

The Political Economy of Latin American Telecommunications: Multilateral Agreements and National Regulatory Systems

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Introduction

This paper is part of LATN's Research Program on International Economic Institutions which aims at analyzing leading issues in international trade relations. Institutional changes in telecommunication services have become a major issue for national governments and multilateral agencies in recent years. In Latin America, changes have been especially dramatic since new regulation has given rise to a completely different bunch of actors and industry structure. The paper looks at how recent trends in international agreements concerning telecommunications services impact in Latin America. The starting point is the development of a framework of analysis designed to capture conflicts, challenges and local interests in the telecommunication service industry. Second, it reviews major regional and international agreements concerning regulation of telecommunication services, namely General Agreement of Trade in Services (GATS/WTO), Mercosur and NAFTA, and third, how these agreements affect telecommunication regulations in Latin America. Finally, the paper will investigate main areas of conflicts and national and subregional reactions in response to the new agenda. These include convergence and divergence in Latin American national policies concerning competition, propriety, safeguards, countervailing duties and antidumping measures. Of major importance for argument we shall be discussing is the proper identification of factors affecting national telecom policies. These include examining the relationship between national regulation agencies and several actors which constitute pressure groups: users, equipment and service suppliers existing regulated firms, new entrants and international and multilateral agencies.

I. Local Interests in Telecommunications: A framework of analysis

The role of information technologies (IT) for development has come to absorb an increasing share of the attention of the economists and international organizations in recent years. According to UN Secretary General, "communications and information technology have enormous potential, especially for developing countries, and in furthering sustainable development (Annan 1997:1)." It is true that the availability of good information and telecommunications infrastructure is of major importance for development. A more complex question, however, is how to develop such infrastructure in a way to maximize local interests. International organizations like World Trade Organization's General Agreement for Trade in Services (GATS) is becoming more influential in national telecommunications strategies. However, there is not a single model to regulate individual countries policies since it depends on existent resources, capabilities, interests and influence of major economic and political actors.

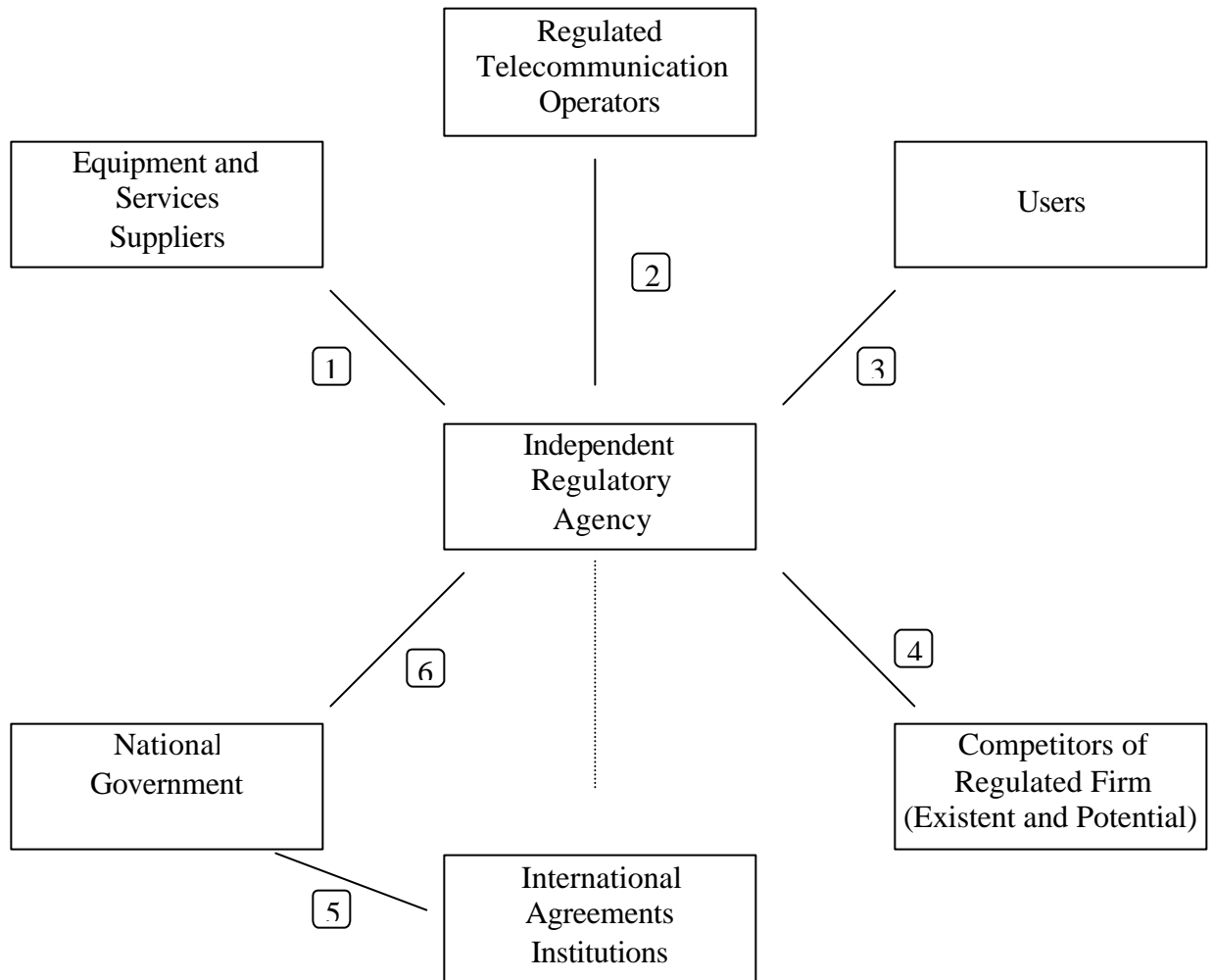
Telecommunications have a dual role in economic development. On the one hand, access to telecommunication services is becoming one of the minimum necessary conditions for participating in domestic and international markets. As we reach the "information age", telecommunications become a prime infrastructure for economic and social development. As Castells (1996:469) put it, "Networks constitute the new social morphology of our societies, and the diffusion of networking logic

substantially modifies the operation and outcomes in process of production, experience, power, and culture.” Mansell (1998) adds to this by arguing that “although the causal linkages between investment in telecommunications networks and social and economic development is difficult to establish, there is considerable evidence that political and economic control within society is contingent upon the characteristics of the electronic communication environment.”

On the other hand, as well as a means of production, telecommunications have become a key product by itself in the world economy. The production of telecommunications infrastructure and the information carried became highly valuable goods in the world marketplace. The IT industry is now the fastest economic sector in the world and participating in hardware, software, and value-added services is a key development strategy all over the world. IT services creates highly qualified and well-paid jobs and provides opportunities for both equipment, software and service firms to prosper.

Building networks linking together the business sector, government institutions and society is a major task for developing countries. National policies concerning regulation of telecommunications services are affected by the nature of its relationship with major players. These include both suppliers and consumers, which are usually recognized as “local interests”. The interactions between national regulation agencies and major players are seen in Figure 1 below. The figure provides a framework of analyzing Latin American interests in the telecommunication sector.

Figure 1: Actors Influencing National Telecommunication Policies



Source: Adapted from Fiani, R. (1998)

Institutional Framework/Equipment Suppliers/Users (Relations 1 and 3):

The relationships 1 and 3 look at pressure groups – telecommunication users and local suppliers of equipment, software and services - directly affected by decisions made by the institutional framework concerning the regulation of incumbent firms. According to Becker (1983) pressure groups search to influence the regulation activity aiming at attending their self-interest. Therefore, regulations will favor those groups with higher-pressure power.

The telecommunication equipment supply industry is becoming an international oligopoly as national governments are phasing out existing protectionist policies for local manufactures. The support of locally owned firms has been shifting from preference in local telecom provider purchases to more indirect support such as R&D financing. Many advanced countries see the telecommunication equipment industry as a key sector to promote exports, to create highly qualified jobs.

As far as the role of users is concerned, there is a basic distinction between the interest of large multinational users and domestic and small users. The telecommunication network, according to Mansell (1993:197) "is not being designed primarily to encourage the universal diffusion of public telecommunication services... in spite of claims that the (international) public network is becoming more open and accessible to users in general, in fact, it is becoming more closed attuned to the needs of a specific segment of the user community; namely the locally operating firms".

Regulated Telecommunication Operators (Relation 2)

The regulated firm is usually a natural monopoly or, in case of oligopoly, the incumbent firm with universal services responsibilities. The relationship between regulated firms and the regulatory agency is influenced, according to Fiani (1998), by three main aspects. First, the political environment, in which Vogel (1996) emphasize the importance of ideology assumed by national governments. "Ideas provide the filter through which decision makers interpret market forces" In UK the debate was based on the assumption that there was a connection between deregulation and international competitiveness. The more liberal the policy framework, the more easily it is to attract technology and investment. In Japanese ideological debate, in contrast, there was not such connection. This may in part explain liberal policies towards telecommunication services in Britain and also in most Latin American countries. Second, the possibility of "capture" of regulation agency by the regulated firms. Power conflicts are mediated by a number of issues and must be analyzed in a case by case basis. *The extension of transitional monopoly time given to newly privatized operators in Mexico and Argentina may be explained by political power assumed by investing groups.* The third aspect concerns the ownership of regulated firms, that is the different roles played by state-owned and private operators.

From Mansell's point of view the notion of public interest is related to the influence of different telecommunication users. There are clearly divergence between the interests of small business and domestic users and those of large multinational users, as long as there may exist conflicts between alternative aims of universalization of services and the need to segment the network to attend the differential demand of sophisticated large users. She rejects the notion that "the rapid diffusion of the most advanced public network capabilities is in the interest of all telecommunication users". This vision is relevant to the case of Latin American countries where the trade off between universalization and large users competitiveness is more striking.

Competitors of Regulated Firms (Relation 4)

A number of studies on the role of regulation, including Welfens', have argued that regulation is not necessary when there is full competition. In telecommunications, new technology has reduced the importance of sunk costs thus changing the status of public utility. Consequently, competition may be a substitute for regulation. However, the incumbent public utility has responsibilities, which are not assumed by new entrants. These include charging fair tariffs without discriminating users, expand services towards universal service, give open access to other service providers and secure interconnectivity.

According to Grieve and Levin (1996:999), "the public utility and the regulator are placed in an impossible situation. The public utility must undertake expensive investments so that it can serve all customers while its competitors can choose only certain customers. The regulator will be required to set just and reasonable rates. But if those rates must be sufficient to cover all of the public utility's costs, they may not be sustainable in a competitive market. If the regulator responds by allowing the public utility to lower its rates, the opportunity to recover the costs of the imposed obligations will not be provided. If the regulator attempts to ensure that the public utility's costs are covered through the imposition of any kind of policy, it faces the cries of competitors complaining that the utility is being granted protection from competition. The regulator simply cannot fulfil its obligation".

Another problem concerning the relationship between the incumbent firm and its competitors is accessibility and interconnection. For Grieve and Levin, the status of common carrier should be limited to firms, which have access to final users only (Fiani, 1998:26). It can be argued, however, that accessibility problems are more complex than the substitution of competition for regulation. In some cases accessibility may be of fundamental importance for competition and efficiency of the whole telecommunication system. The ensuing controversy over interconnection terms and tariff rebalancing illustrates the point that regulation is often needed as a complement, rather than a substitute, to competition.

There are also problems concerning anti-competitive practices and management of scarce resources such as radio frequencies and satellite positions. In those cases, however, there is little discussion about the importance of national and international agreements and regulations.

Local and International Policy Issues (Relations 5 and 6)

Supranational regulation forums affecting Latin American countries are increasing their role in restructuring legal frameworks and pushing national governments to search for a common ground concerning the liberalization of telecommunication services trade. Negotiations between national regulation agencies and multilateral institutions are usually mediated by the Ministries of Foreign Affairs and included in

the general framework of international relations. Thus, agreements are influenced not only by technical or local issues but also by general foreign policy issues.

There are three basic elements in existing models for service trade liberalization: (i) coverage, which can be universal or sector specific; (ii) basic principles and concepts; and (iii) type of commitments. As seen above, the most influential international forums are GATS/WTO, but in Latin America, Mercosur and NAFTA can eventually assume a larger importance in shaping national policies, since their aims concerning the integration of regional telecom markets are much more ambitious.

II- International and Regional Agreements in Telecommunications

6. *The role of main international institutions*

Telecommunications has assumed a central place in the emerging new economic order, both as a transnational means of production and exchange relations. It is an essential infrastructure for the globalization of production, trade and capital flows. Also, the production of telecommunications infrastructure and the information carried have become a highly valuable business in the emerging global marketplace. Not surprisingly it became a major target for international regulatory agreements and a key issue for multilateral development organizations. New regulations were influenced by neoliberal ideology, based on the pioneer experience of Anglo-Saxon countries in the early 1980's. According to their views, barriers to the production and exchange of information and knowledge were problematic for economic efficiency, technological rationalism and even the spread of democracy. As Ken (1996:177) put it "under neoliberalism, knowledge has been defined as a commodity to be privately produced and exchanged according to competitive markets. The global regulation of telecommunications has come to mean minimizing barriers to the operation of such markets".

The liberalization of the international telecommunications market became a driven force in USA international trade negotiations. As Lee (1996:101) puts it "With increased competition for world markets, the USA saw an erosion of many of its key industrial sectors (e.g. automobiles, consumer goods, shipbuilding)... However one sector in which the USA remained the world leader, and which promised dynamic growth in coming decades, was the information sector.

Main messages of World Bank Development Report on Infrastructure (1994:2) are that "the causes of past poor performance, and the source of improved performance, lie in the incentives facing providers". To ensure efficiency, it prescribed the application of three instruments – commercial management, competition, and stakeholder involvement. Also, the role of government and the

private sector must be transformed, in order to give users and private firms a larger role to finance, operate and plan the infrastructure system.

Several international organizations are involved in the regulation of global communications, including the International Telecommunication Union (ITU), International Standards Organization (ISO), General Agreement on Trade in Services, (GATS), General Agreement on Tariffs and Trade (GATT), World Intellectual Property Organization (WIPO), United Nations Educational Scientific and Cultural Organization (UNESCO) and the United Nations Committee for the Peaceful Uses of Outer Space (UNCOPUOS). ITU has been the most important organization dealing with issues related to telecommunication. Its main role is to plan the radio frequency spectrum and to set international standards for equipment and services. Recently, however, GATS is increasingly playing a key role in international telecommunications services liberalization. While ITU is responsible to technical issues, the newly established GATS assumed the responsibility to further integrate international networks. In addition to international, regional organizations are becoming increasingly important to push forward services liberalization within member-countries. For Latin America, NAFTA and Mercosul may open the road for further liberalization in world level, since liberal rule, once established for member countries, may serve as a case to global agreements.

7. *The International Telecommunication Union*

The ITU has enjoyed a strong reputation for its technical expertise and political neutrality. It is the oldest existing international organization, established in 1865 and restructured in 1947 as the United Nation specialized agency with the following responsibilities (Lee, 1996 apud ITC 1947, Art.3:1):

- to maintain and extend international cooperation for the improvement and rational use of telecommunications of all kinds;
- to promote the development of technical facilities and their most efficient operation with a view to improving the efficiency of telecommunications services, increasing their usefulness and making them so far as possible, generally available to the public;
- to harmonize the actions of nations in the attainment of those common ends.

Despite ITU status as an intergovernmental organization, non-state actors, notably private sector interests has played an important leadership in its various committees. Since the late 1970s, excess productive capacity of core capitalist states led telecommunication services firms to look increasingly to foreign markets. According to Lee (1996:176), “the ITU has played a key role in the process of globalization, promoting the spread of telecommunications according to neoliberal-based policies”. This has included the liberalization of telecommunications

regulations both nationally and internationally and the increased participation of private interests in policy-making.

8. General Agreement on Trade in Services (GATS) - WTO

Since mid-90 the World Trade Organization (WTO) has extended the coverage of the multilateral trading system to include trade in services under the General Agreement on Trade in Services (GATS). GATS is still in its early days concerning the liberalization of services but it is already recognized as the main multilateral institution to push participating countries into further agreements. The agreements framework consists of three main elements: (i) a set of general concepts, principles and rules applying to measures affecting trade in services; (ii) specific commitments undertaken by WTO members on national treatment and market access; and (iii) several sector-specific annex of both a substantive and non-substantive nature.

GATS works towards service trade liberalization through specific commitments applied to service activities that are listed in national schedules, reflecting the so-called “positive list approach” under which specific commitments are set out in national schedules. These commitments are made by sector and within sectors, under four modes of supply: cross border (corresponding to trade in services similar to trade in goods); through establishment or commercial presence (corresponding to foreign direct investment); through consumer movement (such as tourism); or via the temporary presence of foreign service providers (through movement of natural persons). Countries signing on for binding commitments have no obligation to include all four or any number of the four modes of supply when considering specific sectors. The principle of “positive list” allows for a choice of specific commitment in each particular sector or across sectors under GATS’ “menu” of measures. Each country “offers” specific commitment on future liberalization plans, which may be subject to qualification as to MFN treatment, market access or national treatment. These binding commitments are further negotiated in WTO aiming at consolidating and promoting liberalization of competition and trade in telecom services. A major achievement of the negotiation was the creation of the “Reference Paper” on pro-competitive regulatory principles that was accepted by 60 of the 69 countries making binding offers on market access. According to Cowhey and Klimenko (1999), The WTO Reference Paper has the following features:

1. It creates obligations for governments concerning their regulation of “major suppliers” of telecommunications services. It focuses on regulatory treatment of the dominant incumbent carrier and excludes potential competitors in particular segments of the market. WTO has thus adopted a cautious approach, since regulation of “non-major suppliers” is a controversial issue.
2. Governments must take measures to assure that major suppliers do not engage in anti-competitive practices, such as anti-competitive cross-

subsidies, use of information obtained from competitors, or withholding timely technical information needed by competitors.

3. Governments will assure interconnection with a major supplier for competitors at any technically feasible point in the networks. The terms, conditions, and quality must be non-discriminatory. The terms for interconnection must be publicly available and enforceable on a timely basis.

4. Governments may maintain policy measures designed to achieve universal service. They must be administered in ways that are transparent, non-discriminatory and competitively neutral.

5. The regulatory body is separate from the operators and must employ procedures that assure impartiality in regard to all market participants

6. Governments will use producers for the allocation and use of scarce resources, including frequencies, that are timely, objective, transparent and non-discriminatory

9. MERCOSUR

Since 1991, Mercosur is pushing Argentina, Brazil, Paraguay and Uruguay into a tariff union aiming at freeing circulation of goods and services. Chile and Bolivia became partially associated in 1996, and neighbors countries from the Pact Andean and other Latin American countries are negotiating free trade bilateral agreements. The importance of Mercosur in the world trade (1.4%) is still small, especially if compared with Latin America share in the world's GNP (3.3%).

Mercosur members are deepening their regional integration efforts in the area of trade in goods in order to include investment, competition policy, intellectual property protection, and trade in services. In telecommunications there is not a specific sectorial regulation, but references have been made in broader agreements. The "Action plan for Mercosur to 2000", issued in 1995, emphasized the will to define a common commercial policy for the service sector and government procurement, and to present a joint position in multilateral negotiations. In 1997 the Protocol of Montevideo on Trade in Services was signed in the form of a Framework Agreement by the Common Market Group, and has been further supplemented through the addition of sector-specific chapters, as well as through annexes in the form of national schedules of commitments (the first round of which was finalized in July 1998). The Protocol will come into effect as soon as at least three of the four member governments have ratified it. The Agreement includes a positive list of supplementary obligations in addition to those already in force aiming at creating a service free trade area in ten years, through the reduction of internal market access obstacles.

According to Stephenson (1998:45) "The basic approach adopted by MERCOSUR members to the liberalization of trade in services is similar to that of the GATS, namely a gradual market opening based on the negotiation of specific commitments to liberalize either market access or national treatment practices for

specific service sectors. However, the MERCOSUR Protocol departs significantly from that of the GATS in objective it sets to achieve full liberalization of traded services within a ten-year period, culminating in an open regional market for services no later than end 2007. It is to be achieved through the annual rounds of negotiations, meant to progressively *incorporate* additional sectors and modes of supply within the orbit of liberalization, through augmenting the number of commitments in national schedules.”

The MERCOSUR Protocol contains many articles, which are very similar to those of the GATS, including those on MFN treatment, market access and national treatment. The provisions indicate the specificity of the latter two principles and their application to scheduled measures or commitments only. Detailed articles on transparency, confidential information, domestic regulation, recognition, denial of benefits, and exceptions (both general and for security purposes) follow the GATS very closely. The article on competition policy makes reference to the provisions contained in MERCOSUR’s Protocol for the Defense of Competition Policy. The articles on government procurement and subsidies make reference to provisions, which will be negotiated in these areas in the future. The possibility for the modification of schedules is foreseen in the Protocol, but the withdrawing or alteration of any commitments cannot be made retroactive. The provisions on dispute settlement specify that conflicts in the area of trade in services will be settled under existing MERCOSUR mechanisms.

The MERCOSUR approach to liberalization of trade in services is an ambitious one; although based on the GATS framework and negotiating modality, the members of this integration arrangement have committed to a specific timetable (ten years) for the complete elimination of restrictions to trade carried out by member services providers. MERCOSUR members have thus agreed in principle to go far beyond the scope of liberalization at the multilateral level, in order to realize a common market, much along the lines of the European Union. The feasibility of this ambitious objective will only become apparent over the coming decade.

10. North American Free Trade Agreement - NAFTA

The agreements among the USA, Canada and Mexico concerning trade on services have a different structure as compared to those under WTO. One of the main differences between NAFTA and WTO is that the former has a mixed structure concerning its coverage. It can include both universal coverage – applied to all sectors – and sector specific agreements such as telecommunications and financial services. A second major difference is that NAFTA model adopts the principle of crossborder trade, thus extending to services the rules adopted to goods. This means that the establishment of commercial presence, involving foreign direct investment, is not necessary to provide a service overseas. Consequently, firms operating within the region have the right to provide services

in other country without any local presence in that country. This legal framework is a model for NAFTA countries negotiations with other American countries.

The main difference between GATS and NAFTA models is that the negotiations in the first forum are based on a “positive list” and the later are based on a “negative list”. In other words, NAFTA model implicit approves what is not included in the agreements while GATS model restrain to what have been explicitly negotiated. This difference is of major importance to Latin American countries since there is no definition yet about which model to follow.

III. Latin America Telecommunications Regulation

1. GATS/WTO influence in Latin American telecommunication policies

In the vast majority of cases, Latin American telecommunication policies are converging towards the main WTO Reference Paper principles for competition and independent regulation. Competition is assumed to give consumers choices for better meeting their demands and to put pressure on suppliers and to be efficient and accountable to user. In telecommunications, competition could be introduced directly, by liberalizing entry into activities that have no technological barriers, and indirectly, through competitive bidding for the right to provide exclusive service where natural monopoly conditions exist and by liberalizing the supply of services substitute. Of WTO Reference Paper’s six major principles, four are designed to assure competition and one to grant independence for the regulating agency face local governments. The other deals with a the social problem of universal service provision.

In 1999 Latin American countries were negotiating new commitments towards the liberalization of telecommunication services and the newest proposals are still confidential. With a few exceptions¹, Latin American countries had already privatized the telecommunication sector and introduced new legislation matching with WTO Reference Paper features. A preliminary evaluation of WTO Reference Paper’s six major principles applied to Latin America is showed in Table 3.1 bellow.

¹ Uruguay, Colombia and Paraguay

Table 3.1: WTO Reference Paper and Regulation Status in Selected Latin American Countries

Features/Countries	Mexico	Argentina	Chile	Brazil
Regulatory treatment for competition	British model. Emphasis on negotiations rather than interventions	10 years of private monopoly. Full competition in 2000	Competition more vigorous for long distance	Duopoly in regional services, long distance and cellular. Full competition in 2002
Anti-competitive practices prevention	Many conflicts, due to main incumbent strength	Monopoly extended for two years, showing existing players strength.		Incumbents are testing Anatel's strength in several practices.
Interconnection/ non-discriminatory cost-oriented rates	Interconnection rates are still high and provisioning by major carrier difficult.	From 1999 based on incremental costs of unbundled services. Very high rates for long distance	Surcharge on incoming international traffic for interconnection	Competition in long distance stills in an initial stage. Problems in billing.
Universal services	Teledensity 10 Competition in local services will increase subscribers	Teledensity 23.8	Teledensity 17.8 Subsidies for service provision in rural areas	Teledensity 10 Universal targets to be implemented based on special funds
Regulatory body separated from the operators	Cofetel (1996). Some overlapping with SCT	CNC (1996)	Subtel (1977)	Anatel (1998)
Transparent allocation of scarce resources	Yes – auctions for wireless spectrum	Yes – auctions for satellite		Yes, except for open signal TV

Source: own elaboration

2. Regulatory Treatment for Competition

Laws submitted to Congress approval usually introduced new regulations. National telecommunication laws were inspired in experiences from early competition adopters, especially Britain, USA and New Zealand. The time for introducing has varied from country to country and those, which were late, have learned on other country experience.

The experience of those Latin American countries that have already begun to dismantle their monopoly shows that creating competition in telephone networks is a very difficult task. The old telephone monopolies, now privatized, will still be powerful companies in the future. They have the competitive advantage of counting with an established infrastructure, a large client base and privileged relationship with suppliers and regulators. In most countries, executives and directors of newly privatized firms came from the Ministries of Communications or from the former state-owned telecommunication monopolies. They are still influential in policy issues and have assumed vested interests against full competition. In some countries, like Argentina, the temporary monopoly granted to bidders were extended for a longer period, thus reflecting existing firms' influence in government decisions. Telephone operators have run a highly effective cartel; they are closely bound to governments and control the final gate between the network and the user. Also, natural monopoly is still embedded in services provided by ex-monopolistic carriers. For all these reasons, in many cases, full competition may take longer to come about.

3. Privatization and Competition: the Latin American agenda

The privatization of telecom services in Latin America has started in 1988 in Chile , followed by Argentina and Mexico in 1990. Peru (1994) and Brazil (1998) followed suit. They usually adopted a pragmatic approach aiming at transferring investment responsibilities from state-owned to private sector. There was a trade-off between the privatization price and competition enhancement. Granting a certain monopolistic period for operators boosted private capital attraction, but it had the disadvantages of postponing competition. Reforms have included a change in the legal framework emphasizing independent regulators. Table 3.2 summarizes and compares different privatization processes in Latin America's largest countries.

In Mexico, in addition to privatize Telmex the Mexican government has introduced competition and allowed foreign investors to participate in the telecommunications market. The 1993 Foreign Investment Law permitted up to 100% foreign ownership of many telecommunications operations including cellular telephony and value added services. In 1996, the Zedillo administration ended the Telmex monopoly on long-distance service and authorized several competitive carriers including Alestra (affiliated with AT&T), Avantel (MCI), Iusatel (Bell Atlantic), and Amaritel (US Global Telecommunications).

In **Venezuela**, the domestic fixed-line telephone service market will be opened to competition in November 2000 when monopoly on domestic service expires. The main operator, CA Nacional Telefonos de Venezuela (CANTV) was privatized in 1991. US based firms already operate cellular phone companies and are expected to enter the fix-line market.

Peru privatized the telephone fixed-line operator in mid 1990's, granting a five-year monopoly on fixed-line services. In 1999 it formally opened its fixed-line local and long- distance market, publishing a series of decrees confirming changes in its

telecommunications Law. In January 1999, Peru's President Alberto Fujimori said that four telecommunications companies were likely to be granted licenses to provide domestic and international long- distance services in several provincial cities. The government hopes the onset of fixed-line competition to reduce rates, improve telecommunications services and spur investment. The government hopes to expand line penetration in the country to 20 lines per 100 inhabitants by 2003. Line density now stands at about 7.5 per 100 people today, compared with 12 to 14 lines in neighboring Chile and Argentina and more than 60 in the U.S. (James Craig at Bloomberg News 21 January 1999).

Table 3.2 - Comparative Process of Telecommunication Privatization in Latin America

Countries	Chile	Argentina	Mexico	Brazil
Year of privatization	1988	1990	1990	1998
Privatization objectives	Not specified	Implicit, including <ul style="list-style-type: none"> - user-oriented - quality - network expansion - public debt - management improvement 	Explicit, including <ul style="list-style-type: none"> - national sovereignty - quality - workers' rights - national ownership - network expansion - R&D 	Explicit, including <ul style="list-style-type: none"> - network expansion - public debt reduction - foreign capital attraction - introduce competition
Nature of concession	Non exclusive concession for local services	<ul style="list-style-type: none"> - Exclusive license for local services, long distance and international, during a initial period; - Non exclusive license afterwards 	<ul style="list-style-type: none"> - Exclusive concession for local services - Exclusive concession for long distance services for six years 	Non exclusive
Concession period	Indeterminate	<ul style="list-style-type: none"> - 7 years with possible extension of 3 years of exclusive license - Permanent for non exclusive license 	50 years automatically renovate for 15 years periods	Indeterminate
Limitations to foreign ownership	None	None	51% of the 20.4% control share must be Mexican-owned	Cellular (B band) up to 49%
Tariff rules	Tariff limits (5 years) for monopolistic services only. Based on incremental costs compared with a benchmark enterprise	Tariffs were fixed before privatization. Increase rule: Annual inflation less 2% (for productivity sharing)	Tariff fixed for each 4 years, based on the incremental costs compared with a benchmark enterprise. Average tariff increase: Annual inflation less 2%	Price cap system (a limit is set for a basket of services)
Expansion commitment	None	1,2 millions new lines (5.6% annual growth)	12% annual growth	Quantitative goals for universalization
Local services	Open	Open after 7 or 10 years	Monopoly	Duopoly for three years, open afterwards
Long distance services market	Dominant position of ENTEL	Open after 7 or 10 years	Open after 6 years	Duopoly for three years, open afterwards

Source: own elaboration based on various sources

Uruguay decided in a public referendum not to privatize its state-owned telecommunication operator ANTEL. The country is relatively well served in terms of main lines/inhabitants and privatization was not welcomed by users.

4. Impacts of new technologies on competition

New technologies are changing the advantages of existing telecommunications services suppliers. Wireless communications; including mobile cellular and WLL (wireless local loop) are enabling new firms to leapfrog by introducing facilities to supply voice service to customers. While cellular mobile phone usually constitutes a separated market, WLL compete directly with existing domestic fix telephone services suppliers. In Brazil WLL was temporary reserved (up to 2002) to new entrants – known as “mirror firms” – in a policy designed to encourage new competition. WLL technology requires lower investment and provides an opportunity to reduce barriers of entry in existing local fix telephony monopolies.

Technology convergence with cable TV and Internet also provide opportunities to introduce competition. Strategic convergence in TV, Internet and telephone markets still depends on regulation changes. By the turn of the century, cable TV firms were already authorized to provide Internet services in Brazil. The entry of Internet and cable TV into the voice market will take more time, since it requires new equipment investments as well as authorization.

5. *Interconnectivity assurance and anti-competitive practices prevention*

Interconnection fees

Interconnect administration has become strategically important to telecommunication operators, as the industry becomes more complex and competitive. Interconnect is the fastest growing section of telecom traffic after the Internet. In Latin America, as elsewhere, interconnect market is being forced into early maturity, especially as the level of interconnect payments can often determine whether or not a new entrant telecom company is profitable.

There is now a wholesale market dealing billions of minutes of voice or data traffic. The market is massive. In the UK, it is estimated that 10% of BT's revenues comes from interconnect fees collected from other fixed operators, mobile and paging companies and Internet service providers (ISPs). For firms buying interconnection, like C&W, charges represents 40% of their operating costs, or 30% of total turnover.

With more networks being built, the market is widening and it is no longer just a case of the incumbent putting through the 'last mile' traffic of alternative long-distance operators. A new class of network operators is springing up and entering

the 'carriers' carrier' market. According to Alan Healey², a specialist supplier of interconnect billing systems, "interconnect agreements used to apply for the long term, but rates are changing so rapidly as the market becomes more competitive, that agreements are now monthly, weekly or even daily". Consequently, the informal models of interconnection agreements are collapsing as the interconnect market creates new demands and needs multiple data services interconnection, intelligent network and number portability services interconnection, and 'cascade' billing where several telecom operators handle interconnection traffic. As the ITU's international accounting rate system breaks down, international interconnect will become crucial.

There is no general agreement on billing systems for interconnection. Legislation in most countries requires companies to ensure that retail-billing systems are secure and properly audited, and that, "Interconnect systems have to play a catch-up game to ensure similar quality." But many conflicts persist in setting up billing systems since it is difficult to calculate the prices that should be unbundled and charged for interconnection.

In some countries, such as Sweden, interconnection is held to be a commercial matter and the regulator does not intervene. But elsewhere the regulator can often play an important role in defining the structure of the incumbent's interconnect charging. For example, in the UK, the regulator has determined the price that BT can charge for the use of 'elements' of the network in great detail -and the result is an arcane and somewhat arbitrary system.³ In the US, an already complex situation is exacerbated by the requirement for incumbents to provide unbundled access to the local loop. The EC is now assessing whether it will also force European incumbents to unbundle their local loops as well.

ITU's secretary-general Pekka Tarjanne⁴ warned recently that global telecom market faces "chaos and anarchy" if the ongoing row over reforming the accounting rates system cannot be resolved. He argues that pure market forces could wreck developing countries' access to telecom services, leaving them and their citizens out of the global information infrastructure. For more than seven years, the existing system of bilaterally negotiated accounting rates has been discussed without a solution. ITU has endorsed the WTO's recommendation that opening up markets and setting cost-based tariffs, calculated from the actual cost of supporting the network which delivers the call. But according to Jeremy Scott-Joynt⁵, two recent events have galvanized discussions surrounding accounting rates. The first was the implementation in February this year of the World Trade Organization's Basic Telecom Accord, signed by 72 countries making up 93% by value of the world telecom marketplace and designed to open up markets to

² (info@total.emap.com URL : <http://www.totaltele.com>)

³ According to Dixon (EMAP Media 1999), 'UK has picked switching as the pricing elements set, but it could just as easily be anything else: fibre optic cable or minutes and bits. These are policy decisions which are essentially arbitrary.'

⁴ info@total.emap.com URL : <http://www.totaltele.com>

⁵ EMAP Media, 19 March 1998. info@total.emap.com URL : <http://www.totaltele.com>

competition. The second was FCC's decision to unilaterally impose its own "benchmark" rates of between 15 cents and 23 cents a minute, depending on the level of development, from 1999 for all carriers doing business with the US. These figures undercut some developing world accounting rates by 80% in some cases, and have been met with a storm of disapproval from those who accuse the US of trying to force its own law on the rest of the world.

Call Back International Services

Another major conflict between Latin American and developed countries is over how to reform the international accounting rate system. The ITU existing rule is a 50:50 accounting rate mechanism, designed to share long distance calls tariffs between local and international operators. However, the US and newly liberalized countries in Europe, are anxious to protect callback revenues and the enormous cost savings from refilling of international traffic through third countries. Call back operations bypass existing rules (since no tax are paid to local operators). Latin American countries, headed by Mexico, want the accounting rate system issue to be inter-linked to callback and refilling.

Under the WTO basic service agreement finalized in February 1998, the WTO would forge multilateral agreement on accounting rates if the ITU Study Group fails in its mission. Study group recommendations set out cost elements for termination fees. As the chairman of ITU Study Group 3, Japan's Tsunekazu Matsudaira puts it "if all rates and tariffs are cost-based, it stands to reason there would be no room for refile, callback and other arbitrage opportunities, which are distorting the market," ITU members believe further delay in resolving the dispute could see the ITU lose its authority to the World Trade Organization on this crucial international trade issue.⁶

6. Transparent allocation of scarce resources

The allocation of scarce resources like orbital slots and radio frequencies represents a challenging demand on the regulatory apparatus. Their capacity to respond to such a challenge depends on building technical and political capacity to policy incumbent firms.

In Latin America, Brazil, Argentina and Mexico have already opened their satellite services markets and orbital slots to competition and private investment in the wake of the World Trade Organization telecom agreement. In 1998, Brazilian telecom authorities invited bids for several of the country's 13 orbital slots to compete with Embratel, the privatized satellite operator. In Argentina, the sole satellite operator, NahuelSat S.A., wants to be allowed to sell services into the United States, while companies such as PanAmSat want better access in

⁶ Vineeta Shetty for Communications International

Argentina. The two governments have been negotiating a bilateral agreement to allow the exchange of services on a reciprocal basis. The privatization process is farthest along in Mexico, where the government's three-satellite system was sold in late 1997. Argentina and Brazil have approached the U.S. Federal Communications Commission to ask for a redistribution of slots in the U.S. "domestic arc" - the band of slots designated for satellites serving the United States. The two South American countries argue that the U.S. operators currently have the best slots.

Observers⁷ worry those new commercial operators - or newly commercialized old operators - will cause a wave of interference problems as they attempt to beam into lucrative markets in both American continents⁸. They expect an increase in satellite spacing and interference problems in the region. Satellite operators are increasingly using big hemispheric beams in the expectation of broader market access throughout the Americas. At present, operators and regulatory authorities ensure that adjacent satellites avoid interfering with each other by "co-ordinating" beams - pointing them in different directions so that they don't overlap - and taking care to re-use frequencies efficiently. But the use of broad hemispheric beams, which give operators broader geographic coverage, may make such co-ordination more difficult.

IV – Impacts of International Regulations in Latin America and Challenges for Local Interests

1. Impacts on the development of local equipment and service industry (Relation 1)

As information technologies converge, the structure of IT industry becomes blur. IT involves a wide range of sectors from equipment and software to services. The IT supply is a very competitive and globalized industry and pushing multilateral trade liberalization has been a major aim for international organizations. A major initiative is the WTO's International Technology Agreement (ITA) already subscribed by most developed countries. ITA eliminates tariffs and other barriers for IT product trade.

Latin American countries, with the exception of Costa Rica, have not signed on. Although few countries in the continent have a telecommunication equipment industry, most countries are able to add value to the IT service network by providing software, system integration and information contents. The more locally manufactured equipment and services are used more qualified jobs are created

⁷ Vineeta Shetty for Communications International

⁸ See Theresa Foley, Communications, 20 April 1998.

and hard currency are saved. Also, close user-producer relations are essential to the diffusion of telecom services when local needs are idiosyncratic.

While some economists argue that industrial success is a function of liberal economic systems and open markets leading to optimum resource allocation, there are plenty of evidence showing that no country has become an important player in the global IT industry without some level of government intervention (e.g. Evans, 1995; Dedrick and Kraemer, 1998:9; Tigre et al, 1992; Amsden, 1989). Policies adopted in most Latin American countries exempted telecom equipment, software and tradable services from import taxes in a policy designed to attract investment. But local firms complain they face unfair competition in most segments of the market. In fact, the market shares of local IT equipment and services industry in Latin America is being reduced due to at least two reasons. First, privatization projects have dramatically increased dependence on imports since new owners are usually TNCs with global supply sources. Second, neoliberal policies adopted in Latin American countries substantially reduced or eliminated tariffs and non-tariff barriers to IT imports. Few countries, namely Brazil and Mexico, still have some kind of incentives for local IT equipment and service production. USA and multilateral agencies pressures to open IT markets have usually succeeded.

Mercosul countries are now negotiating a common external policy for information technology. The agreement includes establishing rules of origin; unified products codes and a common external tariff based on a basic production process (PPB). The PPB rule defines a minimum assembly process for each class of products, which are considered essential to be undertaken locally. Since 1995 there is a tariff convergence agreement establishing a gradual harmonization of extra-zone import tariffs for IT products averaging 16% em 2006. Table 4.1 shows, for the case of Brazil, the convergence evolution of the common external tariffs for Mercosul.

Table 4.1 - Brazil: Mercosul Convergence Schedule for Common External Import Tariffs for IT Products (Percentage)

Products	1999	2000	2001	2002	2003	2004	2005	2006
Communication equipment	31	30	28	26	24	22	20	16
Cellular phones	21	21	21	21	20	20	20	16
Programmable controls	31	30	28	26	24	22	20	14
Boards	25	24	23	22	21	18	16	12
Integrated Circuits	14	13	12	11	10	9	8	6

Source: MCT/Sepin (1998).

Among Latin American countries, Brazil is the largest telecom equipment producer and counts with local technological capability. From the 1970's Brazil has developed a telecommunication equipment industry based on state-owned operators procurement policy, which encouraged local technology development. Telebras' research center (CPqD) has developed a digital switching system (Tropico) which responds for nearly 40% of Brazilian installed base. The availability of a cheap locally developed equipment forced the price of TNCs down and saved Telebras US\$ 2.2 billions in equipment costs from 1990 to 1996. The total Tropico R&D cost was US\$ 350 million (Szapiro, 1999). However, the opening of Brazilian telecom equipment market associated to the privatization of telecom services in late 1990's resulted in a challenge for both local technological development and locally owned telecommunication equipment manufactures. Imports raised six-fold from US\$ 392 million in 1992 to US\$ 2,7 billions in 1998. The survival of Brazilian telecommunication industry depends on new policies for R&D and local manufacturing which are still being discussed by the Congress.

In Argentina imports also raised substantially after privatization and reduction of both tariffs and non-tariff barriers. The telecommunication equipment market was estimated in \$1.7 billion in 1996, one third of which supplied by imports from the USA. As basic telephone services become more available throughout the country, demand for specific telecommunications equipment is expected to increase. Recent developments in this market have been driven by the privatization of the Argentine telecommunications sector. The continuing effects of privatization, liberal trade policies, user firms' desire for state-of-the-art telecommunications equipment, and an expanding local market will result in increasing imports. Local production has declined in recent years to less than US\$ 10 million.

In Mexico, when NAFTA took effect in 1994, import duties were eliminated for on-line equipment, PBX switches, cellular phones and modems. In 1998, tariffs were eliminated on central office switches and telephone sets. Many TNCs are establishing IT equipment manufacturing facilities in Mexico. According to Dedrick, Kraemer and Palacios (1999) these firms have come to Mexico as a response to the lowest CIF [landed] cost logic that governs the location decisions of multinational corporations in general. In this case, Mexico's proximity to the U.S.

market gives it a cost advantage in transportation that may exceed the labor cost advantages of some Asian locations. Shipping from Mexico to the U.S. takes less than a day by truck, while Asia is closer to a month away by ship.

Table 4.2: Major IT Equipment and Services Firms in Latin America (1998)

Company	Country	Control	Revenue 98 (US\$ millions)
IBM Brasil	Brazil	Foreigner	2.482,0
Ericsson Brasil	Brazil	Foreigner	1.477,5
Xerox Brasil	Brazil	Foreigner	1.406,5
Grupo Televisa	México	Private/National	1.692,7
Hewlett Packard México	México	Foreigner	1.266,5
NEC	Brazil	Foreigner	1.121,1
Itautec	Brazil	Private/National	719,9
Serpro	Brazil	State owned	602,5
Compaq Brasil	Brazil	Foreigner	589,9
Splice	Brazil	Private/National	585,1
Promon Eletrônica	Brazil	Private/National	529,6
Itautec Philco	Brazil	Private/National	527,3
Multicanal	Argentina	Private/National	511,3
Hewlett Packard Brasil	Brazil	Foreigner	477,9
Alcatel Telecom	Brazil	Private/National	475,4
CableVisión	Brazil	Foreigner	466,1
Television Azteca	México	Private/National	453,8
Unisys Brasil	Brazil	Foreigner	435,8
3M Brasil	Brazil	Foreigner	409,2
Itron	Argentina	Private/National	369,9
Dataprev	Brazil	state owned	291,1
Te Le Fe	Argentina	Private/National	280,4
Hewlett Packard Argentina	Argentina	Foreigner	261,0
Construtel	Brazil	Foreigner	222,2

Source: Gazeta Mercantil. This list is not complete since, for some reason, large firms like IBM Mexico are not included.

The comparison between Mexico on the one hand and Brazil and Argentina on the other shows that liberalization must be a double way. Mexico opened up its market but gained access to the large USA market. This was a major incentive for local production by TNCs. Brazil and Argentina, in contrast, opened their markets unilaterally resulting in fewer locals manufacturing and more imports.

2. Regulated Telecom Operators and Barriers of Entry (Relation 2 and 4)

In Latin America, from the 1960s and 1970s, the telecommunication service industry evolved as a system of nationally or regionally based public monopolies sanctioned either by law or by the common consent of the state. Since the telecommunication operators were predominantly state-owned and there were no need to develop a separate regulatory apparatus to contend with private business that might be affected with the public interest.

After privatization, however, government and public interests have been mediated by regulation agencies. These agencies have to deal with several companies operating in different regions and segments of the market. Table 4.3 below list major telecommunication operators in Latin America. Most operators are now foreign-owned and follow a global strategy.

While in developed countries quantitative expansion of telephone market is close to saturation, in Latin America there is a potential for infrastructure expansion and, in some cases, there are still unsatisfied requests for telephone lines. This may explain the region's recent explosive growth in the cellular telephone demand.

Table 4.3 Major Telecommunication Operators in Latin America

Operator	Country	Control	Revenue 98 (US\$ millions)
Telefonos de México	México	Private/National	7.871,7
Telemar	Brazil	Private/National	4.267,7
Telesp (Telefonica)	Brazil	Foreigner	3.719,8
Telefónica Argentina	Argentina	Foreigner	3.434,6
Embratel (MCI)	Brazil	Foreigner	3.309,4
Telecom Argentina	Argentina	Foreigner	3.173,0
CANTV	Venezuela	Foreigner	2.180,1
Tele Centro Sul	Brazil	Private/National	2.155,2
CTC Telecom de Chile	Chile	Foreigner	1.598,0
Telesp Celular (Portugal Telecom)	Brazil	Foreigner	1.392,0
Telefónica del Peru	Peru	Foreigner	1.258,7
Telecom	Colômbia	State owned	1.092,6
CRT	Brazil	Foreigner	991,6
Telefónica Brasil	Brazil	Foreigner	969,6
Tele Sudeste Celular	Brazil	Foreigner	763,4
CRM	Argentina	Foreigner	720,0
Antel	Uruguay	State-owned	672,5
Telerj Celular	Brazil	Foreigner	652,9
CTI Móvil	Argentina	Private/National	608,0
Entel	Chile	Foreigner	543,0
Miniphone	Argentina	Foreigner	542,2
Telintar	Argentina	Foreigner	519,9
Telecom Itália	Brazil	Foreigner	417,1
Tele Celular Sul	Brazil	Foreigner	417,1
Tele Centrooeste Cel.	Brazil	Private/National	399,3
Telecom Personal	Argentina	Foreigner	396,3
Tele NE Cel.	Brazil	Foreigner	388,6
Telemig Celular	Brazil	Foreigner	363,7
Celumovil	Colômbia	Private/National	355,0
Comcel	Colômbia	Foreigner	314,5
Iusacell	México	Private/National	284,2
Telef. Comunic. Personal	Argentina	Foreigner	242,6
CTC – Mundo	Chile	Private/National	225,5
Celular CRT	Brazil	Foreigner	225,1
Tele Leste Celular	Brazil	Foreigner	206,2
Tele Norte Celular	Brazil	Foreigner	197,0

Source: Gazeta Mercantil

Telecommunication market in Latin America is relatively small in world terms but is growing in a fast pace. From 1992 to 1997 the region's share in world's total spending rose from 5.4% to 7.0%. The three largest markets – Brazil, Mexico and Argentina – respond for 65% of total spending of US\$ 55 billion in 1997 (see table 4.4).

Table 4.4: Latin American Telecommunications Spending by Country (US \$ M)

Country	1992		1995		1997	
	Spending	% of World	Spending	% of World	Spending	% of World
Brazil	6.154	1.2	9.696	1.5	20.109	2.6
Mexico	7.101	1.4	7.205	1.1	8.389	1.1
Argentina	3.934	0.8	6.968	1.0	6.836	0.9
Colombia	1.154	0.2	1.360	0.2	4.163	0.5
Chile	1.035	0.2	1.525	0.2	2.271	0.3
Venezuela	1.145	0.2	1.787	0.3	1.929	0.2
Other	7.340	1.4	9.854	1.4	11.257	1.4

Source: WITSA, Digital Planet -1998

In the 1980s and early 1990s the development of telecommunication infrastructure in Latin America had been negatively affected by economic stagnation. In the late 60s' Brazil still had more telephone lines per 100 inhabitants than either the Republic of Korea or Taiwan. Now these countries have three times as many as Brazil and other Latin American countries. From mid-nineties, however, privatization boosted the supply-side, both by increasing the availability of new main lines and by digitalizing networks and switching systems. Foreign investments in the telecommunication services were equivalent to US\$ 7 billions in 1995, against US\$ 9 billions in Southeast Asian and only US\$ 2,5 billions in Central and Oriental Europe. In Brazil, Telebrás system was sold to private firms in 1998 for US\$ 22.57 billions. In most countries, privatization agreements included a minimum level of investment by private operators, which agreed to comply with ambitious investment and quality goals.

In Mexico, according to Dedrick, Kraemer and Palacios (1999), the impact of deregulation and privatization on telecommunications network has been generally positive. Ninety percent of switches are now digital compared to 29% in 1990, and fiber optic cables are replacing many copper lines.

In Latin America, interconnect problems are emerging as new firms enter the telecommunication market. Mexico is the more visible case as a legal dispute involving existing incumbent and new entrants has already started.⁹ Telmex set its

⁹ In 1998 Avantel SA, a MCI joint venture start-up long distance operator in Mexico, filed a court complaint to force the government to decide whether rival Telefonos de Mexico SA (Telmex) can charge fees that cost it up to 70% of its revenue. It is seeking to speed up an answer to petitions that have been sitting before the Federal Telecommunications Commission, two of them for more than a year. Avantel wants to know if Telmex can charge other carriers for occupying space at its

fee structure after the government established guidelines for interconnection costs in April 1996. Those guidelines, which were protested by seven long-distance operators, left some questions unanswered given Telmex the opportunity to charge the highest interconnection fee possible.¹⁰

In March 1999, U.S. Trade Representative Charlene Barshefsky announced that the U.S. would take action against Japan, Germany, and Mexico at the World Trade Organization unless they open up their telecommunications markets. The three countries are accused to maintain "over-priced interconnection rates but the USTR found that Mexico has made some progress, although not enough. Each of these countries has committed to open their markets to full-fledged competition, but political pressures to protect their incumbent carriers are still present. If Telmex doesn't comply, it faces the possible suspension of its license to provide long-distance services in the United States through its joint venture with Sprint.

Telmex said the U.S. Federal Communications Commission unfairly accused it of charging high rates for connecting calls that originate from rival companies. "The FCC decision does not take into account advances made in Mexico with respect to reductions in interconnection tariffs which have been made in the last eight years" Telmex, citing the need to recoup recent large capital investments in its telephone infrastructure, has been allowed by the Mexican government to bring down these rates very slowly¹¹. Rival providers of long distance service have suspended planned investments in Mexico, saying until there is fair competition they aren't prepared to risk more capital. In addition to settlement fees, the FCC said it had "serious concerns" over four other anti-competitive issues in Mexico. For instance, it cited the "lack of progress" in opening Mexico's phone market to competitors that want to resell Telmex's service under their own brand name, and the continuation of a 58 percent surcharge for inbound international calls.

switching centers where calls from one company to another are connected. The company also has wondered whether the government's rules apply to certain satellite telephone link ups. The goal was to clarify with Mexican regulator fees Telmex charges for "interconnection".

¹⁰ Eduardo Garcia at Bloomberg News, 6 March 1998

¹¹ The FCC approved Telmex's proposal to reduce the settlement rates to 19 cents a minute from 39.5 cents by 2000. However, the agency rejected interim settlement rates of 37.5 cents for 1998 and 34.5 cents for 1999.

3. The Challenge for users: universalization, fair tariffs, quality and new services (Relation 3)

WTO's Reference Paper states that "any member has the right to define the kind of universal service obligation it wishes to maintain". According to Garnham and Mansell (1991), there are two different concepts for universal services. The first is a concept of universal geographical availability. "All citizens, wherever they are located within the boundaries of the State, have a right to equal access to that State's services." The second concept is related to non-discriminatory access or the equal treatment of all users in terms of price and/or levels of service.

Privatization and new regulation have had a positive impact in expanding the availability of telephone lines in Latin America. The number of fixed-lines per 100 inhabitants almost tripled from 1990 to 2000 as table 4.5 shows.

Table 4.5: Number of main fixed lines per 100 inhabitants (cellular and public telephone not included)

Country	1990	1995	1999	2000*
Argentina	9.5	15.9	22.2	25.6
Brazil	8.3	9.4	15.5	19.1
Chile	7.0	13.2	N/A	36.7
Colombia	6.0	9.9	N/A	18.6
Mexico	6.5	9.6	12.8	16.1
Paraguay	2.6	3.3	4.1	4.6
Peru	2.6	4.7	N/A	8.9
Uruguay	13.4	19.5	23.4	34.3

Source: International Telecommunication Union, apud Gazeta Mercantil Latino Americana, 13-19 Sept. 1999:3.

* Projections

If projections are confirmed, in year 2000 telephone density in Latin America will be similar to least developed European countries. Spain and Russia for example will have 49.5 and 21.6 lines per 100 inhabitants respectively in the same year. However, the penetration of basic telephone services in Latin America is very unequal. Scarcely populated areas and bad income distribution are major factors behind the relatively unbalanced diffusion rates. In Latin America there are pockets where services are inaccessible and/or unaffordable. Brazil and smaller Latin American countries still have a telephone density of less than a line for each three households (see table 4.6). But in general, the number of main lines has increased sharply while the waiting list for new telephone lines has been reduced.

Table 4.6: Telephone Lines per Household by Country

Country	1992	1995	1997
Argentina	0.38	0.54	0.60
Chile	0.33	0.47	0.53
Colombia	0.26	0.37	0.49
Venezuela	0.33	0.42	0.46
Mexico	0.28	0.36	0.41
Brazil	0.20	0.22	0.28
Other Latin American	0.17	0.19	0.24

Source: WITSA, Digital Planet -1998

Under these conditions, the absence of effective policy and regulations supporting the supply of telephone services for low-income population and remote regions will jeopardize the aim of universalization included in GATS agreements. In a private-owned telecommunication system, the design of telecommunication services and networks were redefined mainly in light of large users and firms' requirements. The new network is not being designed primarily to encourage the universal diffusion of public telecommunication services. Rather, it is becoming more closely attuned to the needs of a specific segment of the user community; namely, the globally operating firms. There is, therefore, a need for effective policy intervention, through the public regulatory process, to counter the disparities in network access conditions that will continue to arise.

As for corporations, information has become a key input in the transnational production of goods and services. Effective telecommunications has been needed to enable centralized decision-making, resource management, purchase and sales of components and services through electronic commerce. Since the supply chain is becoming more international, corporations are increasing their dependency on state-of-the art and enhanced telecommunications services.

In regional and national levels, the availability of advanced and reliable telecommunication services is becoming an important issue for location decisions. There are already evidence showing cases of relocation of firm's data processing services to regions or countries counting with more advanced telecom infrastructure. In Latin America, as result of regionalization strategies, transnational firms are adopting the concept of "Panlatino Americanization", regionalizing its activities by function and geographical areas¹². An integrated regional infrastructure is essential

As well as a mean of production, telecommunications has become a key product itself in the world economy. The information sector is "sunrise sector" of post-industrial society. Once restrained to their own countries, telecommunication

¹² For example, Proshnik (1998:11) reports that IBM Brazil president has seen his functions extended. He is now responsible not only for the country business, but also for the infrastructure segment in Latin American, including logistic, purchase, distribution.

services firms are becoming increasingly international. European and American firms are engaged in several acquisitions, joint ventures and strategic alliances worldwide, aiming at building a world infoway which can serve large international clients on an one-stop shopping basis.

The concept of universalization may be extended to include advanced services like Internet. Latin America's share in world Internet hosts has increased from about 0,2% in 1992 to about 1% in 1997. More than half of Internet users are in Brazil and the three largest countries respond for 80% (see table 4.7).

Table 4.7: Internet Hosts by Country

Country	1992		1995		1997	
	Units	% of World	Units	% of World	Units	% of World
Brazil	1.910	0.1	20.113	0.5	117.200	0.5
Mexico	1.239	0.1	13.787	0.2	41.659	0.2
Argentina	0	0.0	5.312	0.1	19.982	0.1
Colombia	0	0.0	2.262	0.1	10.173	0.0
Other Latin American	48	0.0	5.374	0.1	31.117	0.1

Source: WITSA, Digital Planet -1998

As far as tariffs are concerned, telecom costs in Latin America have usually increased in real terms for local calls but have been reduced for international calls. New policies eliminated cross-subsidies and established a ceiling for tariffs increase. Tariffs in Latin America are now comparable to those of Asian countries for international calls, but may be higher in local calls. International telecommunications are a more competitive market since call back and Internet can now bypass existing operators and are forcing prices down.

Table 4.8 Telecommunication costs in selected countries.

Country	Local cost (US\$/3 min.)	US\$/3 min. to the USA
Brazil	0.04	4.68
Mexico	0.08	3.01
South Korea	0.04	4.88
Singapore	0.01	4.02

Source: Tigre, 1999.

Telecommunication tariffs are becoming more flexible with increasing competition. Volume discounts for large telecommunication users can shift the cost burden for the design and implementation of the intelligent public network to the bulk of its smaller business and residential customers.

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