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1 WORLD OVERVIEW

1.1 Global telecommunication reform

The dramatic pace of change in the telecommunication sector over recent years has been both exciting and extraordinary. Incumbent telecommunication operators have undergone ownership transformation in many countries, while many formerly insulated domestic markets have been opened to the entry of new operators. To implement and sustain these developments, many governments have carried through two related tasks: the reform of existing telecommunication legislation and the creation of new regulatory agencies.

Regulatory reform around the world has been driven by the need to create a framework to sustain changes in ownership and market structure. Expanded private participation and/or increased competition, it is perceived, will boost the performance of operators in the sector, subsequently improving the deployment of infrastructure and the delivery of services. It is now increasingly accepted that improvements in telecommunication infrastructure and related services, in turn, enhance economic development.

Although there seems to be a close correlation between restructuring and sector improvement, there is no single “reform recipe” that will guarantee a successful outcome. In fact, countries have followed quite different paths with varying degrees of success. In reforming ownership, for example, some Asian countries - particularly China, but also others such as Vietnam - have achieved an impressive sector growth without introducing any significant transformation of the incumbent carrier.

These experiences imply that introducing private ownership is not necessarily a prerequisite for improved telecommunication services. Nevertheless, it cannot be denied that privatization of state-owned carriers has, in many cases, brought considerable improvement. The issue, therefore, is to understand in which situations and accompanied by which criteria privatization is most likely to be an effective strategy for reform.

The forces that have driven the numerous countries to sell part or all of their national operators are also quite distinct. Some of the early privatizations, such as the United Kingdom and Chile, were based on the predominant political philosophy of the government in power at the time.¹ By contrast, the privatizations in several developing countries in the late 1980s were provoked by deep and growing fiscal crises (e.g., Argentina, Mexico and, to some extent, Malaysia). More recent privatization programmes have been driven by a variety of different factors, such as:

- the need to raise capital to expand infrastructure (e.g., Singapore)
- the desire to have technology transferred, along with management expertise (several African states)
- the intention of the state to withdraw from the provision of services by opening the market to competition (e.g., Brazil), or
- any combination of the above factors (e.g., Bolivia and Peru).

For many developing countries, privatization is currently the most important item on the agenda for transforming the telecommunication sector. In the long run, however, opening markets to competition will almost certainly be more significant and profound. Aware of this, more and more countries are beginning to wrestle with the complicated developments that are set in motion when a government pursues a policy of both privatizing and opening the market to the entry of new carriers.

For instance, liberalization of the domestic market will tend to undermine the potential sales price of the state-owned carrier because of the loss of the carrier’s monopoly position. On the other hand, undertaking privatization first typically entails a request by investors for exclusivity in the local market for a certain period of time - thereby eroding the potential benefits of competition. For these reasons, countries have either chosen to privatize *or* liberalize their domestic market first, largely on the basis of their particular economic situation.

Countries facing economic difficulties generally choose to privatize first, because of the immediate benefits to the government of a considerable amount of incoming capital. Countries benefitting from economic growth, on the other hand, are more likely to open various segments of the local market to competition, leaving the possibility of selling the national carrier to a later stage. The correlation between the performance of the national economy and the order of privatization *versus* liberalization goes a long way in explaining why most

of Latin America pursued privatization first, while most countries in the Asia-Pacific region have liberalized segments of their markets while maintaining the incumbent carrier as a state-owned entity.

The objective of this report is to bring together in a single comprehensive publication the latest knowledge and information on regulatory trends throughout the world (see Box 1.1) This volume focuses on changes in national legislation, the rise of new regulatory agencies, ownership reforms and the key issues confronting regulators in the present and the near future. The report also devotes significant attention to the factors that have triggered institutional and legislative reforms in the telecommunication sector; that is, the rise of private service providers and the increasingly competitive nature of markets, both national and international. In gathering this wealth of *comparative* data on major regulatory trends worldwide, it is hoped that policy makers and regulators will be able to learn from each other's experiences and that the information contained in the report will assist in making decisions appropriate to the development of national information and telecommunication infrastructures.

The report is arranged by region - Africa, Americas, Arab States, Asia-Pacific and Europe. The categorization follows the criteria used by the ITU's Telecommunication Development Bureau (BDT). A list of countries included in each region can be found at the beginning of each chapter. Each chapter focuses on the following aspects of regulation: new legislation, the rise of regulatory agencies, ownership reforms, competition trends and regulatory issues. In this first chapter, a global overview is provided which sets the regional perspectives which follow in comparative context.

Box 1.1: BDT's Global Regulatory Survey project

This report is part of a larger project on regulatory matters carried out within the ITU's Telecommunication Development Bureau (BDT) to build institutional resources aimed at supporting countries - mostly developing - to tackle the need for telecommunication regulation in increasingly privatized and competitive markets worldwide. BDT intends to publish a report of this nature on an annual basis. Future versions will be devoted to specific topics in the regulatory domain.

The report is divided into six volumes. Volumes II-VI are organized by region and contain detailed information on the regulatory situation in each ITU Member State, including the regulators and policy makers; legal instruments governing the sector; institutional profile; regulatory responsibilities; licensing regime; private sector participation; market status; and universal service.

The information presented in the report is based on data collected through a global regulatory survey carried out by the ITU/BDT. About ninety per cent of the ITU membership responded to the survey. Information on major economies that did not respond has been drawn from a variety of other information sources available to the ITU. A copy of the survey can be found at <http://www.itu.int/ITU-D/policies/awchange/awworldof.htm>.

Statistics presented in the report are based on responses to the survey. Thus, unless otherwise indicated, percentages relate to countries that responded to the survey - not to the total number of countries that constitute each region. However, given the large number of countries that responded in each region, we consider that the information accurately reflects recent developments.

This report is an integral part of the ITU/BDT's efforts in the area of sector reform. One of our latest services, available for public access and consultation, is a website for regulators and policy makers. The site can be found at <http://www.itu.int/ITU-D/treg>. It provides access to the following services:

- links to websites of telecommunication regulatory and policy making bodies around the world
- access to the full text of main national telecommunication legislation of a significant number of countries from the five continents
- free access to electronic versions of documents, reports and studies dealing with key regulatory matters, such as accounting rates, interconnection, trade in telecommunication, the Internet and universal service
- brief country information (market liberalization and ownership arrangements) and contact information for each regulatory and policy making institution around the world.

Disclaimer: This report presents the latest available data provided to the ITU. Owing to rapid changes in the sector, however, this information is prone to change and parts of the report or some of the information provided in it may become out-dated.

1.2 Changes in major telecommunication legislation

Telecommunication legislative reform addresses four principal areas:

- the type of regulatory structure (and the processes) appropriate to the desired telecommunication environment
- the extent of ownership change with respect to existing operators
- the introduction of competition into equipment and service markets, and
- the specific “rules” under which companies are to operate.

For many countries, the benefits of introducing new telecommunication-specific legislation have become increasingly clear. Once written into law, the process of implementing policy objectives can be substantially eased. A sound legal infrastructure for the telecommunication sector also has a significant impact on attracting foreign investment into the sector. This is particularly important at a time when competition for private investment is increasing world-wide. To this extent, the introduction of new legislation is motivated by, and directed towards, three main issues: the introduction of market aspects not previously covered, such as competition; the separation of regulatory from operational functions; and the liberalization of certain activities previously prohibited, such as foreign ownership.

However, legislation itself has taken a variety of forms and differs widely between regions depending upon cultural, economic and social characteristics, as well as the timing of reform. Early approaches to sector reform in Africa, for example, introduced legislation over a period of several years. Mauritius, Mozambique and Tanzania, while undertaking reform over different timeframes, introduced several complementary but piecemeal elements of legislation to address their reform objectives. By contrast, Botswana and Zambia, who began reform in the mid-1990s, issued single new telecommunication laws which overhauled their existing regulatory framework. Comprehensive efforts such as these to establish a new telecommunications law or act find parallels in other regions of the world.

One of the principal reasons for this overarching approach is that telecommunication legislation often remains untouched for many years - in some cases, since the last century. Thus, in North America, the Canadian 1993 Telecommunications Act replaced the Railway Act under which the telecommunication sector had been regulated since 1908, while the telecommunication sector in the United States, until the introduction of the 1996 Act, was based on a legal framework established in 1934.

The majority of the Arab States have proceeded cautiously towards legislative reform - mainly because of the desire to monitor the sector closely for economic and security reasons. Countries that have moved towards reform, however, have done so fairly comprehensively. Jordan began passing legislation to modernize its telecommunication sector in 1994 (after several years of failed attempts), while Morocco began introducing similarly broad reforms in June 1997.

Of course, overhauling a complete legal framework is a lengthy process and, as a result, progress can be extremely slow. The US legislative reform process took the better part of 10 years. In Taiwan-China, four years of heavily politicized negotiations were required for the three reform bills to be passed. Indeed, in the Asia-Pacific, the majority of countries have chosen to introduce new legislation gradually by modifying existing frameworks. Such amendments include new laws to permit competition in certain market segments (e.g., the 1995 amendments to the Basic Law in Korea permitting liberalization of basic services), or to allow private-sector entry into specific market segments (e.g., Indonesian decrees to allow private sector joint ventures). Similarly, specific legislation has been used to establish the framework for achieving policy goals or to indicate where responsibilities should lie. For example, Singapore used its 1992 Act to define the scope of the regulator’s responsibilities and powers in licensing and regulating the sector.

Some Western European countries enacted key reform legislation early, beginning with the United Kingdom’s legislative reforms in 1981. Finland established a new Telecommunications Act in 1987, which required the transfer of the regulation of telecommunications from the Finnish PTT to the Ministry of Transport and Communications, and included provisions for all operators to ensure that tariffs were set at a reasonable level. The Netherlands replaced its Telegraph and Telephone Act of 1904 by the Dutch Telecom Act of 1988. This set out the obligations of the monopoly operator, Royal PTT Netherlands NV (KPN), which was then

corporatized in January 1989 and privatized in June 1994. However, most of the major reform legislation in Europe began in the 1990s, and has recently been driven by the timetable of the European Union (EU) telecommunication regulatory reform package and the liberalization deadline of 1 January 1998. Countries applying to join the EU and those with association agreements are in the process of setting up legal frameworks for their telecommunication sectors to bring their national laws into line with the main provisions of EU legislation.

Of course, it is impossible in a survey of regulatory trends in 1998 not to highlight the significance of the General Agreement on Trade in Services (GATS) and the World Trade Organization Basic Telecommunications Agreement, which was implemented on 1 January 1998. The sixty-nine signatories account for more than 90 per cent of international telecommunications traffic. In many cases the commitments made by the signatories represent significant departures that should expand competition beyond previous liberalization programmes. A significant feature of the agreement is its binding nature. Not all signatories are committed to moving ahead with their liberalization programmes at the same pace but, nevertheless, the commitments they have made cannot be easily withdrawn or modified and are binding.

In addition to commitments made in individual country schedules, 63 signatories made at least a partial commitment to the so-called Reference Paper on regulatory principles (57 made full commitment). The Reference Paper commits those Members who signed to:

- establish competitive safeguards to prevent anti-competitive practices
- provide for interconnection
- apply universal service obligations in a neutral and transparent way
- make licensing criteria publicly available
- establish an independent regulator, and
- allocate scarce resources fairly.

WTO Members who have signed the WTO telecommunications agreement must now put in place the regulatory structures and procedures to meet their obligations and specific commitments, according to the negotiated deadlines. They may need to modify existing laws, regulations and administrative guidelines to bring them in line with these obligations and commitments and to benefit from the new environment that this agreement creates, or they may need to draft new laws and regulations where these do not exist. Some of these will be in areas such as competition policy, price regulation, interconnection and consumer protection in which the country may not traditionally have had any significant legislation and procedures.

The General Agreement on Trade in Services (GATS), together with each country's schedule of commitments, specifies in considerable detail the regulatory framework that each WTO member country has to put into place, depending on its level of commitment:

- **All WTO members**, regardless of whether they made commitments in basic telecommunications, are bound under their general GATT commitment not to discriminate against any WTO Member (Most Favoured Nation [MFN] obligation) in providing access to telecommunications services and must make available information on the country's laws, regulations, administrative procedures, and so on.
- **WTO members who made commitments in basic telecommunications** will need to put in place the structures and procedures to allow new operators and service providers to enter those segments of their telecommunication markets which they have committed to open. In the specific field of international telecommunications, it may involve permitting foreign-owned telecommunication service providers to establish a point of presence for purposes of direct interconnection with the network of the incumbent major supplier.
- **WTO members who also committed to abide by the Reference Paper** need to establish regulatory agencies that are independent of operating companies and services providers (if not already in place), and establish a dispute settlement mechanism to resolve interconnection disputes between the incumbent operator and new entrants. They must also publish a description of the procedures applicable for

interconnection to a major supplier and publish actual interconnection agreements or a reference interconnection offer.

The principles of the Telecommunications Annex, which supplements the GATS, require the country to allow access to and use of its public telecommunication transport network and services (PTTNS) on reasonable and non-discriminatory terms for the supply of any service in respect of which the country has made a commitment. Therefore, if the country has undertaken a commitment to allow entry into its financial services, insurance and tourism markets, suppliers of these services must be given access to and use of the PTTNS on reasonable and non-discriminatory terms and conditions in order to supply these services.

The GATS and the Basic Telecommunications Agreement therefore have far reaching implications for telecommunications reform for WTO members. It will undoubtedly also have an impact on non-WTO members, accelerating restructuring of the sector throughout the world.

Governments undertaking legislative reform in response to the new telecommunication environment have a series of broad options: separation of telecommunication and postal functions of the government entity responsible for providing telecommunication services; the creation of a separate, or quasi-separate, body to regulate the sector; and liberalization of the marketplace by introducing competition in certain market segments. The government may enact a comprehensive law that pursues all of these restructuring efforts at one time, or legislators may approach the restructuring of the telecommunication sector in phases.

As the industry goes through this transition, the primary legislative focus has been whether recourse is sought through existing bureaucratic mechanisms, through the judicial system of the country when legislative change is not forthcoming, or through new, sector-specific regulatory agencies.

1.3 Rise of separate regulatory agencies

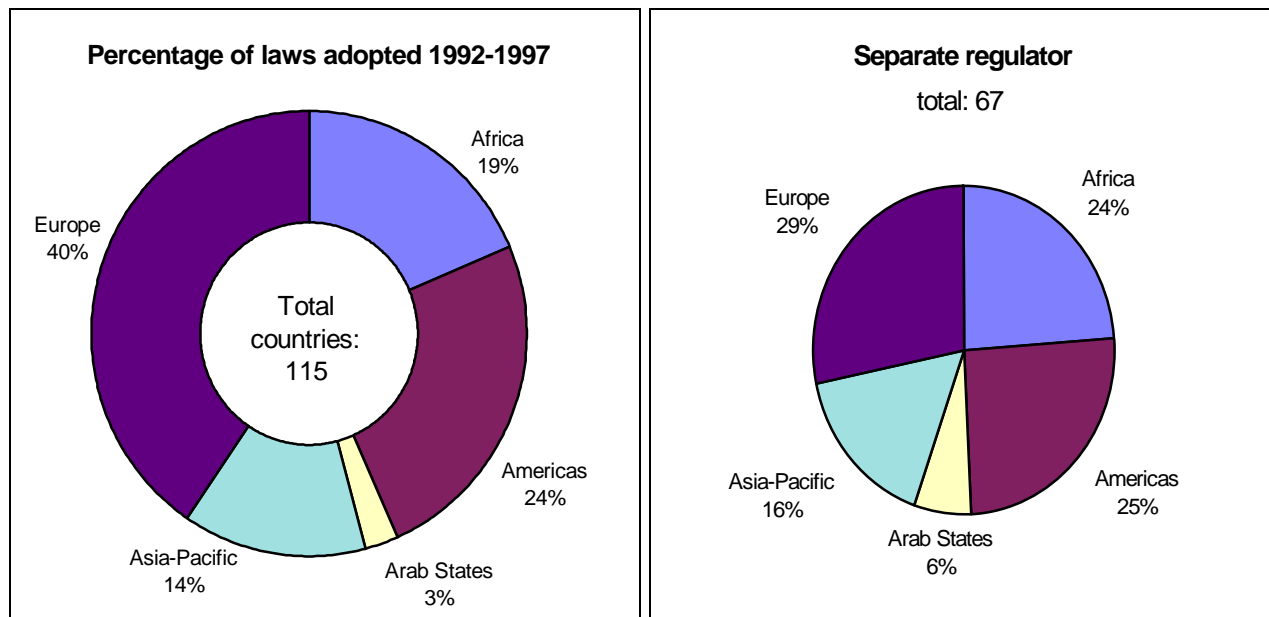
Until recently, regulation of telecommunication services and, perhaps more importantly, who controlled of such regulation, was not an issue in most countries around the world. With the exception of a handful of nations with competitive markets or those in which the monopoly services provider was in private hands, the great majority of state-owned operators continued under a regime of self-regulation. Apart from devising policy for the sector, the national government - or, more precisely, the relevant ministry - retained responsibility for both the provision of services and regulating the provision of those services. This meant that the relevant ministry was in charge of macro-regulation for the sector (maintaining a monopoly market structure through which it could implement policy) with the monopoly operator responsible for micro-regulation (monitoring quality of service, dealing with consumer complaints, tariff issues, and so on).

In the early 1980s, a few countries - namely the United Kingdom, the United States and Japan - began to change to the overall market and ownership profile of their telecommunication sector. The UK government progressively sold its shares in both British Telecom and Cable & Wireless to private investors, established a separate regulatory agency, OfTel, and opened its market to a second operator, Mercury. The US divested AT&T of its local operations and opened the long-distance and international market to competitive entry. Japan privatized its incumbent carrier - Nippon Telegraph and Telephone Public Corporation (NTT) and set the regulatory framework through NTT's Corporate Law and the Telecommunications Business Law.

Throughout the late 1980s, similar liberalization and privatization initiatives began to emerge elsewhere. Governments began to allow private investors and competing carriers into formerly insulated domestic markets, but in a manner corresponding to national conditions and the unique characteristics of the country. Thus, the late 1980s and early 1990s saw a wave of privatization programmes in Latin America and some Eastern European nations, while variations on competition policy began to emerge in the Asia-Pacific from the early 1990s. By the second half of the 1990s, Western and Eastern Europe, as well as Sub-Saharan Africa and some Arab States, had begun to embrace a range of telecommunication reform policies.

As the process of reform spread, many governments came to realize that an entire package of new rulings and laws were often required to support the transition to a market structure - i.e., to "level the playing field," or ensure fair competition. In other words, the new profile of the industry had brought with it an urgent need for the development of separate and capable regulatory institutions. Deregulation became, somewhat more aptly, re-regulation.

Figure 1.1: New laws adopted 1992-1997 and separate regulators



Source: ITU Regulatory Survey 1997.

Note: Law in this instance may be a decree, a new law, a legislative amendment, etc.

As a result, since the late 1980s, a number of new, separate regulatory agencies have been created around the world (see Figure 1.2, left hand chart). The institutional profile and capabilities of these new bodies has, however, been uneven. The first regulatory bodies emerged, naturally, in markets which were first to introduce significant sectoral change. Thus, the mandate and scope of agency responsibility paralleled the market reforms undertaken. In the few cases in which new, separate regulatory institutions were created without parallel sectoral reforms, they have essentially remained paper institutions, holding little more than formal powers.

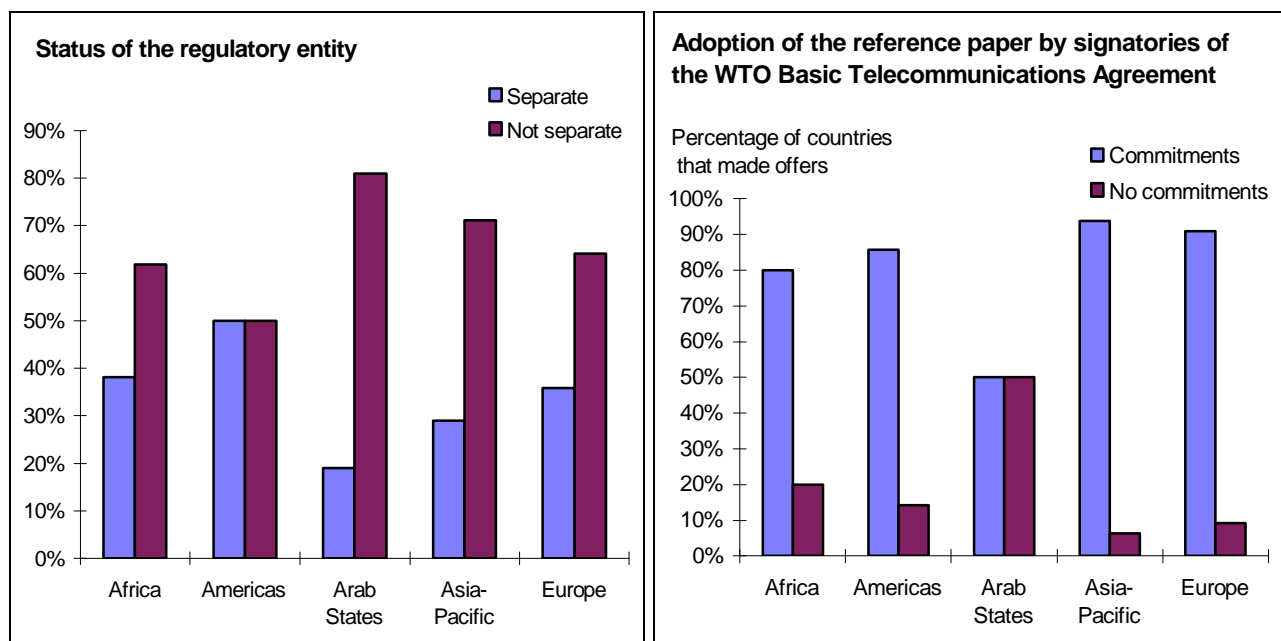
Among the regulatory agencies that have been separated from the incumbent carrier, it is possible to identify two main types: the independent agency with no (or strictly limited) policy oversight from the relevant ministry; and the quasi-separate agency, with a given mandate to regulate the sector, but with oversight by the relevant ministry which retains the authority to issue general directives and/or control funding. This latter model has been predominant in the emerging markets of Africa, Asia, the Arab States and Eastern Europe.

In the Arab States, in particular, the relation between policy making and regulation is closer than in other regions (see Figure 1.2). With regulatory reform a comparatively recent trend, only four Arab States (Bahrain, Jordan, Sudan and most recently, Egypt) have established a separate regulatory entity. Other states, such as Egypt and Morocco, have begun the process but have yet to formalize a separate, independent body. Egypt, in particular, illustrates some of the problems faced in establishing an autonomous entity. A five-member regulatory commission was created in 1994. However, establishment of the new regulatory regime has been stalled while the government tries to find a way to insulate the agency from political interference and to find effective mechanisms for conflict resolution. With the forthcoming privatization of Telecom Egypt (Arento), pressure to resolve these issues has increased.

Many of the same dilemmas can be identified in the Asia-Pacific region, where the relevant ministry has tended to remain closely involved. Asia-Pacific countries are, however, further down the road to regulatory reform having begun the process somewhat earlier than the Arab States. As a result, there are already more established regulators (see Figure 1.2) and the momentum to create regulatory agencies across the region is increasing. By the year 2000, the number of regulators in the region is expected to have more than doubled from the eight existing in 1997. Moreover, a number of the agencies which have already been established - such as ACA in Australia and Ofta in the Hong Kong SAR - have become models emulated elsewhere.

Figure 1.2: Separate, but increasingly standardized

Institutional status of regulatory bodies and adoption of WTO Reference Paper on regulatory principles, by region



Source: ITU Regulatory Survey 1997 and WTO

Note: The 69 countries which made commitments to the WTO Basic Telecom agreement can be broken down as follows: 5 Afr, 21 Am, 6 Arb, 16 Asp, 11 Eur (with the EU countries counting as one).

Africa and Europe appear to be at about the same level of progress in separating regulators from the operators, with a little under 40 per cent of the countries in the respective regions having undertaken reform. However, averages can be deceiving, with Europe much further down the road to independent, autonomous regulation of the sector. In Africa, most of the regulatory bodies created remain quasi-separate, with the operator and the sector ministry continuing to control a number of regulatory functions. In Uganda, for instance, the ministry remains responsible for tariff approval and the establishment of licence fees; in Namibia, the operator remains responsible for numbering, tariff proposal *and* approval, and for interconnection rates.

In the Americas, the mandate of the regulator has been far more specific. In North America the position and purpose of the regulator was further reaffirmed with the recent revamp of the Telecommunications Acts in both Canada and the United States. In Latin America, the creation and mandate of the regulator in many cases resulted from the wave of privatizations in the region beginning in the late 1980s; the creation of the regulator generally preceded a major overhaul of the sector. Nevertheless, in Mexico, a separate regulator was created several years after privatization. And, in Chile, considered by many to be one of the most open telecommunication markets in the world today, there is still no separate regulator.²

In Europe, nearly all countries have separated the regulation of telecommunications from the telecommunication operator. For the 15 EU countries, EU law requires a separate authority from the incumbent operator to be established. Outside the EU, the Czech Republic, Hungary, Norway and Switzerland have also established separate regulatory authorities. Elsewhere, regulation remains the sole responsibility of a sectoral ministry. Delegation of regulatory powers to a regulatory authority has varied across Europe. In all cases, regulatory separation involves a degree of independence from direct ministerial control, but not always a high degree of autonomy in decision making. Some European regulatory agencies, such as the Norwegian Telecommunication Authority, have relatively limited control, with the relevant ministry retaining key regulatory powers. The UK's Office of Telecommunications (OfTel), by contrast, has substantial powers, with the right to make regulatory decisions on many issues. In practice the Department of Trade and Industry delegates many of its powers to OfTel, which can therefore be reasonably described as "semi-separate". However, on some important aspects of regulation, notably licensing of new operators, the Department of Trade and Industry (DTI) has the ultimate authority.

The manner in which the regulatory body is established also appears to be particularly important for the degree of autonomy. In South Africa, for example, the regulatory body consists of a Council comprising a Chairperson along with at least three and not more than five councillors. Each of the councillors is appointed by the South African President on the advice of the Parliamentary committees on communications, with the law requiring that each commissioner possess certain qualifications, thus acting to insulate the process from political interference. Insulation from the political process is one of the most difficult aspects for the regulatory body to achieve.

The structure of the decision making body - for instance, whether the institution is headed by a single person (e.g., a director general) or a collegiate body (e.g., a commission) - may possibly influence the degree of potential independence of the agency. Collegiate bodies, such as those established in the Americas (Argentina, Canada, Ecuador, South Africa and the US), ought theoretically to be better able to achieve autonomy owing to their diverse membership. A regulatory body headed by a single person, such as is the case in Hong Kong SAR (Special Autonomous Region), Nicaragua, the United Kingdom and Venezuela, may theoretically be easier to lobby and influence than a collegiate body. Nevertheless, in spite of the fact that the institutional layout of the regulatory agency does have an impact on its likely independence, the level of real autonomy achieved by the regulatory body will depend just as much upon random non-institutional factors such as the personality of the individuals involved, political and institutional traditions in the country and the existing economic and political conditions.

While autonomy and independence have been raised as goals in the establishment of regulatory agencies worldwide, some governments are equally concerned that autonomy of the agency could itself lead to abuses of power. Some countries have therefore imposed a system of checks and balances upon the regulator. In Côte d'Ivoire and Uganda, for instance, the regulatory mandate has been divided among different agencies as a way of providing regulatory functions with a certain degree of autonomy while avoiding the concentration of power within one body.

Despite the significant diversity that exists, both regionally and nationally, in terms of institutional arrangements, powers, jurisdiction and mode of operation, the growing trend towards standardization of regulatory agencies world-wide should also be recognized. This is particularly true for those countries who, in their participation in the WTO Basic Telecommunications Agreement, adopted - entirely or partially - the Reference Paper on regulatory principles. Out of the 69 countries that signed the Agreement - comprising more than 90 per cent of the global telecommunication market in terms of revenue - 63 adopted, either entirely or partially, the Reference Paper (see Figure 1.2, right hand chart). Among the signatories, Africa and the Americas were the two regions with the highest number of countries abstaining from adoption of the Reference Paper.

The Reference Paper sets down regulatory requirements which must be pursued for a domestic telecommunications market to comply with WTO trading principles. It requires, for example, that the regulatory body be separate and *not* accountable to any operator of telecommunication services. Actions and decisions of the regulator must be carried out in a transparent and non-discriminatory fashion - particularly so in the allocation of scarce resources, such as frequencies and numbers. Countries must also institute appropriate measures to prevent anti-competitive practices, such as cross-subsidization. Interconnection must be allowed at any technically feasible point on the network. The procedures for interconnection negotiations should be publicly available and an interconnection dispute settlement mechanism should be instituted. The criteria, terms and conditions of licences should be publicly available.

Finally, it should be acknowledged that the emergence of separate regulatory agencies has been delayed in some markets as a result of the regulatory dilemmas posed by the convergence of telecommunication, broadcasting and computing technologies and services. Public debate concerning convergence tends to suggest that creation of a single regulator for all communication and information services would be beneficial, but such a move is being contemplated in only a few countries. Furthermore, the few regulatory agencies in which all communication services have been integrated under one jurisdiction - as is the case with Canada and the United States - are not the product of recent convergence trends. In the vast majority of countries, the regulation of telecommunication and broadcasting remains separate - and is likely to continue so - while computing still remains largely unregulated.

1.4 Ownership reforms

The latter part of the 1980s saw the beginning of dramatic changes in the ownership profile of a considerable number of incumbent operators around the world. Some countries in the developing world - Argentina, Chile, Malaysia, and Mexico - and a few countries in the developed world - Japan and New Zealand - launched privatization initiatives. This wave of privatizations followed the earlier sale of both British Telecom and Cable & Wireless in the United Kingdom in the early 1980s.

Over the next decade, private participation in the telecommunication sector increased dramatically (see Figure 1.3, left hand chart). Even so, it has still not reached the proportions that were widely predicted by industry observers in the late 1980s. In 1991, for example, the majority of shares in 29 of the top 40 international carriers (ranked by revenue) were state-owned. Six years later, majority shares in 23 of the top 40 carriers still remain in the hands of the state. Moreover, if one excludes new private carriers from the list - e.g., WorldCom Inc and USA Global Link - the number of top 40 companies that have transferred majority shares to the private sector in the 1990s is reduced to only four - a significantly lower figure than expected.

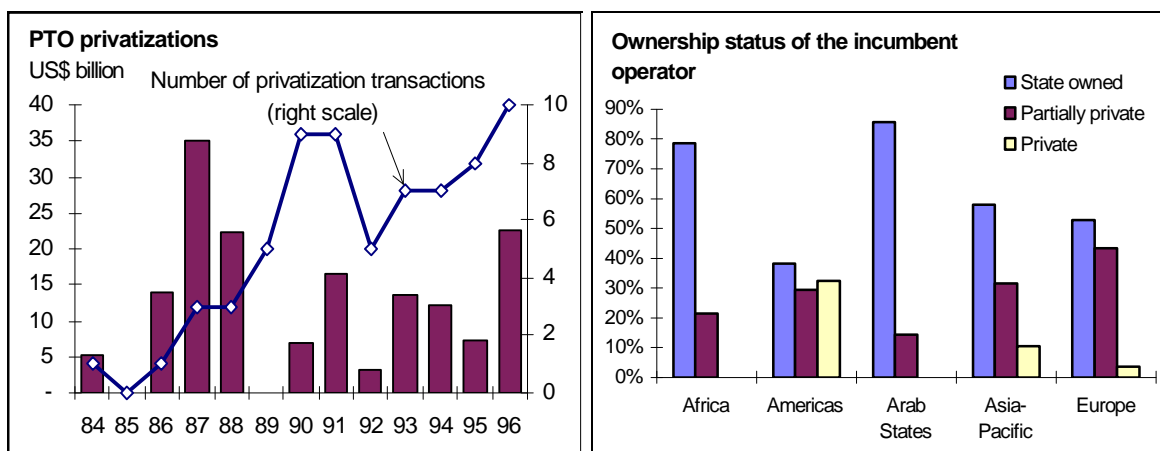
Rather than full privatization, it is corporatization of state-owned telecommunication companies that has instead proceeded across all regions. The preferred mode of private participation - at least in the early stages of ownership restructuring - is most frequently the sale of a minority of shares, either to a strategic investor or as a public offering. Full privatization, or the transfer of 100 per cent of the state-owned operator to private hands, has been limited to comparatively few cases (see Figure 1.3, right hand chart).

Although it is not an institutional prerequisite for implementing more advanced stages of reform, most nations have separated postal from telecommunication functions before introducing reform in the ownership of state-owned carriers. This process has been completed without exception across the Americas and is close to completion in most European and Asia-Pacific countries. In Africa and the Arab States, separation has been carried through in respectively 69 and 62 per cent of cases. Looking for development trends, countries that have separated postal from telecommunication services have generally moved on to corporatize and in some cases privatize - totally or partially - their national operators.

Increasing awareness of the central role telecommunication plays in economic development has led to strategies focused upon improvement in the performance of state-owned operators in both deploying infrastructure and providing services. Corporatization - that is the transformation of the national carrier from a government department (or similar institutional arrangement) to a commercial entity - has emerged throughout the world as the dominant mechanism for pursuing increased levels of efficiency and productivity. This has particularly been the case in Africa and the Arab States where private participation is at a very early stage. In Africa, more than 75 per cent of countries have transformed the national carrier into commercial corporations.

Figure 1.3: Going private

Telecom privatizations, by number of transactions and by value 1984-1996 and by region



Source: ITU World Telecommunication Development Report 1996/97 and ITU Regulatory Survey 1997.

Apart from the Americas - where privatization of national carriers has been adopted in the majority of states - countries around the world have been more reticent to allow private capital into their incumbent operators than was initially expected. Countries from the Americas were among the first to sell state-owned carriers to foreign owners, and among these, developing nations such as Argentina, Chile and Mexico sold controlling shares of incumbent carriers to strategic investors. Non-controlling shares were later sold to a larger number of small investors in two to three consecutive rounds. Variations on this approach were later adopted by countries such as Bolivia, Panama, Peru and Venezuela. By the end of 1997, private capital had been introduced in 16 state-owned telecommunication companies in the region. Four other countries - Brazil, Ecuador, El Salvador and Guatemala - are expected to sell part of their national carriers during 1998.

The rise of new private competing carriers in the Americas has been less significant than in the Asia-Pacific or Europe - owing to the exclusivity in basic services granted to privatized incumbent operators. In regard to limits on foreign ownership, the Americas also differs markedly from other regions. Most Latin American countries which participated in the WTO negotiations have no restrictions on foreign ownership as of January 1998. However, Brazil, Canada and Mexico, for example, have all retained foreign capital restrictions in domestic market participation.³

In the Asia-Pacific region, private participation in the ownership of incumbent national carriers has generally been implemented through the sale of minority shares on national and international stock exchanges. Roughly one third of countries in the region had some proportion of private ownership in their national carriers by 1997. Of those, only three (Mongolia, New Zealand and Sri Lanka) had sold majority shares to private investors.

Many countries in the Asia-Pacific region have instead promoted the creation of innovative arrangements in which public and private sector firms share different obligations and rights related to the provision of telecommunication services. These schemes - ranging from various Build/Transfer schemes, through management and service consultancy schemes, to traditional joint venture arrangements - have provided many developing countries in the region with a way of engaging private capital in the sector without giving up state control over key segments of the market. Countries have avoided granting long term exclusivity to incumbent carriers through this approach, something which has permitted a high degree of liberalization in some market segments.

The direct consequence of this is that a comparatively large number of new, privately-owned carriers have been allowed into Asia's domestic markets. In cellular mobile services, for example, there are more than 100 private or partly-private companies providing services in the Asia-Pacific region. While private participation is widespread in Asia, foreign ownership of carriers is largely restricted. This is particularly true in the case of incumbent operators. More than 62 per cent of the Asia-Pacific countries that signed the WTO Agreement on Basic Services have limits on foreign ownership - 80 per cent of those limit foreign ownership to less than 50 per cent.

The extent and timing of private participation in Europe has varied considerably. Several East European countries, CIS countries and Baltic States either privatized a part of their national carriers in the early 1990s or created new operators through joint ventures between the government and a foreign partner, such as those in Armenia, Georgia and the Ukraine. In the EU, almost half of the countries had partially privatized their national carrier by the end of 1997 - with two more countries planning to do so in 1998. Less than 20 per cent of these privatizations, however, have resulted in a new private owner controlling a majority share of the incumbent carrier. And, in only two cases (Spain and the United Kingdom) does private capital control 100 per cent of the incumbent carrier.

While some incumbent operators in the Arab States have been partially private for some time (Bahrain, Sudan and the United Arab Emirates), most countries in the region have not increased private capital in their national carriers in recent years. At the end of 1997, more than 85 per cent of the national carriers remained completely state-owned. One way in which the Arab region has expanded the participation of private capital in the sector is through the licensing of new private companies to provide services - mainly cellular mobile and value-added services. Three countries (Jordan, Kuwait and Libya) have partially-private mobile operators, while another two (Egypt and Morocco) plan to do so in the near future. Only one country in the region (the Lebanon) has adopted the private participation strategy that has been widely embraced in Asia: Build-Operate-Transfer

(BOT). Although a considerable amount of private capital invested in the region is of foreign origin (mostly European or American), foreign ownership of incumbent carriers remains minimal.

In Africa - in parallel to developments in Latin America, but in contrast to the Asia-Pacific region - the creation of new private companies has been limited and generally restricted to value-added and cellular mobile services. On the other hand, more than 20 per cent of countries have shares of the national carrier in private hands, while at least 11 other countries across the region are planning to privatize their national operators in the near future. And, resembling privatization policies in Latin America, almost half of the privatized African carriers sold controlling shares to a strategic foreign investor; a fact that shows increasing openness to the presence of foreign ownership. Yet, foreign capital remains, for the moment, a small percentage of all investments in the African telecommunication sector.

1.5 Competition trends

The successful conclusion to the WTO Negotiations on Basic Telecommunication Services, and regular reports on domestic telecommunication liberalization can easily build the perception that competition is now widespread throughout the world. In reality, the differences in market liberalization between regions and across market segments is considerable. Until recently, most markets that had embraced liberalization had shared a common characteristic in that competition, where allowed, emerged first in the “periphery” of the market, in services that were marginal to the incumbent’s operations. Value-added and cellular mobile services were, in most countries, the first segments of the market to be opened to competition. However this is changing. A number of countries have now introduced competition in basic services or have committed to do so in the near future. In this regard, however, it is important to make a distinction between local and long-distance services as well as between developed and developing countries.

Basic local services were traditionally less exposed to competition than the long-distance market. In a number of the developed nations - Australia, Japan, New Zealand, the United Kingdom and the United States - it was the long distance market which was opened initially. This has begun to change in recent years with an increasing number of countries opening their basic local service market to the entry of competing carriers (see Figure 1.4, left hand chart). Market competitiveness, however, varies strongly across regions, with the situation in Asia and Eastern Europe different from that in Africa, the Arab States and most of Latin America (see Figure 1.4, left hand chart).

In Africa and the Arab States, for example, both basic and long-distance services are only provided by the incumbent PTO. Close to 88 per cent of the countries in both regions still operate under a traditional market arrangement. Change, however, is in the making. In the Southern African Development Community (SADC) region, 33 per cent of the countries are considering new legislation to open their local services market to competitive entry in the next few years.

In most Latin American countries the situation is similar. In some cases, privatization of the national operator led to the granting of a period of exclusivity in basic telephony (e.g., Argentina, Bolivia, Jamaica, Mexico, Peru and Venezuela).⁴ In others, sector reform has been rejected or lagged behind government restructuring plans (Brazil, Paraguay and Uruguay). The picture however is changing rapidly. Some countries in the Americas (Canada, Chile, Colombia, Dominican Republic, Mexico and United States) have opened either local or long-distance markets. In addition, a number of countries are in the process of setting up the required legal and regulatory reforms to open their basic services market. An exception to this trend is the Caribbean countries that have granted long-term monopolies to private operators.⁵

Emerging markets in Eastern Europe, the Baltic States, the CIS and the Asia-Pacific fall somewhere between the increasingly open basic service markets of developed nations and the rather closed markets existing elsewhere in the developing world. Belarus, the Czech Republic, Kazakhstan, Kyrgyzstan, Poland, Russia, Turkmenistan, Ukraine and Uzbekistan, for instance, have liberalized their local markets in recent years. Unusually, these nations have opened their local service market *first*, while in most cases retaining PTO exclusivity in long-distance services.⁶ Similarly, in the Asia-Pacific, a number of developing nations have introduced competition into their local service market.⁷ Competition policy in these emerging markets, along with the opening of other basic service segments in both developing and developed nations, have turned the Asia-Pacific into one of the most competitive regions in the world.⁸ Almost 35 per cent of the countries in the region have introduced some form of competition in basic services (local, long-distance, and/or international).

In terms of market competition, developed nations increasingly tend to similar market profiles. Since early 1998, most EU member countries have been required to open their basic service market to competition. In countries such as Denmark, Germany, Italy and the United Kingdom, competition has already emerged in the international, long distance and, especially, mobile and data communications sectors. To a more limited extent, competition has also emerged in the local loop. The Italian operator Wind, for example, is using capital provided by Deutsche Telekom and France Telecom to build a full service competitor to Telecom Italia. Full service competitors have also emerged in Denmark (Netcom), France (Cegetel), Germany (Otelo, Viag InterKom), Netherlands (Telfort), Portugal (EDP) and the United Kingdom (Mercury - now merged into Cable & Wireless Communications - and more than 200 operators licensed since 1991). In this way, EU nations join other high income countries - such as Australia, Canada, Japan, New Zealand, Norway, the United Kingdom and the United States - who opened their markets earlier.

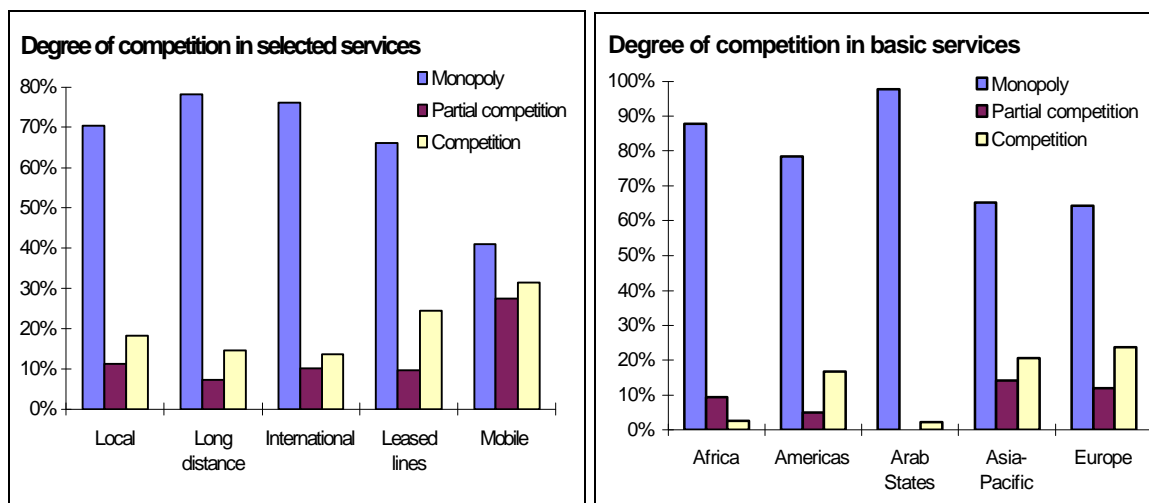
With competition in basic services still limited, it is the cellular mobile market that has enjoyed widespread liberalization. Here factors such as geographical location or the level of economic development play a far less important role than in the case of fixed telephone services. In 59 per cent of the countries with cellular mobile services, the market is open to either a duopoly or multiple operator competition (see Figure 1.5, left hand chart).

In Africa, about one third of countries have at least two cellular mobile operators. In the Americas and Asia, competition has been taken even further, with more than half of countries allowing competition in this market segment. In the case of Asia, industry observers have even gone so far as to suggest that in some countries too many operators may have been allowed.⁹ In Europe, countries at both ends of the development spectrum and both ends of the continent have embraced some form of competition in their cellular mobile service market. Over half the countries allow more than one operator in their local cellular mobile market, but more than three-quarters of the open markets restrict competition to a duopoly.

Not all regions of the world, however, have adopted competition policies for their cellular mobile markets. The majority of Arab States, for example, continue to maintain monopoly markets in cellular mobile telephony. Only the Lebanon allows competitors to provide services in this segment of the market, although Morocco and Jordan have just authorized second operators. Similarly, most Caribbean and Central American countries do not allow competing cellular mobile operators.¹⁰ Only Haiti, Nicaragua and Panama have liberalized these markets.

Figure 1.4: Competition: still a long way to go...

World-wide degree of competition in selected services and basic services by region



Note: Percentages pertain to number of countries world wide and by region which responded to the BDT Regulatory Survey 1997.

Source: ITU Regulatory Survey 1997

1.6 Key regulatory issues

The rise of private ownership and competitive markets has also increased the need for a closer and more thorough control of carriers operating in the market. This has led to the emergence of a host of new regulatory issues. Regulators generally take on the responsibility for functions such as tariffing, licensing, interconnection, monitoring service quality, spectrum allocation and so on. However, the emphasis placed on each of these areas depends upon the national situation of reform and the policy guidelines set by the respective policy making body. Consequently, different regulatory agendas have emerged, with each national agency reflecting the particular local environment. This section provides a brief overview of some of the most relevant regulatory issues on the agenda today, and the way various regions (and countries) are approaching them. A more detailed analysis of these subjects is dealt with on a regional basis in the following chapters.

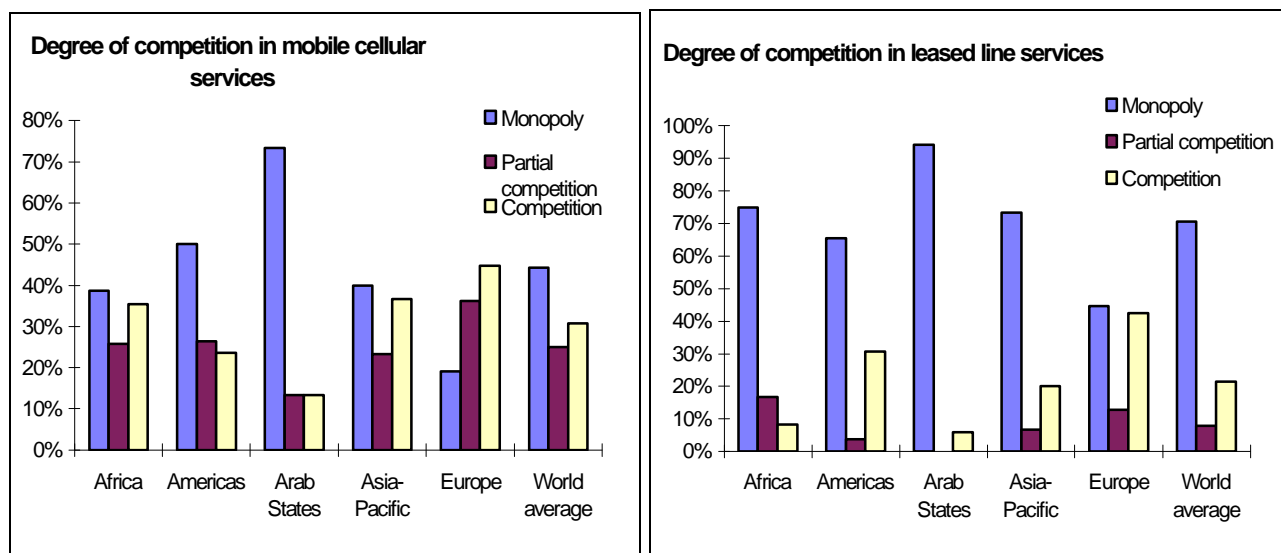
1.6.1 Interconnection

Interconnection-related issues are ranked by many countries as the single most important problem in the development of a competitive marketplace for telecommunication services. By contrast, in the Arab States, where competition is still at a low level, less than 20 per cent of countries presently place any significant emphasis on interconnection issues.¹¹ A similar picture is found in the Americas where a large number of markets still have a monopoly carrier or are in the early stages of competition in non-core services. Only 30 per cent of administrations throughout the Americas pointed to interconnection as a regulatory issue of relative importance.

However, in the Asia-Pacific region, where competition has been growing rapidly, almost half of all countries pointed to interconnection issues as a top regulatory priority. A similar degree of attention is found in Africa, where a number of countries are embracing liberalization. In Europe, interconnection has equally been a highly contentious issue. New directives in the lead up to the 1998 liberalization date required all operators which have more than 25 per cent market share to: interconnect with other operators on a non-discriminatory basis; publish interconnect price lists; and set cost-oriented interconnection prices.

Figure 1.5: ...but, closer than before

Degree of competition in cellular mobile services and leased lines, by region



Note: Percentages pertain to number of countries by region which responded to the BDT Regulatory Survey 1997.

Source: ITU Regulatory Survey 1997

1.6.2 Universal service

Universal service varies more significantly between developed and developing states than across regions. In the developed countries, universal service is typically defined as a telephone in every home, with regulation focused upon the provision of services to marginalized groups in society: the elderly or infirm, the unemployed or the disabled. A number of developed countries, Italy and Denmark for example, have required the operator to develop special telephone services for the hearing impaired.

For many developing countries with low household teledensity, the provision of service to every home remains a long-term objective. Thus, the focus has been on providing ‘universal access’ to a telephone. This has taken a variety of forms, such as village payphones, public call offices, and urban and rural telecentres. The Latin American operators often had a universal service component written into their licences, following privatization, as part of their network target requirements. In Mexico, for example, Telmex was required to install a payphone in every town of more than 500 people by 1994. In Chile, no such requirement was made initially, but the government later moved to establish a universal service fund targeting rural development. The regulatory department under the ministry (SUBTEL) oversees administration of the fund which awards licences to the lowest bidder.

Another approach, more prevalent in the Asia-Pacific, has been the “pairing” of newly-awarded licence areas with the requirement to install a certain number of lines in less economically attractive regions. In the Philippines, for example, five cellular mobile operators were required to install 400,000 new lines over a five year period, while seven international gateway licensees were required to install 300,000 new lines.

In Africa, there has been a greater focus on the development of community telecentres as points of access. Community telecentres are premises equipped with information and communication technology and services, such as stand alone and networked computers, printers, faxes, telephones, photocopiers, and a number of new services, such as connections to the Internet and other public networks and databases. They are open to the local community on a commercial basis not only for use, but also for training and education.

One noteworthy development is that, while it is the developed countries that have focused in a substantially greater fashion upon the provision of broadband services, the definition of universal service remains focused upon traditional basic telephony. Developing countries, by contrast, include a variety of other services within their basket of universal service: fax, data and, in many cases, Internet provision. Digital transmission, of course, means that there is no reason why basic services should be confined to plain old telephone services.

1.6.3 Licensing

Most countries will increasingly have to focus on licensing issues as more service providers enter the market. However, even in a number of developed markets, many incumbent operators do not have a licence for the provision of services. In a number of developing nations that still hold a monopoly in basic wireline services, licensing is only required for new entrants in non-basic services. There is also increasing debate over how specific or broad a licence should be in terms of the type of services being provided. The use of class-based licences and, having passed through the initial transition phases to competition, whether to issue licences at all is increasingly open to question.

In Europe, some regulators have started to waive licensing requirements for certain services - such as value-added services and leased lines. The 1997 European Union Licensing Directive has reinforced this trend by requiring that licensing authorities issue general authorizations to all interested carriers, rather than issuing individual licences to each operator. In some Asian countries, national authorities have decided to grant multiple service licences.¹² In Africa, nations like Uganda have opted for a categorization of major and minor licences.¹³

While multiservice licences may provide an incentive to new carriers, licence fees can constitute a significant barrier to the expansion of services and networks. In India, certain geographic regions have not attracted service bidders owing to high licence fees. In the Arab States, potential market entrants cite high licence fees as an important factor holding back developments.¹⁴ However, for many governments, the licensing process can be an attractive source of supplementary funds for the national treasury.

1.6.4 Price control

In the past, tariffs were mainly controlled through rate of return policies. This is a pricing regime under which the relevant body sets tariff ceilings for services based on a rate of return on capita, which enables the company to run its operations, expand its network and services, and earn a moderate profit for its owners sector entities or individuals.

In most countries with monopoly provision, price control is aimed at controlling the incumbent's profits. In the emerging competitive environment, price controls are aimed at ensuring that the dominant carrier is not able to abuse its market power or adopt anti-competitive pricing strategies. This is particularly true for basic wireline services where the incumbent carrier has strong leverage. Given this, it might be expected that price controls would be imposed only on the incumbent operator. As the Asian countries have shown, however, in a large number of competitive markets, price controls are imposed on both incumbents and competitive carriers.¹⁵ In non-basic services and mobile services, most operators around the world are granted greater flexibility.

It is frequently assumed that as markets become more competitive, and the dominance of the incumbent decreases, price controls become less relevant. Market mechanisms should replace price controls in a competitive marketplace. This trend can be perceived in competitive markets like the United Kingdom, where Oftel has progressively reduced the range of BT's services that fall under price cap regulation. In taking this decision, Oftel considered that BT's dominance in certain segments of the market had diminished and, therefore, price controls were no longer necessary.

The rise of competition has also triggered another sensitive pricing issue: rebalancing. The European Commission has been particularly active through a number of rulings and regulations in making sure that rebalancing - which is already well advanced among EU nations - is implemented by January 1998, when full competition is to be allowed in most EU markets.¹⁶ Tariff rebalancing is less dominant outside the EU countries. Eastern European countries as well as those in other parts of the developing world have generally been reluctant to carry out tariff rebalancing. Many countries in Africa, the Asia-Pacific, the Arab States, Latin America and the Caribbean derive more than half of their revenues from international services. Rebalancing would inevitably see local tariffs rise, the political consequences of which are not relished.

1.6.5 Spectrum management

Spectrum management has become an increasingly important regulatory function for two main reasons: radio frequencies remain a limited resource; and mobile roaming and new technologies (such as Wireless Local Loop (WLL)) benefit from regional, or standardized, frequency allocation. Mismanagement can result in competitive advantage to an operator - usually the incumbent - and can influence national standards selection or technology selection decisions. Transparent, technology-neutral selection processes by the regulator serve to level the playing field for new market entrants. Additionally, as auctioning becomes a more frequently used means of attracting private capital into the sector, the regulator's role in assessing and determining spectrum auction bids will correspondingly increase and broaden. However, Australia, the United States and India have all experienced problems in fairly and efficiently using spectrum auctions, with non-telecommunication groups able to distort the process.

The extent to which spectrum management has become a key regulatory issue therefore tends to reflect the degree to which markets have opened to competitive entry. Thus, Europe and Asia are the two regions to have given greatest attention to spectrum management so far. Europe has perhaps gone furthest in introducing common international (intra-regional) policies for radio spectrum management. At the EU level, specific legislation regarding the reservation of frequency bands for the provision of mobile services such as GSM and DECT were enacted between 1987 and 1991.

In Asia, a key trend has been the migration from analogue to digital technologies. Analogue cellular mobile radio systems utilize a comparatively high amount of bandwidth; as a result, territories such as Hong Kong (SAR), Singapore, Korea, Taiwan-China and Australia have been attempting to migrate users from analogue to digital. The technology migration process is not easy, however, and operators can incur significant capital cost. For the process to be enacted fairly and efficiently, the regulatory position needs to be transparent, so as to not favour one operator over another.

Across the Americas, spectrum management has been increasing in importance, particularly as more operators move into the cellular mobile sector, and also as new wireless technologies are selected. The Arab States and Africa, however, have yet to devote significant attention to this issue.

1.6.6 Supporting regulatory reform

An increasing number of countries in both the developed and the developing world subscribe to the notion that regulatory reform in the telecommunication sector is crucial if national economic development goals are to be achieved. The importance of the issue and the eagerness of governments to explore possible strategies to carry out reform does not preclude the fact that restructuring the sector is a daunting task that will stretch the resources of most countries around the world. For these reasons, a number of international, regional and sub-regional organizations have adjusted their programmes to respond to the growing demand for support with the regulatory issues raised by the restructuring of telecommunication services (see Table 1.1 and 1.2).

Among the international organizations, the International Telecommunication Union (ITU) has had technical assistance programmes for Member States since its early days. Technical support to *developing* countries, however, has been growing in recent years and regulatory support, in particular, has become a key component of the Union's activities in recent times. The Bureau of Telecommunication Development (BDT) is the main body within the ITU responsible for providing support to developing nations in their restructuring programmes.

The World Bank has also been involved in telecommunication issues for a considerable period of time. In the past, most of its activities were heavily oriented to providing loans to the public sector and monitoring the development of infrastructure projects to which these loans were applied. More recently, the Bank has shifted its focus and, while some loans are being oriented to the private sector in emerging economies, a substantial portion of the Bank's resources are devoted to supporting, or indeed inducing, reform programmes in the developing world.

The World Trade Organization (WTO) has been involved with telecommunications issues since its inception. The involvement of its predecessor body, the General Agreement on Tariffs and Trade (GATT), however, was a very recent phenomena. Telecommunication services only came under the WTO/GATT in 1986 with the beginning of the Uruguay Round and the focus upon trade in services. The WTO constitutes an international forum for countries to negotiate various forms of market liberalization in both goods and services. As such it does not deal, nor does it have, plans to become involved in supporting countries in their liberalization programmes or other regulatory-related issues.

In addition to these three main international organizations, there are a number of regional bodies that, in varying degrees, address the telecommunication issues of countries in their region. Some of these organizations, owing to their smaller size and the proximity of their member states, are quite effective in their support tasks.

Africa, for example, has numerous regional organizations that address telecommunication issues, including: the Organization of African Unity (OAU); the Economic Commission for Africa (ECA); the Pan-African Telecommunications Union (PATU); the Economic Community of West African States (ECWAS); the Economic Community of Central African States (ECCAS); the Conference of Central African Posts and Telecommunications Administrations (CCAPTA); the Central African Customs and Economic Union (CACEU); the Regional African Satellite Communications Organization (RASCOM); the Southern African Development Community (SADC) and the Southern Africa Transport and Communications Commission (SATCC); the Common Market for Eastern and Southern Africa (COMESA); and the newly created Telecommunication Regulation Association for Southern African countries (TRASA).

In the Americas, the Inter-American Telecommunication Commission (CITEL) operating under the institutional umbrella of the Organization of the American States (OAS) provides support and coordination to the regulatory and reform activities of its 34 member states. The Caribbean Telecommunication Union (CTU) has similar goals and the activities of its 13 member states receive the support of the institution in various regulatory issues.

In the Arab States, the Gulf Co-operation Council (GCC), the Regional Arab Information Technology Network (RAITNET) and the Permanent Telecommunication Committee of the League of Arab States (PTC), are assisting in shaping a common framework for telecommunication development and regulation in the region. Issues range from technical standardization, to questions of comparative practices and performance, to shared basic policy platforms for national telecommunication development.

In the Asia-Pacific there are number of institutions that are designed to provide support to reform programs in variety of ways. The Asia-Pacific Economic Co-operation (APEC) - which has a Telecommunication Working Group - holds regional meetings aimed at sharing information and coordinating of regulatory activities in the region. The ASEAN Telecommunication Regulators' Council (ATRC), created under the Association of South-East Asian Nations (ASEAN), has been devoted to similar activities but in a more detailed fashion. Other support institutions include the Asia-Pacific Telecommunity (APT) and the Pacific Telecommunication Council (PTC).

In Europe there are also a number of regional bodies involved in either supporting or making telecommunications regulation. Particularly strong in this area is the European Union (EU) which has supranational institutions (the European Council, Commission, Parliament and Court of Justice) with law-making powers in the field of telecommunications and other areas, which are legally binding in the member states. The Regional Commonwealth in the Field of Communications (RCC) coordinates members' activities in network development, technical standards and radio spectrum regulation, while the European Conference of Post and Telecommunications Administrations (CEPT), promotes cooperation between member administrations and bodies responsible for policy and regulation.

1.7 Conclusion

Regulatory reform in the telecommunication sector is not an end in itself, just as privatization and corporatization are not of themselves solutions to inadequate telecommunication service. The experiences of the late 1980s and early 1990s have shown that simply privatizing the national carrier or allowing the introduction of competitive service provision will not in and of itself provide sustained development.

In markets which have pursued reform agendas longest - Australia, the UK and the US - the former dominant provider remains significantly dominant, despite the regulator taking an interventionist role. As a result, the worldwide movement towards telecommunication deregulation has become telecommunication re-regulation. An entire package of new rulings and laws are often required to support the transition to competition. In other words, the new profile of the industry has brought with it the urgent need for the development of a separate and capable regulatory agency to serve as the referee.

The message, therefore, is not the advocacy of regulatory reform for the sake of reform but, rather, the need to create the necessary framework for the achievement of an efficient and developed telecommunication sector. Just as there are many diverse paths towards telecommunication reform, so too there are many paths towards the establishment of an appropriate regulatory framework. This volume is an early effort to bring these experiences together to highlight these choices. The "reform recipe" is not defined but its key ingredients are apparent.

Table 1.1: Major international organizations supporting regulatory reform

<i>Organization</i>	<i>Created</i>	<i>Membership</i>	<i>Comments</i>
International Telecommunication Union (ITU), Telecommunication Development Bureau (BDT)	1865	188 Member States and over 400 Sector Members	The International Telecommunication Union is the organization in which governments, private companies, scientific and industrial institutions cooperate to improve the rational use of telecommunications. BDT's activities focus on specific telecommunication development projects spanning infrastructure development, human resources development, training and regulatory issues. BDT also supports development of the sector by disseminating information through publications and training. BDT organizes regional conferences on fundamental issues facing the development of telecommunication in the regions, organizes, and has drafted resolutions and recommendations regarding such issues as sector restructuring, policy and regulatory issues and new technologies, assistance to LDCs, the impact of the GATS on telecommunication administrations.
Organisation for Economic Co-operation and Development (OECD)	1961	27 democratic member nations with developed market economies.	The role of the OECD is to promote policies based on studies and debate which: achieve the highest sustainable growth and employment; contribute to economic and social welfare; stimulate and harmonize member's efforts in favour of developing nations; and contribute to the expansion of world trade on a multilateral, non discriminatory basis. The OECD established in 1990 the Centre for Co-operation with the Economies in Transition (CCET) to address development needs of those specific countries.
World Bank Group	1944	Open partnership, 180 member countries. Not all countries are members of all the institutions that compose the Group.	The World Bank Group is composed of the International Bank for Reconstruction and Development (IBRD), The International Development Association (IDA), The International Finance Corporation (the IFC), The Multilateral Investment Guarantee Agency (MIGA), The International Centre for the Settlement of Investment Disputes (ICSID) and works like a cooperative. The Bank partners economies, especially the poorest, to help them expand their markets and improve the quality of life for every one.
World Trade Organization (WTO)	1995 (Its predecessor, The General Agreement on Trade and Tariffs (GATT), was signed in 1947.	132 Members	The WTO is responsible for administrating the WTO Trade Agreements like the GATS which provides, among other things, schedules on specific commitments such as trade in telecommunication services. It offers a forum for trade negotiations and handles trade disputes. It monitors national trade policies and provide technical assistance and training for developing countries.

Table 1.2: Major regional organizations supporting regulatory reform

Africa

<i>Organization</i>	<i>Created</i>	<i>Membership</i>	<i>Comments</i>
Organization of African Unity (OAU)	1963	All African countries	The OAU strives to unite the countries in the region to promote an African Economic Community. The organization recognizes the key role that telecommunications plays in the economic, social and political development of the region. Article 10 of the OAU Protocol on Transport and Communications specifically addresses the future commitments of African countries to the development of communications.
Pan-African Telecommunications Union (PATU)	1976		PATU, headquartered in the Democratic Republic of Congo, was established to coordinate the development of a pan-African telecommunications network.
The Southern African Development Community (SADC). Telecommunication Regulators Association of Southern Africa (TRASA)	1992 (its predecessor (SADCC), was established in 1980)	14 Member States: Angola, Botswana, Democratic Republic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.	The Southern Africa Transport and Communications Commission (SATCC) is the telecommunications arm of SADC. SATCC provides technical advice to countries in Africa. Among its activities, SATCC is involved in a USAID financed telecommunications project to provide restructuring advice to countries in Southern Africa. As part of the project, a website has been established that provides telecommunications information related to Southern Africa including telecommunications sector profiles on each of the countries in the sub-region. The SATCC members adopted the SADC Protocol on Transport and Communications in 1996. The Protocol provides guidelines for governments to address policy issues while allowing for telecommunications operational functions to be addressed through private entities with oversight by separate regulatory entities.
The Regional African Satellite Communications Organization (RASCOM)	1992	42 African countries signed the Convention and 39 the Operation Agreement.	RASCOM's objectives are to establish direct links between all the countries in the African region, improve inter-urban communications at the individual country level, and provide service to rural and remote areas. The organization's programme has two phases: the pooling of space capacities leased by African countries on various satellites, particularly DOMSAT; and establishing a dedicated satellite system in Africa, the first of which is to be in place by 1999.
Common Market for Eastern and Southern Africa (COMESA)		22 member countries: Angola, Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Rwanda, Seychelles, Somalia, Swaziland, Sudan, Tanzania, Uganda, Zambia and Zimbabwe.	COMESA consists of the English-speaking sub-regions of Eastern and Southern Africa. The Transport and Communications Division of COMESA has been working with the Bureau of Telecommunications Development of the ITU on technical cooperation in various areas, including network connectivity and tariffs.

Table 1.2: Major regional organizations supporting regulatory reform (con'td)

Americas

<i>Organization</i>	<i>Created</i>	<i>Membership</i>	<i>Comments</i>
Inter-American Telecommunication Commission (CITEL)	1965 (although history can be traced back to 1865)	34 Member States and 178 associate members.	CITEL is an entity of the Organization of American States which has the objective of facilitating and furthering the development of telecommunications in the Americas to contribute to the overall development of the region.
Caribbean Telecommunication Union (CTU)	1990	13 English speaking Caribbean states: Antigua and Barbuda, the Bahamas, Belize, the Commonwealth of Dominica, Grenada, the Co-operative Republic of Guyana, Jamaica, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago.	CTU is an intergovernmental body established to develop regional policy and programmes for the development of telecommunications including coordination of regional positions in areas of international decision making.

Arab States

<i>Organization</i>	<i>Created</i>	<i>Membership</i>	<i>Comments</i>
Arab Permanent Telecommunication s Committee of the League of Arab States	1990	22 countries	The Permanent Telecommunications Committee replaced the Arab Telecommunication Union which was created in 1953. The Permanent Committee is an intergovernmental body aimed to further telecommunication development. Active in regional harmonization of technical standards, tariff issues, etc.
Gulf Co-operation Council (GCC)	1981	6 Members: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates	The Telecommunication Department of the GCC has assisted its members to coordinate telephone and telex tariffs, adopt the GSM mobile telephone system, develop telecommunication emergency restoration plans, and unify the curriculum taught at GCC States' telecommunication colleges and training centres. Also implemented have been decisions to implement the ERMES paging system, SDH technology and CCSS-7 as standards. In addition, the GCC works with international organizations to increase unification and standardization processes.
Regional Arab Information Technology Network (RAITNET)	1995	14 countries: Algeria, Bahrain, Egypt, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, UAE, Yemen	RAITNET is a regional network that uses the Internet as its main transport facility. One of its goals is to assist in bringing the Internet to all Arab States.

Table 1.2: Major regional organizations supporting regulatory reform (cont'd)

Asia-Pacific

<i>Organization</i>	<i>Created</i>	<i>Membership</i>	<i>Comments</i>
Asia-Pacific Telecommunity (APT)	1979	29 member countries: Afghanistan, Australia, Bangladesh, Brunei Darussalam, Taiwan-China, India, Indonesia, Iran, Japan, Korea (DPR), Korea (Rep.), Lao, Malaysia, Maldives, Nauru, Nepal, New Zealand, Pakistan, Micronesia, Mongolia, Myanmar, Palau, Papua New Guinea, Philippines, Singapore, Sri Lanka, Thailand, Tonga, Vietnam.	APT's activities span technology to policy issues, domestic and regional networks to cooperation in telecommunication, technology transfer to human resource development. The organization plays a role in assisting telecommunication reform by disseminating information through seminars, meetings, workshops, publications and training.
Asia-Pacific Economic Cooperation (APEC), The Telecommunication Working Group	1990	18 member economies: Australia, Brunei, Canada, Chile, Taiwan-China, Hong Kong SAR, Indonesia, Japan, Korea (Rep.), Malaysia, Mexico, Papua New Guinea, New Zealand, Philippines, Singapore, Taiwan, Thailand, United States.	APEC's main role is to promote open trade and practical economic cooperation. The Telecommunication Working Group (TEL) addresses issues of relevance to member economies' telecommunication sectors including human resource development, technology transfer and regional cooperation, telecommunication standardization etc.
Association of South-East Asian Nations (ASEAN) Telecommunication Regulators' Council (ATRC)	1994 (ASEAN was created in 1967)	Brunei Darussalam, Indonesia, Laos (Rep.), Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam.	The Council provides a forum for the discussion of regulatory issues and for setting domestic and regional policies for the sector. Key aims include ensuring seamless roaming of services within ASEAN, facilitating intra-ASEAN trade in telecommunication equipment and services, enhancing interconnectivity and interoperability of ASEAN networks and strengthening the region's profile in the international community. Specific objectives include the harmonization of frequency allocation and type-approvals processes across ASEAN and the development of human resource expertise.
Pacific Telecommunications Council (PTC)	1980	More than 650 members which are individuals (qualified professionals), non-profit and for profit entities interested in telecommunications in the Pacific region. Members are found worldwide.	The Council provides a forum for discussion and the interchange of information, ideas and points of view regarding telecommunications in the Pacific area, by bringing together multi-faceted, diverse bodies, including users, planners and providers of equipment and services. It promotes the general awareness of the varied telecommunications requirements to meet the needs of the Pacific area. It organizes conferences and seminars to promote the free-flow on interchange of the varied views and requirements of the Pacific area and to address specific telecommunications issues to assist in solving near term and future issues. It communicates its viewpoints and recommendations to the established national, regional and international organizations responsible for telecommunications policies.

Table 1.2: Major regional organizations supporting regulatory reform (cont'd)

Europe

<i>Organization</i>	<i>Created</i>	<i>Membership</i>	<i>Comments</i>
European Conference of Post and Telecommunications Administrations (CEPT)	Formal Agreement signed in 1959. It has been an organization of regulators since 1992.	43 member administrations in Western and Eastern Europe	CEPT promotes cooperation between member administrations and bodies responsible for policy and regulation. CEPT's work is carried out by three main committees: CERP (for posts); ECTRA (for telecommunication); and ERC for radio. The EU institutions are encouraging CEPT countries to adopt policies aligned with those of the EU, and to handle certain telecommunications issues by voluntary inter-governmental agreement. ECTRA handles the harmonization of licensing conditions, and certain aspects of radio-spectrum management and numbering, in this way.
European Bank for Reconstruction and Development (EBRD)	1990	27 member states from Central Eastern Europe and Former Soviet Union.	The Bank was established to foster the transition towards open market oriented economies and to promote private and entrepreneurial initiatives in the countries of Central and Eastern Europe and the Former Soviet Union. It addresses all investment opportunities.
European Union (EU)	1993 (European Economic Community created in 1958)	15 member states: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, UK (13 applicants to join EU: Bulgaria, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, Turkey).	Established to build the economic integration of Europe, the EU has supranational institutions (the European Council, Commission, Parliament and Court of Justice) with law-making powers in the field of telecommunications and other areas, which are legally binding in the member states. Since the 1980s, policies designed to develop a common market for telecommunications services and equipment have been initiated, and framework European legislation (Directives) on many aspects of market liberalization has been adopted.
RCC (Regional Commonwealth in the Field of Communications)	1991	13 member administrations: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkey, Turkmenistan, Ukraine, Uzbekistan	RCC coordinates members' activities in network development, technical standards and radio spectrum regulation. Its work includes the development of principles governing tariff policy and the interconnection of networks. RCC is also involved in joint research and development programmes as well as the vocational training of communications specialists.

3. AMERICAS

3.1 Telecommunication reform in the Americas region

In the past decade, many countries in the Americas region have attempted to privatize their operators, introduce some level of competition and establish separate regulatory bodies. Not all have succeeded in their ambitious attempts to reform, but the overall results are encouraging. Governments in the region have overwhelmingly recognized the importance of telecommunications to economic development. This was made clear at the 1996 Senior Officials meeting called for by the 1995 Summit of the Americas.¹⁷ It was further demonstrated at the recent conclusion of the World Trade Organization's (WTO) Group on Basic Telecommunications (GBT), where 20 countries from the Americas region, out of total of 69, made liberalization commitments.¹⁸ The Caribbean countries reaffirmed this in the 1997 Bridgetown Declaration, where it was recognized that "access to modern telecommunications is indispensable to the development of international trade as well as to national and regional, social and economic development and security".

Statistics show that, since 1990, the number of telephone lines has increased by over 50 per cent in Latin America and the Caribbean. At the end of 1995, there were 226 million main telephone lines in the region; however, 81% of these were in North America. The average teledensity for the region is 30, but the range is enormous with Bermuda at 75 and Haiti with less than one. Statistics show that the overall teledensity in Latin America and the Caribbean is less than one fifth of the North American average, demonstrating that striking discrepancies remain between countries.¹⁹

Of the 34 ITU Member States in the Americas region, about three-quarters have separated postal and telecommunication functions. Nearly all, with a few exceptions in the Caribbean, have separated regulatory and operational functions. About half have set up separate regulatory agencies, the most recent being Brazil, in November 1997.²⁰

Almost all fixed-link operators are either corporatized or privatized. Thirteen countries (38 per cent) have privatized since 1987 and at least five more are expected in 1998. In North America and the Caribbean, private ownership of the public telecommunications operator (PTO) has been the tradition. In Latin America, the trend began in 1988 with Chile's privatization of the *Compañía de Teléfonos de Chile (CTC)*, the main local service operator, and *Empresa Nacional de Telecomunicaciones (ENTEL)* which provided the majority of the country's long-distance and international services. This was followed in 1990, by the privatization of Argentina's *Empresa Nacional de Telecomunicaciones (ENTEL)* and Mexico's *Teléfonos de México (TELMEX)*. Venezuela took the leap in 1991 with the privatization of *Compañía Anónima Nacional de Teléfonos de Venezuela (CANTV)*. Bolivia, Cuba, Panama and Peru have followed suit.

Competition, like privatization, has also flourished in the past decade in this region. Consistent with other regions, one of the first service areas to be liberalized has been mobile cellular and other non-basic services. Some countries have opened up long-distance and international fixed-line services to competition (e.g., the United States, Canada, Chile, and Mexico) or are about to do so (e.g., Colombia). In most cases, this has come after privatization owing to the fact that in many privatizations the new operators are granted a certain period of exclusivity for basic services, and sometimes all services. Overall, competition has progressed the least in the Caribbean countries, mainly as a result of exclusive licences.

No set pattern for the sequencing of reform has evolved. Many countries have chosen to privatize and maintain a private monopoly for a certain period (e.g., Argentina and Venezuela), while others have chosen to introduce competition without privatizing (e.g., Colombia). Some have now done both, with Mexico and Chile being both private and now fully competitive. Others such as Guatemala are intending to do both at the same time.

3.2 Changes in major telecommunication legislation

Consistent with the widespread reform of the telecommunication sector throughout the Americas region, there have been numerous legislative amendments which have legally enabled these reforms to occur. The main purpose of these legislative modifications is to introduce aspects which were not previously covered (e.g., competition) or to allow certain elements which were previously prohibited (e.g., foreign ownership, see Table 3.1). Many of the Caribbean countries, which were already private, have not made any recent changes. In the Bahamas, for example, the 1966 Telecommunications Act continues to govern the sector; while in St. Vincent and the Grenadines, the Public Telephone Act of 1969 still rules telecommunication services. St. Lucia is presently reviewing its telecommunication legislation.

In North America, new legislation has been introduced to respond to the changing environment. The Canadian 1993 Telecommunication Act replaced the Railway Act under which the telecommunication sector had been regulated since 1908. The new act, amongst other things, places reliance on market forces and competition to protect the interest of users; promotes Canadian ownership and control by imposing certain foreign ownership restrictions; gives the Cabinet the authority to issue policy directives; specifies the power of the Canadian Radio-television and Telecommunications Commission (CRTC); and establishes review and appeal procedures. The telecommunication sector of the United States, until the passage of the Telecommunications Act of 1996, was based on a legal framework established in 1934. (See Box 3.1.)

Like all legislative reforms, changes range from establishing a regulator, to privatizing the operator, to introducing competition in certain market segments. In many cases, the new laws are comprehensive. In Central America, for example, Guatemala has taken such an approach through the recent adoption of the 1996 General Telecommunications Law. This law approves the privatization of Empresa Guatemaltecas de Telecomunicaciones (GUATEL), creates the Superintendencia de Telecomunicaciones as a separate regulator, and introduces competition for local and long-distance services. In contrast, in Panama, a phased approach has been taken. A cellular telephony law was passed in 1991. Four years later, Law No. 5 was passed to restructure the Instituto Nacional de Telecomunicaciones (INTEL). Law No. 26 was passed in 1996 to create a new regulator, the Ente Regulador. Later that year, the new regulatory rules were adopted. Other moves in Central America on the legislative front have been made in Nicaragua, El Salvador and Honduras, for example. In Nicaragua, the 1995 General Law of Telecommunications and Postal services (Law 200) transformed the Instituto Nicaraguense de Telecomunicaciones y Correos (TELCOR) into the regulator. In El Salvador, a new reform law was recently passed which separates operational and regulatory functions and creates the Superintendencia General de Electricidad y Telecomunicaciones (SIGET) as the regulator. In Honduras, the Framework Law for the Telecommunication Sector was approved in 1995, which included the creation of CONATEL as the regulator. The HONDUTEL privatization proposal is pending Congressional approval.

In South America, legislative reforms have been impressive because of the large number of countries which have embarked on the restructuring path, and those countries which intend to do so in the near future. In Argentina, one year prior to privatization, the government set out the legal framework for privatization in the State Reform Law 23,696 and Decree No.731. The Comisión Nacional de Telecomunicaciones (CNT) was established in 1990 by Decree 1,185. The CNT's structure was modified in 1997 by merging the CNT with the Comité Federal de Radiodifusión and the Comisión Nacional de Correos y Telégrafos to create the CNC. Despite the overhaul of the sector, the Telecommunications Law of 1972 remains in place, with amendments to the provisions on exclusive government rights over service provision.

In Brazil, before bringing about sector reform, the government was obliged to change the constitution. In August 1995 the legislature passed a constitutional amendment to open the telecommunication sector to competition. The constitution had determined that the authorization, concession or licensing of telecommunication services would only be granted to companies under state control. The amendment gives the government the right to the authorization, concession, or licensing of telecommunication services without specifying the ownership of the grantee. Finally, in July 1997, the long awaited and highly debated General Telecommunications Bill was approved. This bill replaced the Brazilian Telecommunications Code of 1962. The new bill calls for the establishment of a regulator, sets the rules for privatization of TELEBRAS, allows for 100 per cent foreign ownership of telecommunication companies, and gives the President a veto on certain ownership decisions.²¹

In Chile, the birthplace of reform in Latin America, the restructuring process began with the passage of the National Telecommunications Policies Act in 1978 which allowed the government to grant concessions, licences, and permits for the provision of telecommunication service. This law was followed by the 1982 General Law of Telecommunications, which provided the basis for competition in all telecommunication services. This eventually led to the privatization of all state-owned telecommunication companies in 1988.

In Ecuador, the Special Reformed Law of 1995 (Ley Especial de Telecomunicaciones Reformada) created a regulator; converted the former Instituto Ecuatoriano de Telecomunicaciones (IETEL) into the Empresa Estatal de Telecomunicaciones (EMETEL) which was then transformed into a stock company; and it also allowed the possibility of selling 35 per cent of the shares of EMETEL.

In Mexico, the reform process can be divided into two phases. The first (1989-1994) was the privatization phase. The second (1995- present) focuses on market liberalization. In the first phase, operational and regulatory policy functions were separated; value-added services, terminal equipment and private and mobile network markets were liberalized; and TELMEX was privatized. The new regulatory framework was laid out by the Telecommunication Regulations of 1990 which detailed the authority and functions of the Communications and Transport Secretary (SCT - Secretaria de Comunicaciones y Transportes) and the way in which licences would be granted for all non-reserved areas. These regulations divided the country into nine cellular regions, allowing for a duopoly in each. In the second phase, one year after the basic interconnection rules were passed, the government adopted the 1995 Federal Telecommunication Law which called for the establishment of an autonomous regulatory agency; opened all market segments to competition; removed the distinction between fixed and mobile, and local and long-distance, and made interconnection and tariff unbundling mandatory.²² In 1997, the rules governing competition in the provision of local telephony were published.

The 1995 Telecommunication Law (Ley de Telecomunicaciones) of Paraguay created the Comisión Nacional de Telecomunicaciones as the new regulator, and the Consejo de Radiodifusión as an entity dependent on the new regulator. A new law is before Congress to transform this public operator into a stock company.

In 1993, Peru passed its Telecommunications Law establishing a new framework for telecommunications. It included, amongst other things, the establishment of the Organismo Supervisor de Inversión Privada en Telecomunicaciones (OSIPTEL) as the regulator. The resulting regulations emerging from the 1993 Law were passed in 1994 and included the principles of universal service, and non-discrimination. In 1994, Law No. 26285 set the framework for the progressive demonopolization of local, long-distance, and international fixed services. It also stipulated the measures to be included in the contracts of future licensees. Regulations governing the operation of OSIPTEL were adopted in 1994 and included the establishment of the Telecommunications Investment Fund (FITEL), to be administered by the regulatory agency (See Section 3.6). The government is in the process of preparing the “rules of the game” when the exclusivity of Telefonica ends in mid-1999. The rules are due to be published in June 1998.

3.3 Rise of separate regulatory agencies

By the end of 1997, half of the countries in the region had created separate regulators. With the exception of the United States and Canada, all were created in the past six years. A further five countries have announced their intention to create separate regulatory agencies in 1998. The first separate regulator was the United States’ Federal Communications Commission which, until 1996, was mandated by the 1934 Communications Act. The Canadian Regulator, the Canadian Radio-television and Telecommunications Commission (CRTC), was created in 1976. No separate regulators emerged in the late 1970s or 1980s. It was not until the 1990s, when the pace of privatization and competition increased, that 15 regulators emerged.

Typically, the creation of a regulator precedes a major overhaul of the sector; this was the case in Colombia, Ecuador, Guatemala, Honduras, Nicaragua, Panama and Paraguay. In other countries, the creation of the regulator coincided with the privatization of the state-owned operator, as in Peru and Venezuela. Argentina, Bolivia, Chile, Cuba and Mexico carried out their privatization efforts without a separate regulator. Argentina created the National Telecommunications Commission (CNT) in 1991 after privatization, as a branch of the Ministry of Communications.

Table 3.1: Americas: national telecommunication reform legislation*Selected countries, 1992-97*

Country	Year	Law/Decree	Remarks
Argentina	1996 1997	Decreto N°660 Decreto N°80	Reform of the state. Modified structure of National Administration, merged the Comisión Nacional de Telecomunicaciones with the Comité Federal de Radiodifusión and the Comisión Nacional de Correos y Telégrafos to create the CNC. The function of the CNC were modified though Decree N°1185.
Bolivia	1995	Ley de Telecomunicaciones	Established framework for liberalization of the sector and the privatization on ENTEL.
Brazil	1997 1997	Lei Geral de Telecomunicações Decree No. 2.338	Established a regulator, set the rules for privatization; removed foreign ownership restrictions. Established Anatel as an autonomous regulator.
Canada	1993	Telecommunications Act	Established powers of CRTC and the government, and policy objectives. Cabinet has authority to issue policy directions and review CRTC decisions.
Chile	1994	Ley 3A	Modified the General Telecom Law; established a multi-operator system for long-distance services; created the Fondo Desarrollo de las Telecomunicaciones to subsidize the installation of public telephones in rural and low income areas.
Colombia	1997	Resoluciones 86, 87 y 88	Opened local, regional and long-distance to competition.
Cuba	1992 1994	Decreto 167 del Comité Ejecutivo del Consejo de Ministros Decreto 190 del Consejo de Ministros	Cellular telephony concession. Basic telephony concession.
Dominica	1995	Telecommunications Act	Enabling legislation.
Ecuador	1995	Ley Especial de Telecomunicaciones Reformada	Created a separate regulator, corporatized EMETEL, and allowed for the sale of 35% of the shares of the state company.
Guatemala	1996	Ley General de Telecomunicaciones	Created the Superintendencia de Telecomunicaciones as the Regulator; permitted the privatization of GUATEL and the introduction of competition.
Honduras	1995	Ley Marco del Sector de Telecomunicaciones	Separated operational and regulatory functions; Created the Comisión Nacional de Telecomunicaciones, (CONATEL) as the regulator. Also restructured the state operator (HONDUTEL) to allow private investment.
Mexico	1995 1997	Ley Federal de Telecomunicaciones Reglas del Servicio Local	Opened market to full competition and called for the establishment of a regulator. Rules governing competition in the provision of local services.
Nicaragua	1995	Ley General de Telecomunicaciones y Servicios Postales	Transformed the Instituto Nicaraguense de Telecomunicaciones y Correos (TELCOR) into the regulator.
Panama	1995 1996 1996	Ley N°5 Ley N°26 Ley N°31	Restructured INTEL. Created a regulatory entity. Norms for regulating telecom.
Paraguay	1995	Ley 642 de Telecomunicaciones	Created CONATEL.
Peru	1993 1994	Decreto Supremo 013 Ley No. 26285	Defined the role of the state in the telecom sector, set up OSIPTEL. Progressive demonopolization in telecom.
United States	1996	Telecommunications Act	Allowed local telephone companies, long-distance companies, and cable companies to compete against one another (See Box 3.1)

Source: ITU/BDT Regulatory Database.

Note: This table is intended to be indicative rather than exhaustive.

Box 3.1: Recent legislative reform in the United States

The Telecommunications Act of 1996, among other things, (a) allows local telephone companies, long-distance companies, and cable companies to enter each other's line of business and compete against one another; (b) makes

connecting all classrooms, libraries and hospitals to the information superhighway by the end of this decade a high priority; (c) will help families gain control of the programming that comes into their homes through television; and (d) reduces limits on television and radio ownership.

Major changes include:

Local competition

Under the 1996 Act, each telecommunications carrier has a duty to interconnect with other telecommunications carriers that seek to enter its market. The act sets forth specific requirements that local exchange carriers (LECs) must fulfil to meet this duty. In addition, the new act specifies interconnection obligations for LECs, including new entrants. LECs must: (a) permit resale on a non-discriminatory basis; (b) provide number portability to the extent technically feasible; (c) allow access to poles, ducts, conduits and rights-of-way; and (d) establish reciprocal compensation agreements with other carriers for the transport and termination of traffic. They must also allow interconnection at any technically feasible point for the transmission and routing of telephone exchange and exchange access service. This interconnection must be made available at reasonable and non-discriminatory rates, terms and conditions. LECs must further provide for either physical or virtual collocation of equipment required for interconnection or access in the LECs offices on reasonable and non-discriminatory conditions. Certain exceptions from these requirements are allowed for rural LECs and LECs with fewer than two per cent of the nation's subscriber lines.

Universal service

A Federal-State Joint Board will make recommendations to the FCC regarding changes to the definition and funding of universal service. Each telecommunications carrier that provides interstate and intrastate telecommunications services must contribute, on an equitable and non-discriminatory basis, to universal service. Upon request, all telecommunications carriers must provide universal service to elementary schools, libraries and rural and non-profit hospitals at preferential rates. The 1934 Communications Act is amended so that the FCC's general universal service responsibility includes making communications available to all people of the United States "without discrimination on the basis of race, colour, religion, national origin, or sex." The 1996 act requires telecommunications equipment and services to be accessible to and usable by individuals with disabilities, to the extent this is readily achievable.

Provisions concerning Bell Operating Companies (BOC)

Upon enactment, a BOC may apply to the FCC for authorization to provide in-region long-distance services if it has entered into an approved interconnection agreement and meets the "competitive checklist" and other requirements in the 1996 act. The FCC may approve the authorization if it finds that the BOC meets these requirements and the authorization is in the public interest. A BOC must provide such service through a separate affiliate for 3 years after enactment of the 1996 act. A BOC may also, upon enactment, provide out-of-region and incidental long-distance services, as well as already authorized long-distance services. A BOC may engage in manufacturing if it is in compliance with the 1996 act's interconnection, non-discrimination and cross-subsidy requirements. Such activity must be done through a separate affiliate for 3 years after enactment. BOCs are permitted to engage in electronic publishing through a separate affiliate or joint venture, subject to the act's non-discrimination and cross-subsidy requirements.

Regulatory matters

The 1996 act requires the FCC to forbear from regulating telecommunications carriers or services if it determines that regulation is not necessary to ensure reasonable rates, protect consumers or otherwise promote the public interest.

Source: Adapted from the US contribution to the ITU-D Study Group 1 Meeting, September 1996.

In 1996, it was transformed into the National Communications Commission. Mexico, prior to opening the market to fully-fledged competition, created the Federal Telecommunications Commission (COFETEL), which started operation in August 1996. Chile and Cuba continue today without “separate” regulators, although Chile has recently announced plans to create one in 1999 to take over the responsibilities of the Undersecretariat of Telecommunications (Subtel).²³

Regulatory agencies can take many forms. It may be a collegial body as, for example, in Argentina, Canada, Colombia, Ecuador, Honduras, the United States and in the newly created Brazilian regulator. In Canada the regulator is composed of 19 members (some are full time, while others are part time) appointed by the government. The Colombian regulator has three commissioners which are appointed by the President for a period of three years. In other cases, the regulator is headed by a single president, director general, or superintendent, as in Bolivia, Nicaragua, Paraguay and Venezuela. In some cases, the division of responsibilities may be split among different telecommunication entities, as in Ecuador (see Box 3.2). In Peru, the duties of the regulator are conducted by an executive board comprising a chairman appointed by the President of Peru, and one representative each from the Ministry of Transport, Communications, Housing, and Construction, the Ministry of Economy and Finance, the teleservice users’ group, a teleservice licensee, and a carrier services licensee.

Some of the new regulators are multisectoral in that they regulate other public services. ARESEP in Costa Rica regulates electricity, water, public transportation as well as telecommunications.²⁴ SIGET in El Salvador also regulates electricity. In Panama, the Ente Regulador regulates telecommunication services, electricity, drinking water and the sewage system.

There is no single, correct model for a regulator. There are several different types in the Americas region alone; each one differs according to the situation in each country. Regulators may take on a variety of functions, including tariffing, licensing, interconnection, monitoring service quality, and so on. Most are responsible for frequency allocation, except in Peru, Colombia, Costa Rica and Canada. Many countries have decided not to include a licensing function for their new regulator, as this can often be an extremely controversial matter. Several countries have therefore left responsibility for licence decisions to the relevant ministry, head of state or other government body.

Most regulators in the Americas region are only quasi-independent, as they are responsible to their sector ministry and, in some cases, have limited functions. Nevertheless, many countries have indicated that they will give greater autonomy to their regulators in the near future, as was recently done by Argentina. In other cases, such as Chile, Haiti and Belize, regulation is handled by a department within the sector ministry. Table 3.2, identifies those regulators which are separate from a ministry, although they may still be supervised by one.

Of the 20 countries in the Americas that made commitments under the WTO’s Basic Telecommunication Agreement, 16 have adopted entirely the Reference Paper which spells out a variety of regulatory principles, regarding competitive safeguards, interconnection, universal service obligations, transparency of licensing criteria, the need for an independent regulator, and allocation and use of scarce resources. (See Table 3.3.) Of those 16, eight do not presently have regulators. These countries must now establish an independent regulator according to their individual commitments to the WTO. Ecuador did not make any commitments on the Reference Paper, while Venezuela and Brazil have indicated that they intend to adopt these principles in the future. Bolivia partially adopted the Reference Paper by committing to competitive safeguards, interconnection and universal service.

Box 3.2: Ecuador's regulatory framework

In August 1995, the Legislature enacted the Amendments and the General Telecommunications Regulations, which create a new telecommunications regulatory framework. The Amendments established a regulatory body (CONATEL - Consejo Nacional de Telecomunicaciones), and an administrative body (SENATEL - Secretaria Nacional de Telecomunicaciones). It also modified the responsibilities of the existing Superintendencia. In response to the creation of these new entities and the shift in responsibilities, CONATEL has been modifying existing regulations and resolutions to conform with these changes.

CONATEL, SENATEL, and the Superintendencia are funded by the rates and tariffs collected for the use of frequencies, as well as through other funds and resources which are: prescribed by law or regulation; obtained through investments; and acquired through inheritance and donations. The provisions relating to funding in the 1995 Amendments modify the provisions in the 1992 Special Law of Telecommunications which provided that the Superintendencia would be funded from royalty or tariff payments during the term of the concession, frequency authorizations payments and 25% of the initial authorization payment. As set forth in the 1993 Mobile Cellular Regulations and the Concession, the Superintendencia is in control of this funding; consequently, modifications must be made.

CONATEL

CONATEL consists of an independent, seven member regulatory council that serves as the highest authority over telecommunications. CONATEL is responsible for: annually determining the criteria and percentages that apply for the distribution of the resources derived from frequency tariffs and any other resources obtained from the provision of services; calculating the amount that should be deducted from the revenues collected from concessions; developing regulations regarding the allocation of frequencies, standardization, rates and interconnection; and establishing the terms, conditions, and duration of concessions and other authorizations. Its members include a cross-section of representatives, including: a representative from the President who acts as Chairman; the Commander-in-Chief of the Armed Forces; the Secretary General of the National Development Council; the National Telecommunications Secretary; the Telecommunications Superintendent; a representative jointly designated by the Chambers of Production; and a legal representative of the National Sole Central Committee of EMETEL Workers.

SENATEL

The newly-created telecommunications authority, SENATEL, is responsible for executing CONATEL's decisions. With the approval of CONATEL, SENATEL enters into concession agreements with operators for the provision of telecommunications services, grants authorizations to operators for use of the radio spectrum pursuant to contracts, and approves interconnection contracts between operators. SENATEL is also responsible for various spectrum issues which are subject to final approval from CONATEL including: administrating the spectrum and developing the Frequency Plan and determining the use of the radio spectrum. SENATEL is also responsible for preparing reports on tariffs, based on information received from the telecommunications carriers, which are submitted to CONATEL. The Secretariat of SENATEL is appointed by the President of Ecuador.

Telecommunications Superintendencia

Under the new regulatory framework, the Superintendencia, which previously served as the sole telecommunications entity, has become an oversight and compliance body. The Superintendencia's primary responsibilities include: maintaining oversight over the telecommunications service operators and ensuring that telecommunications operators are fulfilling their obligations; implementing CONATEL's rates schedules; and monitoring the radio spectrum. The Superintendencia also resolves controversies between operators, and between operators and subscribers. The Superintendencia is headed by a congressionally-appointed Superintendent who is nominated by the President of Ecuador. The Superintendent serves a four-year term.

Table 3.2: Americas: telecom regulators*Separate regulators, their structures and main responsibilities, 1997*

Country	Regulator	Created by	Head of regulator reports to	Financed by	Responsibilities
Argentina	Comisión Nacional de Comunicaciones (CNC) ²⁵ http://www.cnc.gov.ar/	Decreto N1626. Began operation in 1996	Secretary of Communications	National Telecom Fund	Technical Standards (with the Ministry), Interconnection, frequency allocation, type approval, monitor service quality
Bolivia	Superintendencia de Telecomunicaciones	1995 Ley de Telecomunicaciones			Licensing, tariff approval; monitor service quality
Brazil	Agência Nacional de Telecomunicações http://www.mc.gov.br/Anatel/	Telecommunication Law of 1997. Started operations in November 1997	Independent	Government appropriation.	Licensing, type approval, frequency allocation, and monitoring service quality
Canada	Canadian Radio-television and Telecommunications Commission (CRTC)	First established under the 1968 Broadcast Act. In 1976 CRTC Act gave regulator the authority over telecom matters. Began operation in 1976	Parliament through the Minister of Heritage	Government appropriation	Licensing, numbering plans (with the Ministry), Tariff approval, interconnection rates, monitor service quality
Colombia	Comisión de Regulación de Telecomunicaciones (CRT) http://www.crt.gov.co	Ley 142. Began operation in 1994	Ministry of Communications; head of state	Fees from regulated companies	Tariffing, and interconnection rates. Joint responsibility for service quality and licence fees, with the Ministry of Communications
Costa Rica	Autoridad Reguladora de Servicios Públicos (ARESEP)	1996			Regulates electricity, water, public transport, and telecom. Sets fees and rates for telecom services, and monitors quality of service
Ecuador	Consejo Nacional de Telecomunicaciones (CONATEL)	The 1995 Ley Especial de Telecomunicaciones. Reformada. Began operation in 1995	Head of state	Licence and spectrum fees	Licensing, numbering plans, tariffing, technical standards, interconnection rates, frequency allocation, establishing licence fees (See box 3.2)
El Salvador	Superintendencia General de Electricidad y Telecomunicaciones (SIGET)	1996 Ley de Telecomunicaciones	Ministry of the Economy		Regulates electricity and telecom. Numbering plans, frequency allocation
Guatemala	Superintendencia de Telecomunicaciones	1996 Ley General de Telecomunicaciones. Began operation in 1996	Ministry of Communications, Transport, and Public Works		Frequency allocation; numbering; resolving disputes
Honduras	Comisión Nacional de Telecomunicaciones http://www.conatel.hn	1995 Ley de Telecomunicaciones. Began operation in 1996	Ministry of Finance	Government appropriation	Licensing, numbering plans, tariff approval, technical standards, frequency allocation, type approval, service quality, establishing licensing fees

Table 3.2: Americas: telecom regulators (cont'd)*Separate regulators, their structures and main responsibilities, 1997*

Country	Regulator	Created by	Head of regulator reports to	Financed by	Responsibilities
Mexico	Comisión Federal de Telecomunicaciones (COFETEL) http://www.cft.gob.mx	Ley Federal de Telecomunicaciones Began operation in 1996	Secretary of Communication and Transport http://www.sct.gob.mx/		Numbering plans, tariffing, technical standards, interconnection rates, frequency allocation, type approval, monitor service quality, establishing licence fees
Nicaragua	Instituto Nicaragüense de Telecomunicaciones y Correos (TELCOR)	1995 Ley General. TELCOR, was transformed into the regulator in 1996	President of the Republic	Licence and spectrum fees	Numbering plans, tariffing, technical standards, interconnection rates, frequency allocation, type approval, monitor service quality, establishing licence fees
Panama	Ente Regulador de los Servicios Públicos http://www.sinfo.net/ente_reg/telecomunicaciones	Ley No. 26. Began operation in 1996			Regulates electricity, telecom and water. Licensing, numbering plans (with the operator) tariff approval, technical standards (with the operator), interconnection rates (with the operator), frequency allocation, type approval, monitor service quality, establishing licence fees
Paraguay	Comisión Nacional de Telecomunicaciones (CONATEL)	Ley 642/95 de Telecom. Began operation in 1995	Ministry of Public Works and Communications	Licence and spectrum fees	Licensing, numbering plans, tariff proposal, technical standards, interconnection rates, frequency allocation, type approval, monitor service quality, establishing licence fees
Peru	Organismo Supervisor de Inversión Privada en Telecomunicaciones (OSIPTEL) http://www.osiptel.gob.pe	Ley No.262685. Began operation in 1994	Functional dependence to the President of the Council of Ministers	Provision of regulated services	Tariff approval, establish technical standards (together with the ministry) interconnection rates, monitor service quality
United States	Federal Communications Commission (FCC) http://www.fcc.gov/	The Communications Act. Began operation in 1934	Independent	Licence fees, government appropriation, regulatory fees	Licensing, numbering plans (Regulator with the Operator), tariff approval, interconnection rates, frequency allocation (for non-government spectrum), type approval, monitor service quality, establishing licence fees
Venezuela	Comisión Nacional de Telecomunicaciones (CONATEL)	Decreto No. 1.826. Began operation in 1991	Ministry of Transport and Communications	Licence fees	Licensing, numbering plans, tariff approval (with the Ministry), technical standards, interconnection rates, frequency allocation, monitor service quality, establishing licence fees

Source: ITU/BDT Regulatory Database.

Box 3.3: Telecommunication sector reform in Peru

Peru is in transition to competition. Its telecommunication sector was privatized in 1994. Two companies offered telecommunication services: Compañía Peruana de Teléfonos (CPT S.A.), for local telephony in Lima, and Empresa Nacional de Telecomunicaciones (Entel Peru S.A.), for local telephony for the rest of the country, and carrier for national and international long-distance service for the whole country. However, since the winning bids in both cases were submitted by the same company (Telefónica de España), the companies were merged to form Telefónica de Perú.

As part of the concession agreement, Telefónica was awarded an exclusive licence for fixed local, national and international telephony services. The exclusivity period is non-extendible and expires in 1999. Telefónica is required to fulfil a series of requirements regarding service quality and expansion. It must install overall 1,200,000 lines and, in particular, install telecommunication services in 1,540 rural settlements whose population exceeds 500 inhabitants each. In addition, Telefónica is required to rebalance its tariffs (i.e., cost-based) to prepare for future competition.

All other services are open to competition. In 1997, there were two mobile cellular providers in Lima and one provider to serve the rest of the country; there are 26 paging companies; 24 cable television companies; and 38 value added service companies.

Legislation

Peru's Telecommunication Act classifies services into "bearer" (common carrier) services; "end or teleservices" (for example, fixed and mobile telephony; telex; paging; etc.); "value-added"; and "broadcast". The law stipulates that, beyond limited competition, in all cases services shall be provided within a framework of open competition between the various licensees.

In line with the principle of open competition, Peruvian legislation prohibits licensees from concluding agreements or engaging in practices that are liable to obstruct or otherwise distort the user's right to freely select the operator of his/her choice. In the same way, the state is required to foster open competition and regulate the market, so as to ensure its healthy development, to monitor the effects of monopoly situations, and to prevent restrictive agreements or practices resulting from dominant positions in the market. Finally, it is provided that the state shall foster user participation.

Interconnection of networks and services is obligatory between bearer service and teleservice providers, in accordance with the principles of equity, neutrality, non-discrimination and equal access.

To achieve universal service, Peru adopted two complementary measures. The first consisted in drawing up a list of unserved localities which licensees are required to serve within five years. The government is at liberty to grant licences to those parties interested in covering any remaining localities. The second was to establish the Telecommunications Investment Fund (FITEL) to be managed by OSIPTEL, the regulatory body. One per cent of telecom firms' gross income is used to fund FITEL. The fund began operation in 1994 and after one year was generating US\$450,000 a month. FITEL's objective is to help fund the necessary private investments to fill the telephone access deficit and reach rural, remote areas which currently lack telephone service.

The Peruvian Constitution reserves natural resources to the state. The Telecommunication Act has, therefore, expressly declared that the "radio spectrum" is a natural resource belonging to the national capital.

Policy management and regulatory authorities

Peru has created a regulatory system entrusted to the Ministry of Transport, Communications, Housing, and Construction and to the *Organismo Supervisor de la Inversión Privada en Telecomunicaciones* [supervisory body for private investment in telecommunications] (OSIPTEL). It is the ministry's task to establish general telecommunications policies; to grant and revoke licences, authorizations and permits; to administer and monitor use of the radio spectrum; to approve technical standards; and to harmonize telecommunication equipment and devices. For its part, OSIPTEL has the task of regulating the sector's market by defending free and fair competition; setting tariff systems; resolving disputes between operators of public telecommunication services; protecting telecommunication service consumers, and managing the Telecommunications Investment Fund.

Source: Adapted from the Americas Blue Book, 1996, ITU/BDT.

Table 3.3: Americas: commitments made to the WTO/GBT*Regulatory principles, foreign ownership and market access*

Country	Regulatory principles	Maximum foreign ownership allowed	Commitments on market access
Antigua & Barbuda	Adopted entirely	None - reserved for exclusive operator until 2004	Voice telephone, data, telex, telegraph and private leased circuits: reserved for exclusive operators until 2012. Cellular mobile, mobile data, PCS, paging and trunked radio: foreign ventures allowed if capital invested exceeds US\$500,000. Satellite mobile and fixed services reserved for exclusive operator. Offers full competition in telecommunication equipment sales, rental and maintenance.
Argentina	Adopted entirely	100%	Commitment to phase in liberalization of voice telephony in November 2000. Full competition without phase-in for other basic telecommunication services. MFN exemption on supply of fixed satellite services by geostationary satellites.
Belize	Adopted entirely	25%	Most telecommunication services reserved for existing operators with call-back and by-pass not permitted. Service competition in online services after 2007. Competition in paging after 2007 and in trunked radio service after 2002.
Bolivia	Partial adoption	100% (2001)	Phased-in competition in all domestic long-distance and international basic services in November 2001. Local telephony provided by 16 exclusive local suppliers. Full competition without phase-in for services to closed-user-groups and for mobile services.
Brazil	In the future	49%	Commitment to end monopoly within one year. Commitment to open markets for paging and closed-user-group services without phase-in, to establish cellular duopolies and to phase out foreign ownership restrictions on mobile cellular and satellite as from July 1999. MFN exemption on DTH broadcasting.
Canada	Adopted entirely	46.7% cumulative - 20% direct, 33.3% indirect investment in the voting capital	Phase-out of certain routing restrictions and foreign equity restrictions by year 2000. Commitment to remove restrictions on landing rights for submarine cables. Exclusive rights on satellite facilities and earth stations to service the North American market will be eliminated from April 2002. Market access exemptions for certain cities or provinces.
Chile	Adopted entirely	100% - except for local services	Full competition in national long-distance and international markets for all basic telecommunication services. No commitment made on local services.
Colombia	Adopted entirely	100%	Two new operators for national and international basic services to be licensed in 1997 with exclusive rights for seven years. Regional duopolies for cellular to be liberalized after June 1999. Offer excludes non-geostationary satellite services.
Dominica	Adopted entirely	None - reserved for exclusive operator	Infrastructure provision reserved for exclusive operator. Service competition, using facilities of exclusive operator, possible for non-public data, value-added services and Internet.
Dominican Republic	Adopted entirely	100%	Competition in all basic services subject to commercial presence and licensing requirements.
Ecuador	Not adopted	100% - selected services only	Commitment to open market access for cellular mobile.
El Salvador	Adopted entirely	100%	Full competition in most basic telecommunication services.
Grenada	Adopted entirely	None - reserved for the exclusive operator	Most basic telecommunication services reserved for exclusive operator until 2005; thereafter open to competition.
Guatemala	Adopted entirely	100%	Full competition in most basic telecommunication services subject to licensing restrictions and availability of frequencies.
Jamaica	Adopted entirely	100%	Most basic telecommunication services are reserved for the exclusive operator until September 2013. Internet (excluding voice) liberalized. Cellular telephony reserved for five to ten years.
Mexico	Adopted entirely	49% - more allowed for cellular	Commitment to competition in local voice services, data and private leased circuits.
Peru	Adopted	100%	Voice telephone services to be liberalized in 1999. Other basic

<i>Country</i>	<i>Regulatory principles</i>	<i>Maximum foreign ownership allowed</i>	<i>Commitments on market access</i>
	entirely		services to be liberalized in 1999 (long-distance and international) or without phase-in (local). Tenders will be applied where spectrum resources are limited.

Table 3.3: Americas: commitments made to the WTO/GBT*Regulatory principles, foreign ownership and market access*

Country	Regulatory principles	Maximum foreign ownership allowed	Commitments on market access
Trinidad & Tobago	Adopted entirely	None - reserved for the exclusive operator	Commitment to competition in telephone, data, telex, telegraph and private leased circuits starting in 2010. Until then, competition in some value-added services using the network of the exclusive operator. Offers competition in mobile services including cellular.
United States	Adopted entirely	100% (indirect)	Commitment to open markets for all basic telecommunication services in all market segments including unrestricted access to common carrier radio licences that are indirectly foreign-owned. Commitment to removing restriction on landing rights for submarine cables. Remaining limitations on foreign access cover issuance of radio licences that have more than 20 per cent direct foreign ownership. COMSAT monopoly over access to INMARSAT and INTELSAT capacity is retained.
Venezuela	In the future	100%	Commitment to open telephone market, in all segments, from October 2000. Full competition, without phase-in, in services such as cellular mobile, data and paging.

Note: * *Regulatory Principles - Bolivia adopted the following regulatory principles: competitive safeguards, interconnection and universal service.*

** Foreign ownership is from Jan. 1998, unless otherwise indicated.

Source: *Adapted from ITU World Telecommunication Development Report 1997, WTO.*

3.4 Ownership reforms

As mentioned in Section 3.1, three-quarters of the countries in the region have separated their postal and telecommunication operations, and almost all countries have separated operational and regulatory functions. In addition, the majority of countries in the Americas have corporatized their operators and many have privatized in recent years.

Most countries in the Caribbean are served by monopolies which are owned or controlled by Cable & Wireless. However, Caribbean countries with state-owned operators, such as Aruba, Bahamas and Curacao, have begun to take steps towards privatization. In Latin America, state-owned monopolies were the norm. The first major change in ownership took place in 1988 with the privatization of Chile's *Compañía de Teléfonos de Chile (CTC)* and the *Empresa Nacional de Telecomunicaciones (ENTEL)*. Since then, sixteen state-owned telecom operators from thirteen countries have been privatized (see Table 3.4). At least five more countries have announced their intention to privatize in 1998 (i.e., Brazil, Ecuador, El Salvador, Guatemala and Nicaragua).

Typically, privatizations in the Americas have been carried out through an initial sale of a block of stock to a strategic investor consortium (or a single, strategic equity partner, as in Bolivia) and often have included, or been closely followed by, a public stock flotation (e.g., Argentina, Mexico, Peru, and Venezuela). The foreign investors, often consisting of a consortium of telecom operating companies and financial institutions, are usually joined by local investors. Normally the investor consortium is obliged to spend considerable sums to upgrade and expand the basic services network. In return, investors are frequently granted operational control over the enterprise, even if they are minority shareholders, and are guaranteed certain exclusive rights, often including a monopoly over basic services for a fixed period of time.²⁶ Governments have elected for a gradual sell off in most instances. In no case, has any government sold 100 per cent at one time.

Chile is often credited as having started the privatization process in the region. The main private national operator, CTC, was established in the 1930s as a private company. In 1964 the government created another organization in charge of long-distance telecommunications, ENTEL. CTC was transformed into a mixed ownership company and, by 1971, was completely nationalized. CTC was reprivatized in 1987 through the sale of 53 per cent of the shares to the Bond Corporation. The remaining shares were sold to employees and the public in 1988. In 1990, Telefónica de España bought Bond's interests. The company offers all

telecommunication services. ENTEL, the second national operator, was also privatized in 1988. Following Telefónica de España's acquisition of shares in CTC in 1995, it had to withdraw from ENTEL for anti-trust reasons; Telefónica sold its 20 per cent of the shares in ENTEL to COINTEL. In 1995 STET bought an 18 per cent stake in ENTEL. The remaining shares were sold to various investors, employees and the public. The company now offers all telecommunication services and competes with several other companies.

In Argentina, the national telephone monopoly, Empresa Nacional de Telecomunicaciones (ENTEL), was broken into two entities in 1990, to cover the northern and southern portions of the country. Sixty per cent of each was sold. The northern operator, Telecom Argentina, was sold to a consortium comprising STET, France Télécom, JP Morgan and a group of Argentine investors. The southern operator, Telefónica de Argentina was sold to a consortium consisting of Telefónica de España, Citicorp and an Argentine company. Ten per cent of the shares in each company were given to employees and the remaining 30 per cent government held stake in Telefónica and Telecom was offered publicly on the Buenos Aires and New York stock exchanges. Both entities were given a seven-year regional monopoly on basic telephone services (local and domestic long-distance), which was due to expire on 7 November 1997. Provision was made to extend these monopolies for a further three years, subject to an evaluation of their performance, and this is currently under review. The two new entities jointly own Telintar, which is responsible for the provision, on an exclusive basis, of most international services. Telefónica and Telecom also own Startel, which is responsible for mainly data; and Minifon (formerly Movistar), a cellular operator.

Although some shares in Mexico's operator, Teléfonos de México (TELMEX), were previously privately held, the government accelerated the privatization process in 1990 when it sold 20 per cent of its stake to a private consortium. The consortium comprised Mexican manufacturing and mining concern, Grupo Carso, as the major partner and included Southwestern Bell and France Télécom. In May 1991 the government sold the majority of its remaining, non-voting shares on the Mexican and international stock exchanges. The remaining shares were sold off through domestic and international offerings between 1992 and 1994.

Venezuela partially privatized its national carrier CANTV in 1991 with the sale of 40 per cent of the stock to an investor consortium led by GTE. CANTV was given an exclusive licence until the year 2000.

In Cuba, the incumbent operator, ETECSA, was 49% owned by CITEL (Grupo Domos). In 1994, STET purchased 25% of CITEL, thereby making it a part owner in ETECSA. In the same year, Telefónica de España purchased a 35% stake in ENTEL-Peru and Compañía Peruana de Telefonos (CPT). The Peruvian companies were merged into Telefónica del Perú. In 1996, 26.6% was sold in a domestic and international public offering.

Fifty per cent of Bolivia's ENTEL was sold in 1996 to STET. STET was given a 40 year licence to provide all services. Exclusivity was given for local, long-distance and international basic services until 2001. In Panama, Cable and Wireless purchased 49% of INTEL in May 1997. In return the company was given a 20 year licence and exclusivity on basic services until 1 January 2003.

A number of forthcoming privatizations are expected in the Americas region. Following the passage of the 1997 Telecommunications Bill, Brazil is preparing for the complete privatization of TELEBRAS' 27 local operating companies, as well as its long-distance and international carrier, EMBRATEL. The government announced in October 1997 that, for sale purposes, it plans to split TELEBRAS into three basic service companies, nine cellular companies, and a long-distance carrier, EMBRATEL.

Ecuador has decided to follow the example of Argentina by dividing EMETEL geographically. EMETEL S.A. will be divided into two regional companies (Andinatel and Pacifictel). Each of the companies resulting from this division will be partially privatized by selling 35 per cent of the stocks to an international investor, and 10 per cent to the workers. The operators will be awarded 15-year concessions with exclusive rights to provide local, national and international services for the first five years. The privatization was expected before the end of 1997 but has been postponed until early 1998 owing to concerns raised by potential investors.

In El Salvador, despite significant opposition from labour unions, the legislative assembly approved the privatization bill in November 1996 to allow the privatization of ANTEL through the sale of 51 per cent of the company to a strategic investor with the remainder to be placed in a blind trust. The government expects to divide ANTEL into two companies: Compañía de Telecomunicaciones de El Salvador (CTE), which would retain ANTEL's fixed infrastructure and receive a concession for PCS; and Internacional de

Telecomunicaciones de El Salvador (INTEL), which will be the wireless operator with a licence to operate mobile and fixed cellular. The privatization was approved by congress in November 1997 and is expected to take place in 1998.

Guatemala is moving forward with its full-scale privatization programme. The government intends to sell between 51 and 95 per cent of the Empresa Guatemaltecas de Telecomunicaciones (GUATEL) to an international operator. The government is also trying to fully liberalize basic services, as stipulated in the 1996 General Law of Telecommunications. This is unlike other neighbours in the region, which have chosen to privatize first, grant a period of exclusivity to the new operator and then introduce gradual competition. In Honduras, the government intends to sell off 49% of HONDUTEL, but the date has yet to be determined. In the few countries in the Caribbean where the main operator is still government owned (e.g., Aruba, Bahamas, and Curaçao) steps are being taken to privatize.

Regardless of the way in which privatization is carried out, in most cases the fully or partially privatized operator is given an exclusive licence for a certain period of time. During that period, and perhaps thereafter, the operator is required to meet certain performance requirements and defined network and service expansion objectives.

In Argentina, for instance, both Telecom and Telefonica were required under the terms of the privatization to invest at least US\$600 million in the telecommunication sector over the first two years following the privatization; each operator was required to increase its network to 1.5 million lines and bring the call completion rate for both local and long-distance to 98 per cent. In addition, repairs had to be made in one day and installation completed within 15 days of a service request. The new operators were required to provide free emergency calls and free directory information services. The decision on whether to extend the exclusivity period granted to Telefonica and Telecom will depend to some extent on whether they complied with these privatization requirements.

A similar approach was taken in Mexico, where TELMEX was granted a six-year monopoly concession for basic telecommunication services. The terms of the sale required that TELMEX expand service access at an average rate of 12 per cent annually until 1994; reduce the waiting period for service and repairs; and improve the quality of service. To safeguard against the company focusing on providing only the most lucrative markets, the concession included obligatory provisions to improve communication services in rural communities. Every town with 500 inhabitants or more was to be served by at least one telephone by 1994.

Performance requirements were also part of the privatization process in Panama. In the recent privatization of Panama's INTEL, as part of the agreement Cable & Wireless is required to invest about US\$500 million over the next five years in order to double the number of telephones and reach a teledensity of 25 lines per 100. Other build-out requirements include a three-day turn-around for 95 per cent of new line requests and complete switch digitization by 2002.

Conditions were also imposed in the privatizations of Peru and Venezuela. Telefónica del Perú was given a five-year exclusivity period (expiring in 1999) on the provision of local and long-distance services and a 20-year renewable concession. The concession contained certain performance requirements, including the installation of almost one million lines (see Box 3.3). In Venezuela, the new owners of CANTV were required to expand the network, which consisted of 1.47 million lines in 1991, by 355,000 lines annually until the year 2000. Also by that time, 98 per cent of all requests for new lines would have to be met within five days.²⁷

While the commitment to privatize may appear unanimous in the Americas region, the process has proven difficult in some countries. Several efforts could not be realized, as a result of national opposition. Most resistance has come from labour unions and employees who fear the loss of jobs. In Venezuela, labour concerns were met through the sale of a portion of the stock to employees. The attempt to privatize Costa Rica's ICE was abandoned in 1987 owing to political opposition. In 1991 the Colombian government's announcement to sell off TELECOM resulted in a nine-day strike and the cancellation of privatization plans. A four-day strike broke out in Honduras to protest against the privatization of HONDUTEL, although the government still intends to go ahead with the sale of 49 per cent. The Nicaraguan privatization bill was approved in November 1995 and ENITEL was scheduled for privatization in July 1997, but this has now been postponed amid strong labour and political opposition. The same is true for Uruguay, where the privatization of ANTEL was defeated by public referendum in 1992.

Some of the countries who have not privatized have chosen to introduce competition in selected or all service areas (see Section 3.5). Overall, private sector participation in the region is on the increase with the continued trend to privatize and/or introduce competition. Restrictions on foreign ownership are also being eased throughout the region. Many countries made specific commitments in this domain under the WTO/GBT agreement (see Table 3.3). Of those which were not part of the GBT, Cuba's foreign investment law (i.e., Ley 77 de la inversión extranjera) does not fix a limit, but in existing companies the maximum for basic telecom services is 49 per cent, and for cellular 50 per cent. In Honduras, again there is no limit while, in Nicaragua, the maximum allowed is 49 per cent.

3.5 Competition trends

Competition in the Americas region has begun to flourish, even in countries with state-owned operators. While the motives for privatization and the introduction of competition are often related, they do not usually occur at the same time. As mentioned in the previous section, where competition is introduced instead of, or prior to, privatization, it is often the result of political and social resistance to the privatization process itself. In other cases, there may be legal impediments to privatization, such as a constitutional prohibition against foreign ownership - as was the case in Brazil.²⁸

Consistent with the global trend, the service areas most likely to be opened to full or partial competition are non-basic services (i.e., mobile cellular, value-added services, private networks, etc.). This is, in part, a consequence of the creation of private monopoly operators, which are granted exclusive rights to provide basic fixed-line services for a number of years. As a result, governments have encouraged competition in segments of the market where there is no exclusivity. Moreover, many governments have chosen to liberalize these service areas to foster universal service goals. For mobile cellular, Mexico, Nicaragua, Panama, Peru, the United States and Venezuela all allow full competition. Canada allows partial competition in mobile analogue and full competition in mobile digital. Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Haiti and Uruguay allow partial competition for mobile services.

The introduction of competition in basic services has been slower to take off. Six countries (i.e., Canada, Chile, Colombia, Dominican Republic, Mexico, and the United States) allow competition in local services. Partial competition in local services is allowed in Honduras. The remainder are monopolies. In the United States, the local service market was opened as a result of the 1996 Telecommunication Act. In Mexico, the 1990 Regulations and the subsequent 1995 Federal Law permitted competition in the local loop, but the rules were not published until October 1997. Auctions took place in November 1997 for radio frequencies reserved for local services; licences will be awarded in 1998.

In long-distance services, the same six countries allow competition. Competition in international services is permitted in Chile, the Dominican Republic, Mexico, the United States and Colombia. Canada and Haiti allow partial competition. (See Figure 3.1 and Table 3.5.)

Chile boldly opened its long-distance and international market in 1994, with the passage of the new telecommunication law and its regulations. In 1997, there were eight long-distance companies in operation. In Argentina, as already mentioned, the monopoly period for Telefonica and Telecom was to end in November 1997. As expected, the two companies requested an extension for three years. However, by the end of 1997, the decision on the extension had not been made because of a pending law suit brought about by a private individual. The regulator announced in November 1997 that the decision would be deferred until the court case was settled.²⁹

In Mexico, TELMEX's monopoly officially ended in August 1996, but competition in long-distance and international services did not begin until January 1997. The concession for TELMEX expressly limited the exclusivity period for long-distance and international until August 1996. The concession also stipulated that TELMEX take measures before the exclusivity period ended to ensure that competition would be viable.

Table 3.4: Americas: privatizations

Privatizations of state-owned telecommunication companies, 1987-97.

Country	Privatized company	Percentage*	Year	Main shareholders
Argentina	Telecom Argentina	100	1990, 1992	60% divided among STET (Italy, 30%), France Télécom (30%), JP Morgan (USA, 10%), Compañía Naviera Perez Companc (30%); 30% public; 10% employees.
Argentina	Telefónica Argentina	100	1990, 1991	60% to COINTEL divided among Telefónica de España (30%), Citicorp (USA, 57%), and Techint (Italy, 10%); 30% public; 10% employees.
Barbados	Barbados External Telecom	25	1991	Cable & Wireless increased its stake to 85%.
Barbados	Barbados Telephone Company	11	1991	Cable & Wireless increased its stake to 75%.
Belize	Belize Telecom.	95.5	1988, 1990	49% sold in 1988, including 25% to BT. In 1990, 13.1% sold to local investors and a further 35.4% in 1991.
Bolivia	ENTEL	50	1995	STET
Canada	Teleglobe	100	1987	Originally sold to Memotec but subsequent ownership changes have left BCE as the main shareholder (24.3%).
Chile	ENTEL	69	1988, 1989	The state-owned Corporación de Fomento de la Producción (CORFO) gradually sold most of its shares in ENTEL. Telefónica de España, which had bought up to 20% of ENTEL, was asked to withdraw because of its stake in CTC. Its shares went to COINTEL of Argentina. STET acquired an 18% stake in ENTEL for US\$278 million in December 1995.
Chile	CTC	100	1987, 1990	Bond Corporation acquired 53% of CTC with investments of US\$115 million and US\$155 million in 1987 and 1988 respectively. In 1990, Telefónica de España bought those interests.
Cuba	ETECSA		1994	In 1994, STET (Italy) purchased 25% of CITEL, a Mexican company, Grupo Domos, that owns 49% of ETECSA. Based on the capital stock of CITEL, the value of the transaction was US\$323 million.
Guyana	Guyana Telecom Corporation	80	1991	Atlantic Tele-Network
Jamaica	TOJ	40	1989, 1990	The incorporation of TOJ took place in May 1987, grouping Jamintel in which Cable & Wireless had 49% and Jamaican Telecommunication Corporation in which the state had 90%. By this arrangement CABLE & WIRELESS received 39% of TOJ. The government of Jamaica sold 20% in 1989 and again in 1990 to CABLE & WIRELESS which thus increased its stake up to 79%.
México	Telefonos de México (TELMEX)	55.1	1990, 1991, 1992, 1993, 1994	In 1990 4.4% went to the employees for US\$325 million (financed through loans) and 20.4% was sold to a consortium including Grupo Carso of Mexico, France Télécom and SBC of the US for US\$1,757 million. In 1991, 15.7% offered to the public (domestic and international public offerings), raising some US\$2,170 million. In 1991, SBC exercised its option to buy 5.1% for some US\$467 million. 4.7% was sold in 1992, for some US\$1.5 billion through a domestic and international offering. US\$1 billion raised in 1993 for 3.3% of the company. US\$550 million raised in January 1994 for the remaining 1.5%.
Panama	Institución Nacional de Telecom. (INTEL)	49	1997	Cable & Wireless
Perú	Telefónica del Perú	61.6	1994, 1996	Telefónica de España paid US\$1'392 million to the Peruvian government for a 35% stake in ENTEL-Peru and Compañía Peruana de Telefonos (CPT). As part of the agreement, Telefónica also invested US\$610 million in CPT. The Peruvian companies were merged into Telefónica del Perú. In 1996, 26.6% was sold (domestic and international public offering) for US\$1.2 billion.
Venezuela	CANTV	74.8	1991, 1996	Private sale in 1991 of 40% (but with majority voting control), raising US\$1,900 million, to Venworld consortium which includes GTE (USA), AT&T (USA), Telefónica de España, and two Venezuelan partners. In November 1996, domestic and international public offering raising US\$892 million for 34.8% of the company.

Note: * Percentages displayed represent the stake sold over the period.

Source: Adapted from the 1997 World Telecommunication Development Report.

Measures included establishing more cost-based rates by lowering long-distance charges and increasing local rates, and establishing an interconnection plan which would provide equivalent access to end users by all competitors.³⁰ By 1997, there were already ten new operators.³¹

The new regulator, COFETEL is taking measures to ensure a gradual transition. TELMEX was required, by the 1994 Interconnection Resolution, to provide interconnection to new operators at 60 points on the network in 1997, with the total number of points rising to 200 by 1 January 2000. In the future, customers will be able to choose their carrier. Equal access is scheduled to begin in April 1998. On the local service side, competition

has not yet taken off as the rules for competition were only published in October 1997.

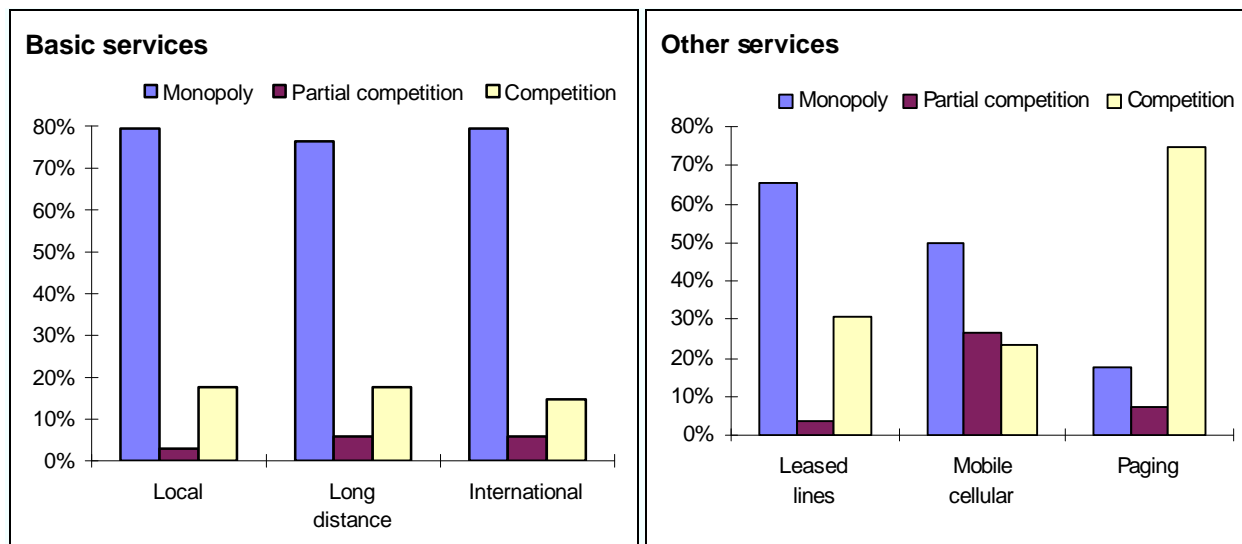
Colombia has put off privatization efforts and focused its efforts into setting an ambitious agenda for introducing full-blown competition. In 1997, Resolutions 86, 87 and 88 were passed which opened the local, long-distance and international market to competition. The Colombian market consisted of 28 local and regional state-owned operating companies providing local service on an exclusive basis. Telecom was the monopoly operator in long-distance and international services until recently, when it began competing in the local service area. This caused local operators to complain of unfair competition. Resolution 86 of September 1997 ended the monopoly in long-distance and international. This resolution stipulated various requirements for those wanting to compete, including: the consortia must maintain at least one local Colombian operator with at least 150,000 lines in service at year-end 1996; local partners cannot maintain more than 35 per cent of the lines in service in Colombia at the time of bidding; the consortia must include a company with experience in international long-distance markets; and the consortia must pay a US\$150 million licence fee. In the first year, all new operators are mandated to provide interconnection with all local companies with more than 50,000 lines in service and with all cellular operators.

In some of the Caribbean countries, where the environment has been traditionally comprised of private monopolies, countries such as Barbados have announced that they cannot wait until the monopoly licence expires to introduce competition. In Suriname, the government has issued a licence to a new operator which will be in competition (all areas) with Telesur. In Dominica, the local cable TV operator (MARPIN) has a licence which allows it to provide some telephone services.

As Table 3.3 shows, many countries have committed to the WTO to introduce competition in the near future. Peru plans to liberalize basic telephony service in 1999. Venezuela, commits to open all market segments by October 2000. Argentina intends to phase in liberalization of voice telephony in November 2000. Others, such as Colombia, have even surpassed their present commitments.

Figure 3.1: Americas: how much competition?

Level of competition in basic and other services



Note: Percentages pertain to number of American countries which responded to the BDT Regulatory Survey 1997.

Source: ITU/BDT Regulatory Database. For more details see Table 3.5.

Table 3.5: Americas: degree of competition*Selected countries, 1997*

<i>Country</i>	<i>Local</i>	<i>Long-distance</i>	<i>International</i>	<i>Data</i>	<i>Telex</i>	<i>Leased lines</i>	<i>Cellular mobile</i>	<i>Paging</i>	<i>Cable TV</i>	<i>Fixed satellite</i>	<i>Mobile satellite</i>
Antigua & Barbuda	M	M	M	M	M	M	M				
Argentina	M	M	M	M	M	C	PC	C	C	PC	
Bahamas	M	M	M			M	M	C			
Barbados	M	M	M				M				
Belize	M	M	M	M	M	M	M	M	C		
Bolivia	M	M	M				PC	C	C		
Brazil	M	M	M	C	M	C	PC	C	C	PC	C
Canada	C	C	PC	C	C	C	C	C	C	PC	C
Chile	C	C	C	C	C	C	PC	C	C	C	C
Colombia	C	M*	M*	C	M	C	PC	C	C	C	
Costa Rica	M	M	M	M	M	M	M	PC	PC	M	M
Cuba	M	M	M	M	M	M	M	PC	PC	M	M
Dominica	M	M	M	M	M	M	M	M	C	M	M
Dominican Rep.	C	C	C								
Ecuador	M	M	M	M	M	M	PC	C		PC	
El Salvador	M	M	M	M	M		M			M	
Grenada	M	M	M				M			M	
Guatemala	M	M	M	M	M	M	M	C	C	M	
Guyana	M	M	M				PC				
Haiti	M	M	M	C	M	M		C	PC		
Honduras	PC	PC	M	C	C	M	C	C	C	C	C
Jamaica	M	M	M								
Mexico	C	C	C		M		C	C	C	M	M
Nicaragua	M	M	M	C	M	M	C	C	C	C	C
Panama	M	M	M	M	M	M	C	C	M	PC	PC
Paraguay	M	M	M	M	M	M	M	C	C	M	
Peru	M	M	M	PC	C	C	C	C	C		
St. Lucia	M	M	M	M	M	M	M	C	C	M	M
St. Vincent and the Grenadines	M	M	M	M			M	M		M	
Suriname**	M	M	M	M	M	M	M	M	C	M	M
Trinidad & Tobago	M	M	M	PC	PC	PC	PC	C	C	C	C
United States	C	C	C	C	C	C	C	C	C	PC	PC
Uruguay	M	M	M	M	M	M	PC	C	PC	M	M
Venezuela	M	M	M	C	M	C	C	C	C	C	C

Notes: * In Colombia, the present situation in long-distance and international is a monopoly, although the recent decision by the government indicates that this market will be open to competition.

** In Suriname, the government licensed a new operator which will compete with the incumbent, Telesur, in all service areas.

Key: M = Monopoly; PC = Partial competition; C = Competition

Source: ITU/BDT Regulatory Database.

3.6 Key regulatory issues

As demonstrated in the previous sections, the Americas region has undergone significant reform in the past decade, although the transition from government operator to government regulator has not always been easy. Each country has recognized the importance of having an effective, efficient and transparent regime. New

regulators must be equipped with clearly defined mandates and the necessary resources (human and financial) to carry out these responsibilities. While some commonalities have emerged, the region is characterized by a diversity of approaches taken towards reform. As experience grows in the region, countries can be expected to learn from the best practices of others.

The following section addresses some of the key regulatory issues emerging in the Americas region as a result of sector reform.

3.6.1 Universal service

Universal service is generally taken to refer to the extension of basic service to areas that are geographically remote and/or characterized by high costs and low incomes. This has been a political priority for those countries which have undergone reform or are presently contemplating it. Seventy-two per cent of the countries have a definition of universal service. In nearly all cases, this definition includes basic telephony (see Figure 3.2). Universal service is generally financed throughout the region by cross-subsidies or development funds.

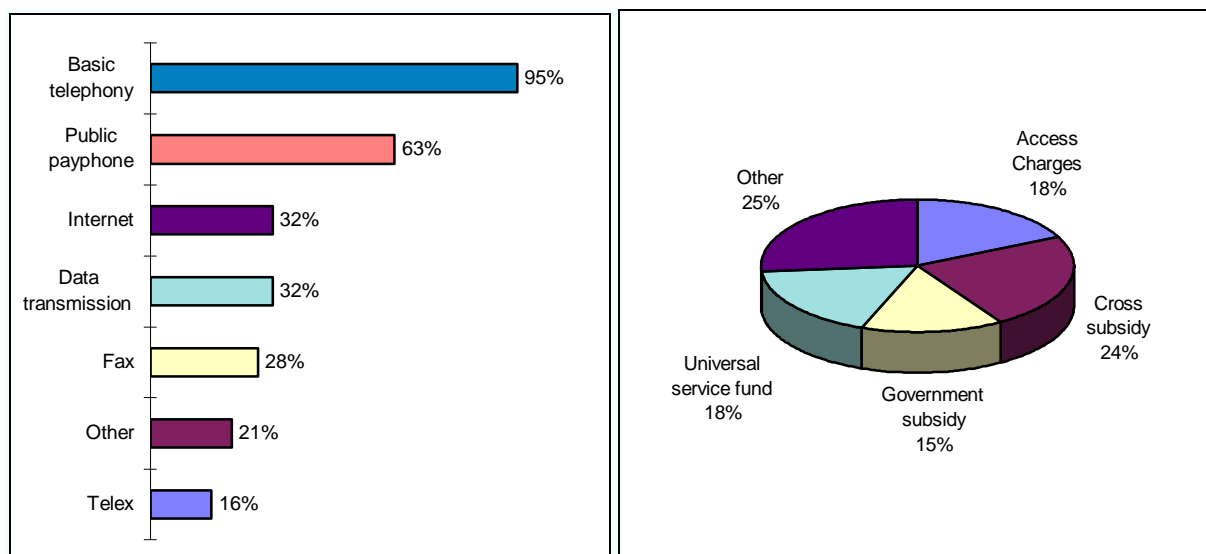
To combat fears that privatization or the introduction of competition will fail to extend service to rural and unprofitable areas, telecommunication development funds have become increasingly popular. These funds typically draw upon income from telephone taxes or fees collected from operators which is then used to subsidize operators providing service to rural areas or to support specific population groups.

Even in the United States, which had 64 telephone lines per 100 inhabitants in 1996, universal service remains a political priority. The Telecommunications Act of 1996 demonstrates the clear intent to protect, preserve and advance universal service for the benefit of all Americans, including those of low income, living in rural communities, and with disabilities. The objective is to make advanced telecommunications and information services available to all regions in the United States. The law preserves the concepts of quality of service at just, reasonable and affordable rates, and expands the definition of universal service to include advanced telecommunication and information services. Special provisions are made for schools, health care facilities, and libraries to obtain access to advanced services at a discount. Telecommunication service providers must ensure that service is usable and accessible by those with disabilities, if "readily achievable." The law stipulates that each telecommunication carrier that provides interstate and intrastate telecommunication services must contribute, on an equitable and non-discriminatory basis, to universal service. This will change the previous approach to universal service in which charges were levied on the long-distance telecommunication carriers, and funds were distributed among local telephone companies (monopolies) according to the subsidizing rates applicable to them.³²

In Chile, the 1994 Ley 3A created a Telecommunication Development Fund to subsidize the installation of public telephones in rural and low income areas. In the recently passed Colombian Resolution 86, new operators in the long-distance and international service areas will be required to contribute five per cent of annual revenues to the Social Telephony Fund, which will in turn finance projects in underserved areas. Guatemala, in its 1996 General Law of Telecommunications, intends to establish a development fund, Fondo de Desarrollo de la Telefonía, for services in rural and low income areas. Honduras is creating a Rural Telecommunications Development Fund which will finance unprofitable projects and oblige all operators to provide services to lower economic zones. The 1995 Ley de Telecomunicaciones in Paraguay provides for the creation of a Fondo de Servicios Universales with the objective of subsidizing the operators providing public services in areas that justify it. Peru's Telecommunications Investment Fund (FITEL) is described in Box 3.3.

Figure 3.2: Americas: universal service definition and policies

Services covered in the definition, and policies used to meet universal service obligations, 1997



Note: Figure shows percentage of countries reporting each service and policy.

Source: ITU/BDT Regulatory Database.

3.6.2 Licensing

Licensing has long been a common practice in the Americas region. It has been used to preserve scarce resources such as the frequency spectrum and geostationary satellite orbit, to avoid harmful interference in radiocommunications, to control the market and to impose certain obligations on the operators.

With few exceptions, almost all services are subject to some form of licensing and/or authorization regardless of whether the service is provided on a monopoly basis. Licence fees and duration vary throughout the region. In Chile, there is no licence fee and the licence duration is typically 30 years. In Colombia, the licence duration is generally 20 years; new licensees for long-distance and international services will be required to pay a licence fee of US\$150 million. No licence is required in Costa Rica for any service provided on a monopoly basis.

Many countries have grouped different services and designed various forms for authorizations. In Honduras, all authorizations are made by CONATEL. Depending on the kind of service, a distinction has been made between those services requiring a concession, authorization, registration or licence. Concessions are necessary to provide telephony (including public payphones, and mobile cellular) as well as telex. Authorizations are required to provide data, broadcasting and private networks. Registration is required for all other value-added services, and licences are required for any service which utilizes the radio spectrum. Concessions are granted through public bidding. The same bidding process is required for the granting of authorizations and licences when only a limited number is available. Fees are established for concessions, authorizations and licences.³³

Under Panama's 1996 Telecommunication Law, concessions were divided into Type A and Type B. A Type A concession is given for those services, that for technical or economical reasons, should be granted in a regime of temporary exclusivity or to a limited number of operators. Type A concessions are granted by the Government Council, through public bidding. Type B is given for the provision of all other telecommunication services. No public bidding is required. An entity in compliance with the rules may obtain a Type B concession.³⁴

In some countries certain non-basic services have not required a licence (e.g., cable television). However, with the rise in the number of competitors for all services, some countries have now instituted policies which required operators to obtain licences for previously non-licensed services, by a certain deadline or they would be required to terminate their operations.

3.6.3 Price controls

In 1996 and 1997, tariff rebalancing was a major issue facing regulators in the Americas region. The United States, Mexico, Guatemala, El Salvador, Colombia, Brazil and Argentina rebalanced tariffs, access charges or interconnection charges. The general trend has been to lower or eliminate cross-subsidies to ensure prices for specific services reflect costs and to set the groundwork for increased competition and interconnection. In several instances, regulators faced stiff political opposition to tariff rebalancing. Some regulators were able to overcome political opposition by framing tariff rebalancing as critical to competition and by simultaneously unveiling new universal service programmes.

Regulators, in addition, faced increased pressure to rebalance tariffs towards cost because of technological innovations and regulatory initiatives to lower international tariffs. A growing number of carriers are losing revenues because consumers are increasingly using lower cost alternative call procedures to make outgoing international calls. Furthermore, the United States' Federal Communications Commission (FCC) issued regulations directing US carriers to bring international settlement rates down to a set of benchmarks over a one to five year period. The benchmarks and the transition periods vary according to the income level and teledensity of a given country.

Many Latin American regulators believe that reduction of the accounting rates with the United States will dramatically reduce the large settlement payments US carriers make to foreign carriers. As a result, regulators in the Americas will likely face additional pressure to rebalance tariffs because many carriers use international settlements, in part, to cross-subsidize local service. By December 1997, carriers from Mexico and Venezuela had made commitments to comply with the FCC benchmarks. In addition, the FCC granted an arrangement between a US carrier and a carrier from the Dominican Republic that settles payment for international traffic through a new asymmetrical, growth-based termination fee. This arrangement is a significant departure from the traditional accounting rate regime and may signal the beginning of new and creative international settlement arrangements in the Americas.

3.6.4 Interconnection

With the rise of competition, interconnection has long been a disputed issue and is likely to become more contentious. It has reinforced the need to have a referee to mediate disputes between the incumbent and new operators. In the Americas, the referee is usually the regulator or the sector ministry.

Most countries have left interconnection arrangements up to the operators. In the event that operators cannot reach an agreement, the regulator or some other government body steps in. With the emergence of new operators and the ending of exclusivity periods for certain monopoly operators, interconnection disputes are likely to continue.

In the Dominican Republic, a country long dominated by the private monopoly operator CODETEL, it took TRICOM more than three years to negotiate an interconnection agreement with CODETEL. The government published its interconnection rules in May 1994 which required carriers to conclude negotiations for an interconnection agreement within three months. Carriers were required to provide the facilities necessary for interconnection within one year of signing an agreement. Any failure to comply will be taken up by the Directorate General, the body responsible for regulation.³⁵

One of the newly licensed providers for wireless local loop in Venezuela was delayed for five months until the Ministry of Transportation and Communication stepped in to settle the dispute over interconnection rates, which the new operator felt were too high.

In Mexico, with the recent publishing of the rules for local competition, local carriers will be required to negotiate interconnection rates with TELMEX or other networks within 60 days, after which point the regulator may intervene. The interconnection battle for the provision of long-distance and international services has been contentious. Companies were required to pay TELMEX over US\$420 million over seven years to cover signalling, balloting, numbering and so on and are disputing these requirements with the regulator.

3.6.5 Spectrum management

Spectrum management procedures have undergone substantial changes in recent years, the most visible being the use of an auctions to assign spectrum licences. Until October 1996, the United States was the only country in the world that used multiple round auctions to allocate scarce telecommunications resources such as spectrum. Since then, other countries in the region have held successful auctions for radio spectrum, including El Salvador, Guatemala and Mexico.

By and large, Latin American countries have been hesitant to use simultaneous multiple round auctions instead of single-round closed seal bids to allocate scarce resources. Most countries have relied on single-round closed seal bids because they have extensive experience with this methodology and because of the lack of information on simultaneous multiple round auctions.³⁶ Given the success of the Mexican and Guatemalan auctions, it is likely that other countries will use multiple round auctions in future.

The Mexican regulator, COFETEL, held the first multiple round auctions in Latin America which concluded on 21 October 1996. The auction allocated 29 paging licences to 19 participants and raised about 13.9 million pesos (US\$1.8 million). Since then COFETEL has successfully held additional auctions for a wide variety of radio services. Between October 1996 and October 1997 the Mexican auctions raised more than 2,500 million pesos (US\$328.9 million). Mexico opened bidding for the 77 wireless local loop (WLL) and PCS licences in November 1997. On the first day of the auction, an estimated US\$78 million in bids was put forward. COFETEL plans to continue to use multiple round auctions to allocate radio spectrum.

The 1996 Telecommunication Law in Guatemala requires that all spectrum licences, for which there are more than two applicants, be auctioned. Seventy per cent of auction funds must be allocated to universal service programmes, the remainder going to fund the Superintendencia of Telecommunications. The Superintendencia has established procedures to ensure the legitimacy, fairness, transparency and confidence in the auction process. For example, the Superintendencia allowed the press to monitor the entire auction process that was held at a Superintendencia site in Guatemala. Bids were submitted via computer terminals located at the Superintendencia site, although bidders were not allowed to submit electronic bids from remote sites. The first Guatemalan auction, carried out in June 1997, ran for three stages and 101 rounds. Of the 11 participants, seven won licences and the Superintendencia collected almost US\$3 million. The Superintendencia has subsequently held auctions for radio station frequencies and is planning to do so for PCS licences.

Regulators in the Americas faced increased demand to allocate and manage radio frequencies because of growing demand for wireless services. Regulators in bordering countries spent considerable resources to coordinate policies on frequency issues along border regions. Several regional initiatives on radio frequency issues were also carried out in the Inter-American Telecommunications Commission (CITEL).

3.7 Conclusion

The political will for reform in the Americas has been strengthened by several factors and events, including the WTO's Basic Telecommunication Agreement, the 1994 Summit of the Americas, the 1996 *Americas Blue Book*, and the recent 1997 Bridgetown Declaration. The Summit of the Americas, a meeting of presidents from the region, agreed that individual governments should: ensure universal access; establish clear and stable laws, regulations, and policies when introducing competition; establish separate regulatory entities; seek more cost-based rates and improve the settlements process.³⁷ The *Americas Blue Book*, coordinated by the ITU and CITEL, was adopted by countries in the region, as a tool to assist decision makers contemplating sector reform. It is based on the premise that a well-conceived telecommunications policy, mindful of the peculiarities of each country and attentive to the advancement of technology, is essential to satisfy the public interest.

Although much has happened in this region in the past decade, reforms are expected to continue. In 1998, five more countries are expected to privatize, five new regulators will be established and the exclusivity periods for the privatized operators in Argentina, Bolivia, Panama, Peru and Venezuela will soon come to an end.³⁸ Many different approaches have been taken in sector reform. Refinements of the new regulatory frameworks have been made and will continue so that each country establishes an environment which is appropriate to its national situation and future expectations.

¹ Privatization is defined as the transfer of commercially oriented state-owned enterprises, activities, or productive assets of the government to total, majority, or minority private ownership or private control.

² Although a department within the ministry handles regulation. The government has announced its intention to create a separate regulator by 1999.

³ Countries in the Americas region that retain 100 per cent foreign ownership limitations are the Caribbean islands of Antigua & Barbuda, Dominica and Grenada.

⁴ In Mexico the exclusivity was limited to long-distance services but the lack of adequate regulatory measures - mostly related with interconnection terms and conditions and the then not yet implemented tariff rebalancing - excluded potential competitors from the local basic service market.

⁵ A number of factors have coincided to make this possible. In several of these nations the period of exclusivity linked to privatization is coming to an end (Mexico, for example, opened its long distance market in 1997 after seven years of exclusivity granted to TELMEX). Others, in their willingness to join the World Trade Organization (WTO) agreement on basic telecommunications, have committed to grant market access before or just after the turn of the century (See Table 3.3). Some, finally, have opted for an open market policy not because of the end of exclusivity or WTO-related commitments, but because they understand that competition leads to a more effective and efficient market.

⁶ It is important to highlight the fact that there is a growing trend in developing nations to open their local services market first, generally with the attached promise of a future liberalization of long-distance and international services. Probably the most clear and outstanding example in this regard is India.

⁷ China, India, Malaysia, the Philippines and Sri Lanka are among the growing number of countries that are experimenting with progressive liberalization of their basic service market.

⁸ Competition in Asia, however, has taken a rather peculiar local flavour. Following a long tradition of state presence in the economy, most policies promoting competition have been tempered with a considerable degree of regulatory control on the side of the state. Therefore, although competition in Asia is rampant compared to other developing countries, it is highly managed and regulated. Cross ownership of public and private operators and informal ties between governing parties and private sector companies have created a unique competitive environment. For further information and analysis of liberalisation trends in Asia-Pacific markets, see the 1997 *ITU Asia-Pacific Telecommunications Indicators: New Operators*.

⁹ Hong Kong (SAR), Korea, Malaysia, Philippines, and Taiwan each have between five and eight operators in their local markets.

¹⁰ Mexico, which has a fairly competitive cellular mobile market is included - for statistical purposes - in the North American region.

¹¹ The Permanent Telecommunication Committee of the League of Arab States (PTC) is nevertheless devoting considerable energy and resources to interconnection-related matters.

¹² This approach increases the attractiveness of the licences granted and provides the operators with the required flexibility to target those market segments in which they are stronger.

¹³ In Uganda, major licences are issued by the ministry, while minor licences are issued by the regulator.

¹⁴ See Chapter 4, section 6.

¹⁵ The only two Asia-Pacific economies where competing carriers are free from price controls on basic wireline services are Australia and Hong Kong.

¹⁶ Guiding principles are embodied in the cost-orientation and cost-accounting systems set by the Commission in its Open Network Provision Directives.

¹⁷ The September 1996 Senior Officials Meeting recognized that telecommunications is essential "to any economic, social-cultural or political proposal that is initiated on a national, or in this case, hemispheric level". See <http://www.oas.org/EN/PROG/CITEL/citel.htm>

¹⁸ EU member states counted as one voting party. Guyana and Honduras announced their intention to submit offers before the end of 1997.

¹⁹ ITU World Telecommunication Indicators Database.

²⁰ ITU/BDT Regulatory Database.

²¹ Center for Strategic & International Studies, Draft Report, "Trends in Telecom Privatization & Liberalization in Latin America", 1997, p. 11.

²² Bjorn Wellenius and Gregory Staple. *Beyond Privatization: The Second Wave of Telecommunications Reforms in Mexico*, World Bank, 1996.

²³ Chile's Subsecretaria de Telecomunicaciones (Subtel) was created in 1977 as a unit within the Ministry of Transport and Telecommunications.

²⁴ The Government of Costa Rica intends, as a next step, to establish a separate autonomous telecommunication regulator, the Regulatory Institute of Telecommunications (IRETEL). IRETEL will assume the telecom responsibilities of ARESEP, as well as the National Department for Radio Control which is responsible for frequency management.

²⁵ The CNC was previously the Comisión Nacional de Telecomunicaciones which was established in 1991.

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- ²⁶ William Melody. *Telecom Reform: Principles, Policies and Regulatory Practices*, Technical University of Denmark, 1997, p 338.
- ²⁷ SATCC, *Increasing Private Participation in Telecommunications: A General Overview*, 1997, p.5.
- ²⁸ William Melody , *Telecom Reform*, p. 343
- ²⁹ See Latincom, Volume 1, Number 5.
- ³⁰ Bjorn Wellenius and Gregory Staple. *Beyond Privatization*, p. 7.
- ³¹ Long-distance operators are Alestra, Amaritel, Avantel, Iusatel, Midtel, Nextel, Protel, Telnor, TELMEX and Telnor.
- ³² Response of the USA to the Regulatory Survey.
- ³³ ITU, Project CAM/91/011, “Diagnostic of the Telecommunication Sector in Central America and Panama”, April 1997, p 28.
- ³⁴ ITU, Project CAM/91/011, p 38.
- ³⁵ See Dominican Republic Resolution 94-003.
- ³⁶ With multiple round auctions, the bidding takes place in a series of rounds. After each round, the highest bid is announced and a new round is set to solicit higher bids. The process continues until no higher bids are put forward.
- ³⁷ See <http://www.oas.org/EN/PROG/CITEL/citel.htm>
- ³⁸ The extension of Telecom and Telefonica’s exclusivity in Argentina is under debate, Peru’s exclusivity ends in 1999; Venezuela’s in 2000, Bolivia’s in 2001; Panama’s in 2003.