PRIVATIZATION OF TELECOMMUNICATIONS SECTOR IN COLOMBIA

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ABSTRACT

The purpose of this thesis is to cover the general concepts and considerations about the privatization process of the telecommunications sector in Colombia, and describe the fundamental elements for that process, such as the reasons to regulate and privatize, the major actors and their role in the process, the conflicts among privatization objectives, the events of a typical implementation.

The thesis seeks also to analyze the telecommunications sector in Colombia, and evaluate the role of the players, the new rules, the possibilities and risks of the privatization process. The thesis includes a summarized description of related experiences in different countries of the region, in order to bring a pattern of comparison with the current privatization process of telecommunications sector in Colombia.

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Chapter I  The Privatization Process

1.1. Antecedents

The new economic model adopted by Colombian government, opening the markets and deregulating the supply of public services, has challenged the private investors for new opportunities in the country. Strong unions, monopoly in the long distance service, reduced competition in local service, new cellular networks, promissory services of transmission of voice, data and video, emerging technologies, strategic alliances, are elements of the new framework of competition in this sector.

Privatization has been one of the most controversial economic transformation process during the last 20 years around the world. More than 10,000 state-owned enterprises - SOEs- in over 100 countries have been privatized.

Privatization can be defined broadly as the transfer or sale of any asset, organization, function, or activity from the public to the private sector. As such, in addition to the sale of publicly owned assets, the term privatization also applies to joint public-private ventures, concessions, leases, management contracts, as well as to some specialized instruments, such as build-own-operate-and-transfer (BOOT) agreements. Each of these approaches to privatization offers different opportunities to investors who are prepared to take advantage of them.

When the privatization trend began in the developing world in the early 1980s, the enterprises selected for divestiture were typically small and operated in competitive markets. Firms of this description had fallen into government hands for a variety of historical or accidental reasons. Until about 1987, despite any rhetoric to the contrary, the
privatization trend in developing countries was confined to small firms of this sort in the periphery of the public sector. However, experiences in developed countries, conditions of international banks and dissatisfaction with the state enterprise’s performance, encouraged some governments to have more ambitious plans, including the outright sale of large state-owned enterprises that dominated their markets.

In 1988, privatization moved into high gear. In developing countries, the revenues raised from privatization grew from US$2.6 billion in 1988 to US$23.1 billion in 1992 (US$17.3 billion in 1992 for industrialized countries). About 33 percent of the developing countries’ privatization was accounted for by infrastructure sectors, such as power, telecommunications, transport, and water; about 25 percent was accounted for by banks and other financial institutions; and other 15 percent was accounted for by firms in the primary sector, that is, mining and extraction, particularly in oil and gas. Within infrastructure, telecommunications accounted for more than half the total (power 23% and airlines 12%).

In terms of geographic distribution, the leading region for privatization was not Eastern Europe, where there was much talk about wholesale divestiture, but Latin America and the Caribbean, which accounted for fully two-thirds of the US$60 billion raised through privatization in the developing world between 1988 and 1992.

After 1988, country after country in Latin America announced plans to privatize airlines, telephone companies, electric power companies or gas and oil enterprises. Within the five-year period 1988-1993, six of these countries privatized their telephone companies, nine divested their flag carriers, and between two and four privatized firms in the electric power, railroad, and water sectors.
Argentina went the farthest in the shortest time. Mexico, Peru, and Venezuela implemented less sweeping but equally broad-based programs, while in 1994, ambitious programs were under way in other countries in the region, such as Bolivia, Brazil, Colombia and Ecuador.

1.2. Reasons for regulation and reasons for privatization

1.2.1. Rationale for regulation

A major justification of government intervention in the economy, through either legislation or expenditure, is the view that consumer welfare will not be maximized in all circumstances by leaving private sector firms to pursue their individual profit-maximizing strategies and that the costs of government intervention are likely to be offset by the benefits.

Competitive markets will, under certain conditions, secure the efficient allocation of resources. Product market competition causes firms to produce goods that meet consumers’ requirements at prices which reflect the relative cost of supply. At the same time, only firms that minimize costs and develop an efficient mix of factor inputs are able to succeed, while those that do not will be vulnerable to take over, if there is competition in the capital markets. When the above conditions do not apply, however, markets may fail. In such circumstances, governments frequently intervene through public ownership and/or other forms of regulation, intending to remedy the market failure.

Historically, regulation has been justified on a variety of non-economic grounds related to public interest, such as the need to maintain a particular industry for reasons of national security or nationwide network services or to protect and encourage the development of a new industry, or, in the case of banking and insurance, to maintain the prudential supervision of people’s savings. In addition, regulation of entry, prices and profits of such
industries as road haulage and airlines grew during 1930s when it was thought that "excessive" or "destructive" competition would occur if unrestricted entry and price competition were allowed, resulting in price wars, bankruptcy and unemployment. This claim of instability was often advanced by the industry itself but seldom justified the facts.

The specialists consider two broad types of market failure which can justify regulation on economic grounds: circumstances where competitive solutions do not exist (natural monopoly) and circumstances where they exist but not efficient, because of externalities and information asymmetry.

1.2.2. Rationale for privatization

Two key factors have underlain the changing approach of governments towards regulation. The first is the growing awareness of the extent and nature of regulatory failure. The experience of several decades of governmental regulation has led to a growing recognition that failure is not confined to markets, governments can also fail. Interventions intended to correct market failure can often have adverse, although unintended, consequences for the achievement of efficiency.

The traditional theory of regulation presupposed that if the objectives of the government regulatory authorities and the regulated enterprise were identical, then the possibility of regulatory failure was removed. Policy towards regulated industries has often been founded on this view of the objectives of public enterprise managers. In practice, the vagueness of the objectives and the difficulty of precisely determining a socially optimal output level, has proved wrong to the efficient management of the industries concerned. The objectives of the regulatory authority and the enterprise diverge.
The second is changes in technology and a better understanding of organizational structure and behavior that have fundamentally altered the incidence of market failure. Regulatory intervention has been justified as a response to market failure. Market failure should not, however, be viewed a static concept, fixed for all time. Rather, technology, market conditions, and organizational structure determine it. Thus, recent developments in technology have led to a reappraisal of the nature and extent of market failure in the economy.

The effect of changing technology is demonstrated most powerfully in the telecommunications industry. Until the development of digital networks and microwave transmission, the only opportunity for introducing competition lay in the installation of a cable network identical to that already established. In addition, the SOE faced problems such as long waiting times, poor service, artificially prices, and high pressure by workers and unions. However, the increase in demand for a cheap and reliable service, high-speed networks for transmitting data, voice, text, and images, has enabled alternative networks to achieve the minimum efficient scale operations and to complete effectively with the existing systems, first for international, and then on trunk, calls.

Both factors here considered, regulatory failure and changes in technology, underpin the arguments at the heart of the recent micro-economic debate concerning the poor performance of the regulated (nationalized) sector, labor market rigidities, government financial needs, and wider share ownership.

- Poor performance of regulated sectors: the perception of poor performance in the regulated sectors is widespread across the developed and developing countries. This perception has been based generally on comparisons with deregulated sectors in other countries or in parts of the country which have subject to deregulation. However it has
been frequently prompted the conclusion that the observed poor performance is primarily a consequence of state ownership, rather than the weak incentives to improve performance. Regulation can provoke poor performance in a number of ways. Management can be or feel restrained by regulatory oversight - low salaries, political interference in decision making, and limitations on new business initiatives. Poor performance may also be precipitated, or made more likely, by regulatory change in other nations creating a economic pressure to adopt the same position.

- **Labor market effects:** Labor market problems have also had considerable impact on the movement to regulatory reform. The performance of public sectors that had been used to implement of covert employment subsidy, began to deteriorate as reduced commitment of the managers with the performance of the SOE, protectionism policy and demands of strong unions.

- **Budgetary considerations:** In many countries, a key objective of privatization has been to reduce the fiscal burden of loss-making SOEs, in order to help regain fiscal control and macroeconomic stability. By mobilizing financial resources through sales, privatization has served to reduce public debt and the associated recurrent fiscal burdens of debt service. Usually this determination is a response to the pressures from the international banking community. By reducing the fiscal burdens of loss-making SOEs or reducing public debt service burdens, privatization can serve to release limited funds for the financing of other activities including projects to fight poverty. However, although those objectives are really important, it would be wrong to conclude that budgetary considerations are an overriding motivation for regulatory reform. Governments always face financial pressures of varying degree.
• **Wider political goals:** Finally, there are a number of motivations for regulatory reform that are limited to particular countries. Both France and the United Kingdom sought to use privatization to wide share ownership, with the intention, in the UK at least, of promoting the ideology of "popular capitalism". The French privatization also aimed to boost the developing Paris stock exchange. This arguments have been used also in Latin America.

1.3. **Major actors in privatization**

Privatization involves a number of major actors. First and foremost is the State that sees its role reduced in some areas, but increased or modified in some others. Redefining the role of the State, to enable it to make a more effective contribution to economic performance, is a main objective of privatization.

Private sector enterprise is another key actor. It needs to be able to make use of the new opportunities brought about by privatization to enhance productivity and growth. Private sector enterprise includes several distinct elements - entrepreneurship, management and labor, as well as private sector capital.

Domestic savers and investors are the third key actor in privatization. Privatized enterprises will need to rely on private sector sources of capital and mechanisms for financing current operations, rather than on tax revenues. The reduced role of government in enterprise funding will require a corresponding increase in the role of government in enterprise funding will require a corresponding increase in the role of institutional mechanisms and financial instruments which can attract private sector savings on a voluntary basis.

The role of foreign investors must also be addressed. In this regard, the measures needed to build investor confidence are essentially similar for both domestic and foreign investors.
The main difference is that foreign investors are more concerned with freedom of capital movements, because of their need to repatriate capital and earnings. In addition, they may be generally somewhat more sensitive to exchange risks.

The financial sector is also a key actor in the privatization process. Capital markets and financial intermediary institutions play a vital role in ensuring the success of privatization. Capital markets perform a number of functions in this regard, mobilizing large pools of domestic savings so that the capital requirements of enterprises can be met without inflationary credit creation, and enabling individual investors to alter their investment portfolios or withdraw funds without necessarily affecting the level of market capitalization or causing disruption of credit lines to individual enterprises. Financial intermediary institutions also play a crucial role in reconciling the needs of savers and investors, and mobilizing domestic resources for productive investment.

The donor community can also be a significant actor in the privatization programs of developing or transitional countries. Their participation can take the form of supplying financial and technical assistance, financing social protection or compensation measures, or even in some cases buying equity stakes in privatized firms.

1.4. Methods of privatization
Governments use a variety of mechanisms for transferring public assets and services to private investors. The main mechanisms include the following:

- **Auction**: The SOE’s assets are sold to the highest bidder in open bidding.
- **Negotiated sale**: The price and terms of the transaction are agreed to in direct negotiations between the buyer and the seller.
• **Tender:** Bidders submit sealed bids, which are opened at the announced time, with the property generally going to the highest bidder.

• **Stock flotation:** The government’s shares are offered on local or international capital markets.

• **Management/employee buyout:** SOE management and/or employees buy a controlling interest in the company.

• **Stock distribution:** A percentage of shares (generally in the 10-25 percent range) in the SOE are given or sold at the preferential terms to employees and other special groups.

• **Voucher or coupon privatization:** Eligible citizens are given or are sold coupons or vouchers at a nominal price, which can be exchanged for shares in former state-owned companies or in investment funds that control the actual company shares.

In addition to an outright transfer of ownership, there are other mechanisms by which many of the same objectives as outright privatization can be achieved such as the following:

• **Joint venture:** The private investor and the SOE join forces to form a distinct legal entity, but one that preserves the distinction between public and private capital.

• **Build-own-operate-and-transfer (BOOT) agreements:** Such agreements are used mainly for infrastructure projects. The private investor pays the cost of constructing a facility (or a road or bridge) and then is entitled to collect a share of the revenues for an agreed-upon period of time, after which time ownership reverts to the government.

• **Leasing:** The private investor pays the government an agreed-upon annual fee to operate an SOE or other publicly owned facility but is entitled to keep the balance of the operating profits.

• **Management contract:** The government pays a private operator an agreed-upon fee to operate an SOE or other facility.
1.5. How the firms are privatized.

Privatization is more than an event; it is a process by which state-owned assets or activities are transferred to the private sector. Naturally, the details differ by country and by type of transaction, but the process for privatizing a typical state-owned enterprise is fairly representative.

The privatization process has three phases: i) preparation; ii) privatization, and; iii) post-privatization. In the first phase, preparation, selected enterprises or activities are targeted for privatization, either as the outcome of a planning process or as result of an investor’s expression of interest. In the case of an SOE, the next step is typically “corporatization”, in which the enterprise that has been targeted for privatization is transformed into a shareholding type of company, with the government all or the majority of shares for the time being.

In the second phase, privatization, the government and its advisers undertake a study to assess the feasibility of privatizing the enterprise or activity and the mechanisms available for achieving this objective. Projections of future revenues also are an important element in determining the government’s asking price. In many cases, the investor will be performing parallel analyses of his or her own.

Depending on the conclusions reached in the strategic assessment, the government may decide to restructure the enterprise before putting it up for sale, in order to increase its marketability.

Financial restructuring is also often part of the prescription. Many public enterprises are heavily indebted to state banks, and some form of loan forgiveness or debt-equity swap
may be required in order to put the enterprise on a financial footing that is acceptable to investors.

The government’s strategy for marketing the enterprise is influenced by the enterprise’s strategic interests, legal provisions, and the political realities of the host country. In cases in which the government decides to market at least a portion of the shares to foreign investors, the government and its advisers (frequently an investment bank) target candidate investors, prepare a prospectus or offering memorandum, and try to drum up a sale.

In the third and final phase, post-privatization, the investor takes over the operation of the enterprise. Most investors undertake further restructuring, with an emphasis on improving the quality and reducing the cost of the goods or services provided. The government’s role in the final, post-privatization phase may vary, from arm’s-length regulation or a continuing involvement in the running of the enterprise, on the one hand, to seats on the board of directors for the government or its proxies (e.g., social insurance or pension funds), on the other hand.

The privatization process would have to include not only the mechanisms that are available to investors who wish to acquire shares in former state-owned enterprises, but also the favorable environment by which those mechanisms are implemented. The overall political and economic health of the host country are important aspects of the enabling environment, but other important aspects have to be considered:

- **Policy environment**: Liberalization of domestic and foreign trade, relaxation of price controls, balancing of the government’s finances in order to reduce the public sector’s demands for available financial resources.
• *Legal environment*: Furnishing the legal framework necessary to reassure private investors and to guarantee the orderly functioning of the market economy (e.g., laws on private property, contract law, laws on taxation).

• *Regulatory environment*: Providing the degree of oversight necessary to prevent misuse or abuse of the system (e.g., antimonopoly, banking, securities and exchange regulations), consistent with the government’s reduced role in the economy.

• *Financial environment*: Affording investors and business-people access to sufficient capital to finance new investments, the expansion of existing facilities, and working capital requirements, through the banking system or financial markets.

• *A social “safety net”*: Cushioning the impact of the transition to a market economy on the weaker segments of the economy.
Chapter II  Experiences of privatization of telecommunications in Latin America

2.1 Description

Nowhere in the developing world has the movement toward restructuring the telecommunications sector has been as rapid and vigorous as in Latin America. First in Chile, then in rapid succession in Argentina, Mexico, and Venezuela, and currently under way at various stages in Bolivia, Brazil, Colombia, Ecuador, El Salvador, Honduras, Panama, Peru, and Uruguay, profound changes have been sweeping through this region. Governments are replacing the traditional model of state telecommunications monopoly embraced in the 1960s with solutions that largely rely on services provided by the private sector, growing competition, and a shift of government role from ownership and operation to policy and regulation. These changes seek to overcome long-standing constraints on economic and social development imposed by telecommunications services that are in short supply, unreliable, of poor quality, and slow to respond to changing demand patterns and technology choices.

2.1.1. The experience of Chile

Reform of the telecommunications sector in Chile started in 1975 and was substantially completed in 1987. At the time reforms began, telecommunications were dominated by two joint-stock companies, mainly state-owned. Compania de Telefonos de Chile (CTC) had about 95 percent of the local telephone market, and Empresa Nacional de Telecomunicaciones (ENTEL) operated most long-distance and all international facilities. CTC had been a private, foreign-owned company until 1964, when it became jointly owned by the state, which injected substantial amounts of capital for expansion and modernization. In 1970 CTC was taken over by the government, and in 1974 the foreign partner was
bought out. ENTEL had been established as a state-owned company in 1964 with the mandate of building a countrywide, modern long-distance network and, shortly after, satellite facilities for international services.

In the context of the government's adoption in 1975 of a strong market-oriented economic development strategy favoring private enterprise and foreign investment, a series of steps was taken to create a policy and regulatory framework specifically for telecommunications.

In 1986 the government began to sell some of its shares in CTC and ENTEL to company employees and the public. In 1987 international bids were invited for a controlling interest in CTC and awarded to Alan Bond, an Australian investor. The balance of the ENTEL shares was sold to various domestic and foreign investors and to the public at large. In 1989 the government sold its remaining CTC shares to employees and the public. In 1990, Bond sold CTC to Telefonica de Espana, which by then held a 25 percent interest in ENTEL.

The reforms have revitalized the telecommunications sector. Telephone lines, which had been growing at about 5 percent in the 1970s and 1980s, expanded at over 20 percent per annum in 1990 and 1991. Digitalization accelerated from around 35 percent to 70 percent. Modern optical-fiber networks, digital microwaves, and satellite systems were built. Labor productivity, already rather good for developing countries at around 13 staff per 1,000 lines, improved further to 7 in 1991. New services were introduced and there is a substantial competition in non-basic services and networks. Three companies (including one subsidiary each of CTC and ENTEL) compete in providing cellular service in the main cities. Business users can choose between the public-switched telephone system and network solutions offered by several new carriers besides CTC and ENTEL. CTC and ENTEL are operating very profitably, new sources of financing have been developed.
(including CTC’s breakthrough placement of US$100 million in new shares in the U.S. market in 1990), and share values of both CTC and ENTEL roughly doubled in 1991.

From a broader economic viewpoint, a study\(^1\) shows that with the privatization of CTC, aggregate welfare has been enhanced by some $600 million, of which 94 percent accrues to Chilean parties.

Considering the regulatory arrangement, the relative difficulty of passing or amending legislation gives stability to the sector’s legal framework, making it less vulnerable to policy changes from one government to the next. Subsecretaria de Telecomunicaciones, SUBTEL, has clearly defined functions, including the authority to verify compliance by service producers and users of legal, procedural, and technical resolutions. Deciding whether service is not subject to effective competition, and thus its prices should be regulated, is left to the antitrust tribunal in the context of well-established general commerce law. Disputes on sharing costs and revenues among operating companies are resolved through arbitration.

Nevertheless, not all is well. The market is still dominated by CTC and ENTEL. As for quality of service, the results have been mixed. Faults are being cleared faster, and CTC appears to be more responsive to customer complaints. However, the fault has not continued to decrease, call completion rate has actually dropped, and the increased percentage of busy signal suggests growing network congestion. No practical solution has been found to ensure service in rural and other areas that are less profitable than cities, and mechanisms for direct government subsidy, where needed, have proven ineffective.

There are also critical regulatory issues that remain unresolved despite several years of litigation in the antitrust tribunals and ordinary courts of justice. One issue is of particular importance in terms of competition. CTC’s plans to become itself a long distance carrier and develop its own optical fiber and satellite long-distance network have been challenged by ENTEL, which holds a virtual monopoly of these facilities over many routes. A court order has restrained CTC from putting into service new equipment and satellite leases already purchased. In turn, CTC has contested the ENTEL’s attempts to expand its base of direct access to final business users.

As for SUBTEL, it is not fully equipped to discharge its regulatory responsibilities effectively. In particular, relatively low government remuneration makes it difficult for SUBTEL to attract and retain qualified specialists who are also in high demand in the private sector. Being part of a ministry largely dominated by the much larger transportation sector, SUBTEL’s problems tend to receive rather limited attention at the higher levels of government. Solutions under consideration include reorganizing SUBTEL as a more independent “superintendencia”, similar to the successful banking regulatory agency, or along the lines of the widely acclaimed energy commission.

2.1.2. The experience of Argentina

In early 1989 the president of Argentina announced his decision to privatize Empresa Nacional de Telecomunicaciones ENTel, the state telecommunications monopoly. In January 1990 an executive decree outlined the government’s new sector policies and structure and set forth the terms and conditions for the sale of ENTel. These provisions were designed to enhance competition and diversify ownership. ENTel would be divided into two regional companies, each including about half of the lucrative Buenos Aires market. The regional companies would have the monopoly of basic telephone services and
networks for seven years, or up to ten years subject to meeting higher performance targets. Sixty percent of the shares of each regional company would be sold under competition to foreign telecommunications operating enterprise responsible for managing the new companies, associated with local and foreign investors.

Bidding and evaluation were designed to give preference to different owners-operators for each regional company, partly in order to facilitate subsequent performance comparisons and to give credibility to the potential competition between them. Two separate companies, jointly owned by the regional enterprises, would provide international and competitive services, respectively. Franchises for cellular services would be awarded under competition, the first franchise in each locality being adjudicated to a company other than the regional telephone operator. The supply of subscriber terminal equipment, private networks, and data and value added services, would be liberalized immediately. Three independent companies, licensed during a short-lived liberalization effort by the previous government, were to continue developing competing data networks and services using satellite technology.

Privatization was completed close to schedule. In early November 1990 the new owners-operators took over the two regional companies. Telecom Argentina, the northern regional company, belongs to a consortium led by France Telecom and STET, from Italy. Telefónica de Argentina, the southern regional company, is a company from a consortium led by Telefónica de España. The remaining 40 percent of shares were sold in 1991 and 1992 to employees, subscribers, existing rural telephone cooperatives, and the public at large. The public sales, in Argentina and through agents abroad, were several times oversubscribed.
A tentative assessment two years after privatization showed that the labor force has shrunk by 20 percent, from a combined total of 41,000 workers at the end of 1990 to 33,000 in early 1993, mostly through voluntary retirements for which the companies made incentive payments. The combination of sharply reduced workforce and modest system growth resulted in an improvement of labor productivity from 13 to 10 workers per 1,000 lines in the first year of operation. Improved systems for internal information and control were put in place, especially in the areas of billing and collection, payroll, contracting, and purchasing. Contracts with equipment suppliers inherited from ENTel were renegotiated, resulting in price reductions of up to 50 percent. Already in 1991, the first year of operation after privatization, the regional companies averaged a modest 4 percent return on equity. The return on investment was much larger for the foreign operator partner who, including management contracts, netted 17 percent for STET and France Telecom and 83 percent for Telefonica de Espana. The regional companies’ investment plans for 1991-96 were well in excess of what would be required to meet the targets agreed at the time of purchase.

Progress on the regulatory front, however, has been slow. An executive decree of June 1990 established Comision Nacional de Telecomunicaciones, CNT, a semi-autonomous telecommunications regulatory agency, and outlined its functions and organization. However, government administrative decisions delayed its implementation. Whereas the sector reform schedule called for a core regulatory capacity to be in place by the time the regional companies were transferred to the new owners-operators, in practice this did not materialize. Finally, by early 1992, CNT issued licenses to regularize the operation of 140 of 300 independent new telephone cooperatives; initiated bidding for cellular licenses outside Buenos Aires, established norms for competitive provision of domestic data transmission, private mobile radio, and videoconferencing, and took important steps to protect customers.
It looks like there is still a long way to go before Argentina can claim to have a stable and credible telecommunications regime. CNT's institutional development outlook also remains unsettled.

2.1.3. The experience of Mexico

As of 1989, Telefonos de Mexico S. A. de C. V. (TELMEX), a 51 percent state-owned parastatal company, provided local, long-distance, and international telephone service through Mexico. After Brazil, Mexico had the second largest telecommunication system in the developing world.

In August 1989 the government published a program for the modernization of telecommunications. It identified four main structural obstacles to improve sector performance:

- Complex labor and administrative arrangements that limited technological innovation and service quality improvements.
- Tax and tariff distortions that resulted in excessive dependence of TELMEX on long-distance revenues and, consequently, limited possibility of introducing competition.
- Insufficient management and financial autonomy of the operating enterprises.
- Inadequate regulation of TELMEX's monopoly operations.

The modernization plan sought to improve service to reach internationally competitive levels, expand service coverage in rural and urban areas, diversify and modernize services, establish competitive tariffs at the international level and achieve financial self-sufficiency, and promote greater private investment and competition.
The policy proposals were, to a very substantial degree, implemented during 1990 and 1991. Tariffs were increased to ensure profitable operations and rebalanced to reduce distortions. The tax on telephone bills was replaced by a special tax on profits that could be offset by accelerated investment. Two licenses for cellular services were awarded in each of nine regions, one to a TELMEX subsidiary and the other to independent operators. Secretaria de Comunicaciones y Transporte SCT, became solely the sector regulatory agency after its operating functions were reorganized as an autonomous state enterprise. The telecommunications regulations were extensively revised. The supply of customers premises equipment, provision of value added and information services, and ownership and operation of private networks, all were liberalized.

A controlling interest in TELMEX was sold to a consortium of national and foreign investors associated with France Telecom and Southwestern Bell. The privatized TELMEX was granted a concession that provided for price-cap tariff regulation, serious obligations for network expansion in urban and rural areas, as well as progressively demanding targets for quality of service, and exclusivity for basic services and networks until 1996, after which competition would be allowed.

Fifteen months after TELMEX’s privatization, the sector appeared to be making good progress along the lines sought by the government’s modernization program. TELMEX had overall met its obligations under the concession regarding growth, quality, and price of basic telephone service. The company was building a sound organizational, physical, and financial base for sustained expansion and improvement of service, and yielded high returns to investors. Independent operating companies were successfully competing with TELMEX’s cellular subsidiary in each of the nine zones. They were providing business and high-income residential customers cellular alternatives to the scarce and unreliable wired
telephone service at prices close to the U. S. average. These companies, as a group, were becoming a force to contend when TELMEX's monopoly privileges end in 1996. Private corporate networks using satellite, microwave, and other own and leased facilities continue to develop, providing cost-effective solutions to meet the needs of large business users and specific communications-intensive sectors of the economy.

Progress in developing regulation receives mixed reviews. The new telecommunications regulations established in Mexico a comprehensive, modern framework with policy formulation, licensing, and regulatory functions exercised by the government, with telecommunications networks and services largely provided by the private sector in an increasingly competitive marketplace.

On the other hand, progress in developing SCT as a regulatory agency with strong professional staff capability has been slower than expected. Moreover, implementation of the development plan has been constrained by a shortage of authorized management positions. Also, there is a big concern around discussions on telecommunications in the context of the North American Free Trade Agreement NAFTA, which requires a substantial level of regulatory competence in Mexico to deal with the implementation of legal and guarantee issues.

The most striking and consistent short-run result in the telecommunications sector was the rapid expansion of the network after privatization. In the first three to four years after privatization, the network grew at 13 percent per annum in Mexico, 13 percent per annum in Argentina, more than 15 percent per annum in Venezuela, and 18 percent per annum in Jamaica. Not only were these rates double or triple the historic rates, they exceeded the targets set by governments.
The second dramatic result in every case but Jamaica was the explosive growth in labor productivity. Measured by the number of lines in service per employee, it grew by double digits in Venezuela, 13 percent annum in Mexico, and 19 percent per annum in Argentina. As a result, the companies' sales and profits doubled or tripled after privatization. The companies also registered large increases in rural telephone service and the number of telephones in operation.

2.1.4. The experience of Venezuela

Approximately 1.6 million lines were in service in Venezuela at the end of 1990. This was the fourth largest telecommunications system in Latin America (after Brazil, Mexico, and Argentine), and with 8.2 lines per 100 inhabitants it was also among the largest relative to population size. Service, however, was very poor: call competition rates were less than 30 percent for long distance and international calls and waiting periods exceeded 18 months for new lines. Unmet demand for new telephone connections was estimated at up to 3 million. Local tariffs were far below cost, with the result that total revenue per subscriber (for all services) averaged only $250 in 1990.

In mid-1990, the government appointed a new Minister of Transport and Communications and also a new president of Compañía Anónima Nacional de Teléfónos de Venezuela (CANTV), the state-owned monopoly providing local and long-distance service throughout the country. A Telecommunications restructuring Group was established to manage the reform of the sector and the privatization of CANTV. Consulting firms were hired in early 1991 to analyze the competition regime, develop a new tariff structure, prepare a new telecommunications law and regulations, and design the regulatory institutional regime. An investment-banking consortium was also hired to prepare the sales memorandum and bidding documents.
In March 1991, the government published pre-qualification criteria for the privatization. The criteria included six financial and technical benchmarks. Based on these criteria, eight international operators were pre-qualified. Draft bidding documents were distributed and discussed with the pre-qualified firms. Following these discussions and the due diligence period, the government issued the final bidding documents in September 1991. The government established a base price of US$900 million for the sale of 40 percent of CANTV’s shares. An additional 11 percent was to be sold to CANTV employees on the same terms and conditions. The government’s remaining shares (49 percent) were to be progressively sold in the future through global share issue(s).

The public tender process took place on November 15, 1991. Two consortia participated, including one consortia led by GTE and one led by Bell Atlantic. The GTE consortia won the tender with a bid of US$1,885 million ($2,930 per line in service). The company was formally transferred to the new owners-operators the following month.

Privatization was accompanied by the preparation of a new telecommunications law (still before congress), the establishment of a new regulatory agency (CONATEL), major tariff adjustments, and the introduction of competition in cellular, private networks, and value added services. One cellular band was granted to CANTV (and transferred to the new operator following the privatization). The second band was awarded through competitive bidding to TELCEL (A Bell South consortium) at a price of roughly US$100 million.

Key features of the privatization of CANTV included:

- The new operator would have a 9-year monopoly on basic service, including long distance and international. This essentially followed the Mexican and Argentinean examples. The exclusivity period was deemed essential to ensure sufficient financial
incentive and cash flow to finance the ambitious expansion program for the basic network.

- The concession requires an aggressive investment program: 3,000,000 new lines in addition to 640,000 replacement lines over 9 year (or 400,000 lines annually). The concession also included a number of service performance targets to be achieved during the exclusivity period.

- Tariffs were increased in mid-1991 (prior to privatization) and again on January 1, 1992 (upon transfer to the new operator). This included major increases in local tariffs, as well as the introduction of a new surcharge for digitalization and modernization. As a result, revenue per subscriber line increased from US$250 in 1990 to an estimated US$500 in 1992. Tariffs were grouped into three baskets, to be regulated on a price-cap basis, with full inflation indexing on a quarterly basis until end-1996, followed by partial indexing for the remainder of the exclusivity period (end-2000).

- The new operator was required to adhere to the collective labor contracts (which were to expire at end of 1993). The government did not implement any work force reductions in CANTV prior to privatization. At the time of privatization, CANTV productivity was 12.3 employees/1000 lines, about average for Latin America.2.2.

2.2 Results

The following tables describe the results and some important elements of those privatization processes mentioned above:
<table>
<thead>
<tr>
<th>Performance Measures</th>
<th>Telefonos de Mexico</th>
<th>ENTel de Argentina</th>
<th>CANTV de Venezuela</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. System expansion and growth</td>
<td>The network grew at 12% or more per year after privatization, compared to 6-7% in the previous decade and an average of 9% in the three years leading up to privatization. Telephone density increased from 6.6 lines per 100 persons to 8.7 in the first three years of privatization. Capital spending averaged US$2.2b per year after privatization, versus US$1.3b in the three years before privatization (and much less in the early 1980s).</td>
<td>The network grew at 12% per year in the first four years after privatization, versus 5% in the five years prior to privatization. Telephone density increased from 9.4 lines per 100 persons in 1985 to more than 14 in 1994. Average capital spending of US$1.2b per year after privatization was three to four times capital spending in the early 1980s.</td>
<td>The network expanded at more than 15% in the first two years after privatization. Telephone density increased from 8.2 lines per 100 persons in 1990 to 10 by 1993 and was projected to reach 20 in the year 2000. Capital spending in the first two years after privatization was US$1.1b and was projected to total US$6.0b between 1992 and 2000.</td>
</tr>
<tr>
<td>2. Labor productivity (measured by main lines per employee)</td>
<td>This improved by 13% per year in the first three years of privatization to reach 152 lines per employee in 1993, compared to a decline of 2% per year in the 1980s and a growth of 10% per year in the two years leading up to privatization.</td>
<td>This improved by 19% per year in the first three years after privatization, partly through workforce reduction to reach 150 lines per employee in 1994, versus 6.5% in the years before privatization.</td>
<td>This improved by doubled digits in the first two years after privatization, when it stood at 97 lines per employee, versus a small decline from 1987 to 1990.</td>
</tr>
<tr>
<td>3. Quality of service</td>
<td>This improved in the aggregate by historical standards but with significant shortfalls in some areas compared to the (challenging) targets set in the concession agreement, particularly in the Mexico City region. Digitization rose from less than 40% to 72% in the first three years of privatization.</td>
<td>If company reported data are accurate, significant quality improvements were registered in the first four years and the (easy)targets set in the concession agreement were greatly exceeded; however, as of 1994, regulators had not verified the accuracy of the self-reports. Digitization rose from 14% in the south and 11% in the north in 1990 to 53% and 72%, respectively, in 1994.</td>
<td>In the first year, the call completion rate improved from 48% to 53% for local calls, from 31% to 39% for domestic long-distance calls, and from 19% to 33% for international calls; in the aggregate, all quality of service targets in the concession agreement were exceeded. Digitization rose from 20% to 40%.</td>
</tr>
<tr>
<td>4. Financial performance</td>
<td>In the first three years after privatization, sales and net profits rose to three times and five times, respectively, of their levels in the year before privatization.</td>
<td>Sales rose to 3.5 times in the year prior to privatization; losses exceeding US$500m in 1988 were turned into after-tax profits of US$600m in 1994.</td>
<td>Sales more than doubled in the first year of privatization (55% increase at constant prices), and loss of US$161m in 1991 turned into a profit before tax of US$208m in 1992.</td>
</tr>
<tr>
<td>Elements of the Package</td>
<td>Teléfonos de México</td>
<td>ENTel de Argentina</td>
<td>CANTV of Venezuela</td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------</td>
<td>--------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>1. Restructuring prior to privatization</td>
<td></td>
<td></td>
<td>a. CANTV was sold as is.</td>
</tr>
<tr>
<td>a. Organizational</td>
<td>a. The idea of dividing Telmex into two regional companies was rejected; instead, domestic long-distance microwave transmission network owned by a government agency was consolidated with Telmex prior to privatization.</td>
<td>a. ENTel was divided into northern and southern parts, with the capital city divided between the two and the regional companies equally owning the long-distance service company.</td>
<td>b. There were no reductions in the workforce.</td>
</tr>
<tr>
<td>b. Labor relations</td>
<td>b. Labor contracts were consolidated into a single agreement, categories of workers were reduced, and flexibility in deploying workers was increased.</td>
<td>b. The workforce was reduced through attrition; labor relations were strained in the run-up to privatization. The workweek was extended by 7.5 hours, job guarantees were ended, and workers rights were curtailed.</td>
<td></td>
</tr>
<tr>
<td>c. Financial</td>
<td>c. The balance sheet was improved through debt buyback, but only company resources were used for this purpose; the government assumed no additional debt.</td>
<td>c. The government purchased hundreds of millions of dollars of equipment prior to privatization, adding to the companies’ inventories, while agreeing to absorb US$1,757m in debt and leaving the buyers responsible for only US$380m.</td>
<td>c. Before privatization, the government assumed US$500m in long-term debt and accumulated interest owed to foreign creditors.</td>
</tr>
<tr>
<td>2. Competition policy</td>
<td>Telmex was granted an exclusive right to provide domestic and international public long-distance service for six years; entry into other services, including local service and private circuits, was unrestricted. Telmex was also granted the only license to offer cellular service in all regions of Mexico. It was permitted to compete in all services, equipment supply and service, yellow pages, value added services, etc. through separate subsidiaries.</td>
<td>Each company was granted an exclusive right to provide local and long-distance service in its assigned territory for seven years, extendible to ten years if performance targets were met. A joint venture between the two regional companies was granted the right to be one of two providers of cellular service nationwide, with the requirement that entry occur no sooner than two years after rivals had entered. Both companies were permitted to offer other services through separate subsidiaries.</td>
<td>CANTV was granted an exclusive right to provide local and long-distance service for nine years, from 1992 to 2000. It already had the rights to one of two bands reserved for cellular service. All other services, including private lines, value added services, and terminal equipment, were opened to competition.</td>
</tr>
<tr>
<td>Elements of the Package</td>
<td>Telefonos de Mexico</td>
<td>ENTel de Argentina</td>
<td>CANTV of Venezuela</td>
</tr>
<tr>
<td>-------------------------</td>
<td>---------------------</td>
<td>--------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>3. Pricing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Initial levels</td>
<td>a. Special telephone tax averaging 40% scrapped; local and domestic long-distance rates were increased sharply in the run-up to privatization, while international rates were reduced; overall, revenue per line increased from US$450 in 1989 to US$745 in 1991.</td>
<td>a. Price distortions were not corrected, with very high rates for new connections and long-distance service continuing; overall rate for a basket of regulated services increased revenue per line from US$328 in 1990 to US$635 in 1991 and US$794 in 1993.</td>
<td>a. Two large price increases were granted before privatization, raising the revenue per line from US$275 in 1990 to about US$500 in 1992; rate rebalancing between local and long-distance service was to begin in 1994 and end in 2000 with an end to all cross subsidization; telephone tax on CANTV reduced.</td>
</tr>
<tr>
<td>b. Subsequent price rules</td>
<td>b. Thereafter, prices for the basket of regulated services were to be set according to the price cap method, with no adjustment for anticipated productivity gains.</td>
<td>b. Thereafter, price increases allowed according to the price cap method, with 2% per year adjustment for anticipated productivity gains in years 3-7.</td>
<td>b. Thereafter, prices for regulated services were to be increased according to the price cap method with no adjustment for productivity gains until the end of 1996, followed by a 3% per year adjustment on long distance service up to 2000.</td>
</tr>
<tr>
<td>4. Labor participation</td>
<td>4.4% of the stock were sold to a trust controlled by the workers at the same price paid by the core investors, financed under confessional terms through a state-owned bank. There was no worker representation on the board.</td>
<td>10% of shares were sold to workers at a price equal to about 20% of that paid by the winning consortium, with subsidized financing thrown in as well. Workers were assigned one seat on the board.</td>
<td>11% of shares were sold to workers at the price offered by the winning consortium but financed by a non-interest-bearing loan. Workers were assigned two out nine seats on the board.</td>
</tr>
<tr>
<td>5. Performance obligations</td>
<td>Explicit goals were set for the rate of network expansion, universal coverage, public telephones, and quality of service, with financial penalties for nonfulfillment of targets.</td>
<td>Explicit targets were set for network expansion, public service obligations, and quality of service.</td>
<td>Explicit targets were set for network expansion, public service obligations, and quality of service.</td>
</tr>
<tr>
<td>Elements of the Package</td>
<td>Telefonos de Mexico</td>
<td>ENTel de Argentina</td>
<td>CANTV of Venezuela</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>6. Regulatory institutions</td>
<td>The idea of creating an autonomous regulatory agency was rejected in favor of continuing existing agency (SCT). The government specifying procedures for entering various segments approved a new set of telecommunications regulations.</td>
<td>A new autonomous regulatory agency (CNT) was created by presidential decree in 1990 but failed to function until 1992 and the was hamstrung by political interference. The agency was financed by a levy on telephone companies, but the budget still had to be approved by the ministry.</td>
<td>A new regulatory agency, CONATEL, was established by presidential decrees in absence of congressional approval of a new telecommunications law that would have created such an agency.</td>
</tr>
<tr>
<td>7. Targeted investors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Core investors or dispersed?</td>
<td>a. Core investors were sought.</td>
<td>a. Core investors were sought.</td>
<td>a. Core investors were sought.</td>
</tr>
<tr>
<td>b. National or foreign?</td>
<td>b. Control by Mexicans was required, although this could be done through a trust in which foreigners owned up to 49% of the shares.</td>
<td>b. Foreign control was permitted. Three bids were received for the two companies, with one bidder withdrawing in the final stages, forcing the government to work out a deal with the two remained.</td>
<td>b. Foreign control was permitted. Two bids were received, both involving control by foreign firms, with local investors as minority partners in the consortia.</td>
</tr>
<tr>
<td>c. Divestment in stages?</td>
<td>c. In the first step, controlling shares were sold to a consortium of Mexican and foreign firms, including Southwestern Bell and France Telecom; subsequently, additional shares were sold through three international offerings.</td>
<td>c. In the first step, 60% of the equity of each company was sold to the winning consortium (Telefonica de España, Citibank, and Argentine investor; STET of Italy, France Telecom, J.P. Morgan, and another Argentine investor). Subsequently, the government’s remaining holding of 30% was sold through international offerings.</td>
<td>c. In the first step, 40% were sold to the winning consortium, with the right to appoint five out of nine board members, 11% were sold to workers, and the government plan to sell its 49% in stages in the local and foreign capital markets was put on hold due to political circumstances in Venezuela in 1993 and 1994.</td>
</tr>
<tr>
<td>8. Selling price and terms</td>
<td>The government realized more than US$6 billion for its 55% of Telmex, representing a price of US$1,750 per line from the core investors and more than US$5,000 per line in subsequent rounds. All sales were for cash.</td>
<td>The government realized US$3.3 billion from selling ENTel, with an average price of US$1,050 per line (US$630 from the winning consortium and US$2,200 from the international offering). Debt-equity swaps were allowed to core investors; international offerings were for cash.</td>
<td>The government realized a price of US$1.885 billion from VenWorld, a consortium led by GTE, which owned 51% of the consortium and included Telefonica de España (16%), AT&amp;T (5%), and two Venezuelan private firms. The sale was for cash.</td>
</tr>
</tbody>
</table>
The most striking and consistent short-run result in the telecommunications sector was the rapid expansion of the network after privatization. In the first three to four years after privatization, the network grew at 13 percent per annum in Mexico, 13 percent per annum in Argentina, and more than 15 percent per annum in Venezuela. Not only were these rates double or triple the historic rates, they exceeded the targets set by governments.

The second dramatic result in every case was the explosive growth in labor productivity. Measured by the number of lines in service per employee, it grew by double digits in Venezuela, 13 percent annum in Mexico, and 19 percent per annum in Argentina. As a result, the companies’ sales and profits doubled or tripled after privatization. The companies also registered large increases in rural telephone service and the number of telephones in operation.
3.1 General Description of the Telecommunications Network

3.1.1 Basic Local Telephony Service

At December 1995, Colombia had a total of 4,955,341 installed lines and coverage of 13.4 lines per 100 inhabitants. 70% of this capacity was built with digital technology and 30% with analogic technology.

The residential segment is the largest in the market with 72.6% of the total of lines.

<table>
<thead>
<tr>
<th>Market Segment</th>
<th>Participation % (Dec. 1995)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>72.6</td>
</tr>
<tr>
<td>Residential Rural</td>
<td>0.5</td>
</tr>
<tr>
<td>Commercial</td>
<td>20.9</td>
</tr>
<tr>
<td>Public phones</td>
<td>1.1</td>
</tr>
<tr>
<td>Rural</td>
<td>0.2</td>
</tr>
<tr>
<td>Official</td>
<td>2.1</td>
</tr>
<tr>
<td>Isolated lines</td>
<td>0.2</td>
</tr>
<tr>
<td>Others</td>
<td>2.4</td>
</tr>
</tbody>
</table>

The national local telephony service in Colombia is supplied by 29 state-owned and one mixed private/state-owned companies. It has been planned that new companies will enter to compete with the existent ones during the period 1996 -1997. The National Company of Telecommunications, TELECOM, supplies local basic telephony around the country. It covers 632 towns around the country.
Figure 1. Composition of Telecommunications Traffic in Colombia

3.1.2 Geographic concentration of installed base

The following chart illustrates that three principal municipalities represent 24% of the total population and 60% of total access lines.
3.1.3 Digitalization of Network

In 1993, 60% of the network had been upgraded to digital technology.

The Residential sector is the main component of demand for local telephony services. If the residential segment is in turn broken down into six socioeconomic strata, one observes that the largest proportion of this demand emanates from the medium stratum.
3.1.4 Service Growth

As it is mentioned before, Colombia had 4,955,341 lines installed in 1995, which represents an increase of 15.8% in comparison with 1994. While in 1994 the service consisted of 12.3 lines per 100 inhabitants, in 1995 that relation was of 13.4 lines per 100 inhabitants. In 1998 it is supposed to be 18 lines per 100 inhabitants for a total of 7 millions of lines. Currently, Colombia is the third country in telephone density for the Latin American market:

### Table 4. Telephone Density in Latin America (1994)

<table>
<thead>
<tr>
<th>Country</th>
<th>Telephony Density</th>
<th>Installed Lines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Uruguay</td>
<td>18.4</td>
<td>582,000</td>
</tr>
<tr>
<td>Argentina</td>
<td>14.1</td>
<td>4,834,000</td>
</tr>
<tr>
<td>Colombia</td>
<td><strong>12.3</strong></td>
<td><strong>4,281,000</strong></td>
</tr>
<tr>
<td>Chile</td>
<td>11.0</td>
<td>1,545,000</td>
</tr>
<tr>
<td>Venezuela</td>
<td>10.9</td>
<td>2,334,000</td>
</tr>
<tr>
<td>Mexico</td>
<td>9.3</td>
<td>8,493,000</td>
</tr>
<tr>
<td>Brazil</td>
<td>7.4</td>
<td>11,746,000</td>
</tr>
<tr>
<td>Peru</td>
<td>3.3</td>
<td>772,000</td>
</tr>
<tr>
<td>Paraguay</td>
<td>3.1</td>
<td>142,000</td>
</tr>
</tbody>
</table>


Source: National Planning Department
Demand is thus forecast to grow at an annual growth rate of 4.5%. At year 2000, the relation might be of 20 lines per 100 inhabitants, for a total of 8.3 millions of telephone lines.

**Figure 5. Demand vs. Supply of Access Lines**

![Graph showing demand vs. supply of access lines from 1994 to 2005.]

Source: DNP.

**Figure 6. Line Demand by customer segment**

![Graph showing line demand by customer segment from 1994 to 2005.]

Source: Expansion plans of companies.
This gap is, however, not only caused by an increase in line demand, but also by an increase in average line usage, as shown in the table below.

<table>
<thead>
<tr>
<th>STRATUM</th>
<th>LOCAL (MILLION MIN)</th>
<th>DLD (MILLION MIN)</th>
<th>ILD (MILLION MIN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>847.6</td>
<td>943.1</td>
<td>149.8</td>
</tr>
<tr>
<td>Residential</td>
<td>554.8</td>
<td>658.7</td>
<td>57.0</td>
</tr>
<tr>
<td>Stratum 6</td>
<td>731.8</td>
<td>834.2</td>
<td>136.4</td>
</tr>
<tr>
<td>Stratum 5</td>
<td>713.3</td>
<td>858.4</td>
<td>135.3</td>
</tr>
<tr>
<td>Stratum 4</td>
<td>587.7</td>
<td>713.3</td>
<td>59.6</td>
</tr>
<tr>
<td>Stratum 3</td>
<td>540.3</td>
<td>658.8</td>
<td>39.3</td>
</tr>
<tr>
<td>Stratum 2</td>
<td>443.4</td>
<td>478.9</td>
<td>37.7</td>
</tr>
<tr>
<td>Stratum 1</td>
<td>402.8</td>
<td>667.8</td>
<td>33.4</td>
</tr>
</tbody>
</table>

Source: DNP

### 3.1.5 Expansion and Investment Plans

The total investment during the period 1995-1998, according to the government plan, is $3,631 millions\(^2\). Private and public sources will be provided to accomplish the plan.

For basic local telephony, TELECOM has planned to install 959,000 new lines between 1995 and 1998 (70,000 lines for replacement). Then, the total capacity will go from 839,933 lines at 1995 to 1,445,000 lines at 1998. The density will grow from 10.5 lines per hundred of inhabitants to 15.2, during the period mentioned. Operational funds and loans will be used to finance the plan. Joint venture contracts with private investors are also part of the expansion plan:

---

\(^2\) Source: “Plan de Desarrollo para el sector de telecomunicaciones” - CONPES 2760/95.
Table 6. Contracts signed 1995-1998

<table>
<thead>
<tr>
<th>Contract</th>
<th># of lines</th>
<th>Investment ($ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nortel</td>
<td>266,168</td>
<td>163.0</td>
</tr>
<tr>
<td>Asesa</td>
<td>157,598</td>
<td>195.0</td>
</tr>
<tr>
<td>Bell</td>
<td>24,778</td>
<td>19.4</td>
</tr>
<tr>
<td>Siemens</td>
<td>86,350</td>
<td>130.0</td>
</tr>
<tr>
<td>Nortel, Siemens, Ericsson, NEC in Santafe de Bogota</td>
<td>550,000</td>
<td>385.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,084,894</strong></td>
<td><strong>892.4</strong></td>
</tr>
</tbody>
</table>

3.1.6 Tele-associates and Municipal Companies

The TELECOM associated companies and the state-owned enterprises lead investment plans for their area of influence considering the expansion of service and replacement of lines. For the years 1995 – 2000, those companies have contracted the installation of 2,247,720 new lines\(^3\). That means an increase of 53 % for the period mentioned and an investment of $1,700 millions for the expansion program\(^4\).

3.1.7 New Companies

Between 1995-1996 new companies have started their operation such as the public company ERT, and mixed enterprises such as Metrotel, Empresa de Teléfonos de Yumbo and Empresa de Teléfonos de Jamundí.

\(^3\) Source: “Telefonía Local a nivel nacional, Planta Interna - Capacidad Instalada - 1994”.

\(^4\) Source: DNP-UINF-DITEL. Average unit cost per line is US$756
ERT operates at the Departamento del Valle and will install 98,066 lines between 1995 and 1998. Metrotel operates at the city of Barranquilla and will install 100,000 lines during the same period of time.

3.1.8 Mobile Cellular Telephony Service

Mobile Cellular Telephony Service has been available since June 1994. To provide the service, the country has been divided into three regions. For each one, the Miniatry of Communications has allocated two grants, for an extendible ten-year term, one to a privately owned company and the second to a jointly owned company. With the shared market regime under which it operates (a jointly owned network and a network managed by private investors), the private sector share amounts to over 75%. The operators were selected on a public auction basis, producing a grant fee that amounted to $1,187.0 million.
Chapter IV  Competition Structure

4.1 Competition in local telephony in Colombia

One of the most important events in the recent history of telecommunications in Colombia is the appearance of new providers of local telephony service in some cities, competing with those that have existed for many years.

The first part of this chapter describes some changes in the industry, its origins and some important elements to be taken in account in a competitive environment. The second part considers the local telephony market in Colombia, emphasizing the aspects that affect the competition development. Finally, it is presented some issues related with the competition in Colombia.

4.1.1 The local telephony in Colombia

The transformation of the telecommunications sector around the world during the past years, based on the rapid technologic development, is moving a monopolized industry into a competitive one, providing advantages for the consumers in terms of efficiency, quality and price.

However, each service and market segment evolves at different speed and in different way, due to its technologic and commercial characteristics. The entry of new operators has led o a reduction of margins in order to get more customers and forced the competitors to look for a more focused market. By the way, the first communications service with competition
were the radio broadcasting, followed by basic services, the added value services and the
basic long distance telephony.

The characteristics of the local telephony service have made this service the last one in the
transition to the competition. High costs in copper wire connections had prevented this
service from being offered by more than one operator. However, these conditions have
changed. With new technologies, some of them wireless systems, connection costs are
lower than before and accessibility to the service is higher. No longer are significant
economic reasons to maintain the monopoly by the state.

As part of the technologic development, local telephony service is acquiring a new
dimension. The tendency to integrate interactive services has expanded the market
possibilities far away from the voice transmission into new possibilities of communication
as video, data, cable and multimedia.

Technological and economic changes are not enough to create an effective competence. It
is necessary to redefine new game’s rules in a market designed for only one operator, to
provide space for profitable activities of new operators. In order to reach it, at least three
specific aspects must be considered:

1. Access to the market. It must exist clear rules in order to inhibit or delay the entrance
   of new competitors.

2. Free competition. Once the new operators enter to the market, it is necessary to assure
   that all of them have the same opportunities. It must be clear the regulation related with
   technical and commercial procedures of interconnection, quality standards, procedures
   to solve conflicts, and rates.
3. User protection. Due to the principal reason of competence is to bring new alternatives to the users and to benefit them, it must be avoided that a hard competence could affect negatively on the consumer.

Special attention must be paid to the tariff system. One of the characteristics of the service with a monopoly structure, is the tariff distortion. In general, local rates are not based on the costs of the service and some users pay less than their costs. The deficit generated by this fact is paid by other users, by cross-subsidy services, or assumed by the companies through less profit. A competitive scenario requires a redefinition of the tariff structure, which allows financial self-sufficiency, economic efficiency and expansion of the service.

The situation described so far has occurred not only in Colombia, but also around the world. The Colombian regulation has made more flexible the entry of new operators to the market and established general rules that must be implemented by the Commission of Regulations in Telecommunications. The Commission has already started this task and there are currently some cases of local telephony in competition.

Next, it is described briefly the main characteristic of the Colombian market for the local telephony and the current situation for the new operators.

4.1.2 The local telephony business in Colombia

4.1.2.1 Size of the business

The local telephony service represents an important portion in the Telecommunication Industry in Colombia. From the total of revenues of $1,450 millions for the sector in 1994, $635 millions (44%) was provided from the local telephony. The 66% of $880 millions
invested in the sector during 1995 were for the local telephony. The following chart illustrates this fact:

**Figure 7. Investments in the telecommunications sector**

![Pie chart showing investments in telecommunications sectors in 1995](image)

Source: DNP - El Salto Social Balance 1995  DNP

### 4.1.2.2 Service Coverage

On December 1995, the country had 4.0 millions of telephone lines installed and 3.96 millions of customers, which means there were 14 installed lines per 100 inhabitants and 11.3 customers per 100 inhabitants. During the last ten years, the number of installed lines has been increased in a 9.07% per year, while the number of customers has been growing at a rate of 9.40% per year.

The telephone density in Colombia has been growing at 6.6% per year. Despite of this significant growing, telephony development in Colombia has decreased, in comparison with countries like Chile, Mexico, Costa Rica and Peru. These countries have increased their telephony density at a biggest rate, due to the privatization processes in their telephony companies:
The local telephone service in Colombia is offered by 30 companies, which are very diverse in size, coverage and market. Seventeen of these companies serve only one town; the remainders cover multiple areas of different sizes. Telecom provides the service to 609
cities or towns around the country. As a matter of comparison, the smallest company, Teleobando, owns 4,600 lines; the biggest, ETB, has 1.8 millions of lines. Due to the technical and economic conditions, each day more companies extend their coverage.

**Table 8. Companies of Local Telephony in Colombia December, 1995**

<table>
<thead>
<tr>
<th></th>
<th>Company</th>
<th>Installed Lines</th>
<th>Customers</th>
<th>Towns served</th>
<th>Density (lines per 100 inhab.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E.T.B.</td>
<td>1,796,046</td>
<td>1,471,395</td>
<td>2</td>
<td>32.47</td>
</tr>
<tr>
<td>2</td>
<td>TELECOM</td>
<td>799,811</td>
<td>525,865</td>
<td>609</td>
<td>5.15</td>
</tr>
<tr>
<td>3</td>
<td>E. P. MEDELLIN</td>
<td>795,015</td>
<td>695,798</td>
<td>18</td>
<td>29.54</td>
</tr>
<tr>
<td>4</td>
<td>EMCALI</td>
<td>430,297</td>
<td>386,018</td>
<td>3</td>
<td>24.28</td>
</tr>
<tr>
<td>5</td>
<td>E.P. BUCARAMANGA</td>
<td>165,000</td>
<td>140,177</td>
<td>3</td>
<td>24.20</td>
</tr>
<tr>
<td>6</td>
<td>E.M.T. BARRANQUILLA</td>
<td>139,000</td>
<td>113,926</td>
<td>3</td>
<td>N.A.</td>
</tr>
<tr>
<td>7</td>
<td>E.P. PEREIRA</td>
<td>95,010</td>
<td>80,671</td>
<td>2</td>
<td>18.41</td>
</tr>
<tr>
<td>8</td>
<td>TELECARTAGENA</td>
<td>91,498</td>
<td>69,454</td>
<td>2</td>
<td>11.59</td>
</tr>
<tr>
<td>9</td>
<td>E.P. MANIZALES</td>
<td>84,602</td>
<td>77,113</td>
<td>3</td>
<td>21.76</td>
</tr>
<tr>
<td>10</td>
<td>TELETOLIMA</td>
<td>65,280</td>
<td>43,943</td>
<td>1</td>
<td>18.83</td>
</tr>
<tr>
<td>11</td>
<td>EDA</td>
<td>63,374</td>
<td>49,234</td>
<td>106</td>
<td>3.26</td>
</tr>
<tr>
<td>12</td>
<td>TELEARMENIA</td>
<td>45,765</td>
<td>44,077</td>
<td>1</td>
<td>20.77</td>
</tr>
<tr>
<td>13</td>
<td>TELEHUILA</td>
<td>43,464</td>
<td>42,016</td>
<td>2</td>
<td>13.69</td>
</tr>
<tr>
<td>14</td>
<td>TELETULUA</td>
<td>36,208</td>
<td>26,278</td>
<td>1</td>
<td>16.03</td>
</tr>
<tr>
<td>15</td>
<td>EMTEL</td>
<td>29,280</td>
<td>28,000</td>
<td>1</td>
<td>13.12</td>
</tr>
<tr>
<td>16</td>
<td>TELEPALMIRA</td>
<td>29,056</td>
<td>22,202</td>
<td>1</td>
<td>11.31</td>
</tr>
<tr>
<td>17</td>
<td>METROTEL</td>
<td>29,000</td>
<td>13,393</td>
<td>1</td>
<td>N.A.</td>
</tr>
<tr>
<td>18</td>
<td>TELENARINO</td>
<td>24,500</td>
<td>23,657</td>
<td>1</td>
<td>7.53</td>
</tr>
<tr>
<td>19</td>
<td>TELESANTAMARTA</td>
<td>23,019</td>
<td>22,210</td>
<td>1</td>
<td>7.44</td>
</tr>
<tr>
<td>20</td>
<td>TELEUPAR</td>
<td>22,100</td>
<td>16,590</td>
<td>6</td>
<td>8.32</td>
</tr>
<tr>
<td>21</td>
<td>E.M. CARTAGO</td>
<td>14,000</td>
<td>12,743</td>
<td>1</td>
<td>11.95</td>
</tr>
<tr>
<td>22</td>
<td>TELEBUENAVENTURA</td>
<td>13,833</td>
<td>11,509</td>
<td>1</td>
<td>5.18</td>
</tr>
<tr>
<td>23</td>
<td>E.M. BUGA</td>
<td>10,900</td>
<td>10,083</td>
<td>1</td>
<td>10.26</td>
</tr>
<tr>
<td>24</td>
<td>E.T.G.</td>
<td>10,828</td>
<td>10,828</td>
<td>3</td>
<td>10.07</td>
</tr>
<tr>
<td>25</td>
<td>TELEMAICAO</td>
<td>10,800</td>
<td>6,802</td>
<td>1</td>
<td>13.15</td>
</tr>
<tr>
<td>26</td>
<td>E.R.T.</td>
<td>10,600</td>
<td>1,209</td>
<td>1</td>
<td>9.98</td>
</tr>
<tr>
<td>27</td>
<td>TELECALARCA</td>
<td>7,712</td>
<td>6,326</td>
<td>1</td>
<td>13.83</td>
</tr>
<tr>
<td>28</td>
<td>TELECAQUETA</td>
<td>7,560</td>
<td>7,491</td>
<td>1</td>
<td>6.41</td>
</tr>
<tr>
<td>29</td>
<td>TELESANTAROSA</td>
<td>5,000</td>
<td>4,956</td>
<td>1</td>
<td>6.54</td>
</tr>
<tr>
<td>30</td>
<td>TELEOBANDO</td>
<td>4,600</td>
<td>4,545</td>
<td>1</td>
<td>5.27</td>
</tr>
<tr>
<td></td>
<td><strong>TOTAL</strong></td>
<td><strong>4,903,128</strong></td>
<td><strong>3,968,509</strong></td>
<td>779</td>
<td><strong>13.97</strong></td>
</tr>
</tbody>
</table>

---

5 Barranquilla has two suppliers, the density per company is not measurable. The total density total for the city is 15.78 lines per 100 inhabitants.
Recent studies have estimated\textsuperscript{6} that there is a deficit of 1.18 millions of local lines in the supply side. Here, the residential segment has a deficit of 890,000 lines and the commercial and industrial users are short of 290,000 lines. This unsatisfied demand is concentrated mainly in some big cities and productive centers.

\textbf{4.1.2.3 Cost, Tariff and Subsidy Structures}

Investment costs in local telephony are close to $720 per line, which is, in average, considerably lower than in other countries\textsuperscript{7}. On the other side, operation and maintenance costs, and administrative expenses are close to $95 per line per year, value similar to the international costs. For largest companies the pension costs are relatively high.

In general terms, tariffs in local telephony consist of four components: i) installation or connection charge; ii) the fixed charge; iii) service charge and; iv) access fee to long distance service. Traditionally, it has been considered that telephony rates in Colombia are lower than in other countries. However, it does not imply that they are not covering costs of the local telephony. In average, the installation charge might be around $308 per customer, while the fixed charge is $2.4 per month, the value of the pulse is 1.15 cents and the access fee is us$2.6 per minute.

Considering the data, it can be concluded that the analysis shows the level of actual tariffs permit recovery at the total amount of the costs of the service, even existing differences between companies and groups of users.

\textsuperscript{6} Booz-Allen and Hamilton.
\textsuperscript{7} This fact is explained by the high level of competition in the Colombian market, where the distributors of telephony equipment compete strongly.
4.2 International Long Distance Communication

The International Long Distance service is offered by the National Telecommunications Company, TELECOM, as a monopoly. In 1994, Telecom had 3,307 international long distance circuits. Compared with its capacity in 1993, (2,694 circuits), its growth has been of 23%. It is expected the capacity of Telecom will be of 15,000 international long distance circuits at 2000.

The international long distance service is offered by TELECOM through two centers located in Bogota and Barranquilla, using analog underground - satellite - submarine fiber optic network.

Due to the main traffic is kept with US, there is a direct connection with that country through the Transcaribbean Submarine Cable. This cable connects Puerto Rico, Central America and US each other. In the other hand, communications with Venezuela, Ecuador and Peru are made by an underground analog connection. TELECOM is evaluating a new project to connect the Pacific Coast through an optic fiber cable.

The investment program between 1991 and 1994 lead by Telecom for the international long distance program, was close to $84,582 millions of pesos (($ 1994):
Table 9. Investment in International Long Distance Telephony 1991-1994

<table>
<thead>
<tr>
<th>Year</th>
<th>Millions of pesos</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>12,258</td>
</tr>
<tr>
<td>1992</td>
<td>2,422</td>
</tr>
<tr>
<td>1993</td>
<td>37,712</td>
</tr>
<tr>
<td>1994</td>
<td>32,190</td>
</tr>
<tr>
<td>Total</td>
<td>84,582</td>
</tr>
</tbody>
</table>

In addition, TELECOM has planned to make new investments for the international long distance service. That includes the acquisition and installation of communications equipment for Santafe de Bogota, and for the digital network between Santafe de Bogota and Choconta (main satellite communication base). It is also considered the expansion for the transmission systems, mainly for those related with the submarine connection system at the Caribbean. TELECOM is building a new network between Maicao and Barranquilla in order to improve the long distance service with Venezuela. Other important project for TELECOM consists of the extension of submarine connection to Mexico and Europe.

On 1997, new suppliers will offer long distance telephony service in Colombia. It has been calculated that 14,073 new international circuits will be installed in 1998. It implies that the investment during 1995 and 1998 will be of $261.2 million[^8].

4.3 National Long Distance Service

The National Long Distance Service is currently provided by TELECOM under a monopolistic regime. On 1994, TELECOM owned 48,666 circuits for the national long

[^8]: Exchange rate: US$1=Col$850
distance service. Comparing with the capacity on 1993 (41,312 circuits), the increase is close to 18%. On 1994, the plan suggested a capacity of 62,486 circuits.

The investment program between 1991 and 1994 made by Telecom and planned to be used in the national long distance telephony, is $231,794 millions of pesos ($ 1994):

**Table 10. Investment in National Long Distance Telephony 1991-1994**

<table>
<thead>
<tr>
<th>Year</th>
<th>Million of Col$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>123,803</td>
</tr>
<tr>
<td>1992</td>
<td>19,717</td>
</tr>
<tr>
<td>1993</td>
<td>52,677</td>
</tr>
<tr>
<td>1994</td>
<td>35,597</td>
</tr>
<tr>
<td>Total</td>
<td>231,794</td>
</tr>
</tbody>
</table>

Source: DNP

For communication between cities, TELECOM has developed a plan to integrate them into the switching and transmission network. Currently, more than 90% of the switching network has been implemented under digital technology. In the short term all the inter-cities, local and rural switching network will be built under digital technology. Furthermore, the main transmission network will be implemented under digital technology to improve the telephone service, data transmission, and develop the Digital Network for Integrated Services – RDSI.

TELECOM is leading the construction of the fiber optic network to interconnect 26 cities of the country. This project requires the installation of more than 3,200 Km. of 18-pairs fiber optic cable with a transmission capacity of 2 Gbps per pair.
The entry of two new providers in the national long distance market on 1997 will allow an accelerated growth at the supply side, in terms of infrastructure and availability of new lines in the country during the following years. The goal is to reach a total of 205,410 lines for the country in 1998, between TELECOM and private companies. That means a total investment of $660.8 million for the next two years.

4.4 Mobile Cellular Telephony

The Mobile Cellular Telephony service is launched in Colombia on 1994, through concession contracts awarded by the Ministry of Communications with the winners companies of a public bid.

The country was divided into three regions in order to divide the market and make easier the provision of the service: East, West, and Atlantic Coast. Two carriers operate in each region. One of these operators is a private/state-owned company, and is in charge of the Network A. The other, a private company, operates the Network B. The providers of the cellular service are:

Table 11. Regions and service providers of cellular communication

<table>
<thead>
<tr>
<th>Region</th>
<th>Network A</th>
<th>Network B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern</td>
<td>COMCEL S. A.</td>
<td>CELUMOVIL S. A.</td>
</tr>
<tr>
<td>Western</td>
<td>OCCEL S. A.</td>
<td>COCELCO S. A.</td>
</tr>
<tr>
<td>Atlantic Coast</td>
<td>CELCARIBE S. A.</td>
<td>CELUMOVIL DE LA COSTA S. A.</td>
</tr>
</tbody>
</table>

Source: DNP

Government was able to collect $1,187 millions with that bid, and the companies obtained the right to provide the cellular telephony service for 10 years, without more competitors for 5 years.
Currently, the cellular carriers are negotiating the extension of the concession for 10 more years. At year 2013, Colombia can have more than 1.2 millions of cellular users\(^9\). At December, 1996 the number of total users was 522,857, distributed per company as the following:

Government was able to collect $1,187 millions with that bid, and the companies obtained the right to provide the cellular telephony service for 10 years, without more competitors for 5 years. Currently, the cellular carriers are negotiating the extension of the concession for 10 more years. At year 2013, Colombia can have more than 1.2 millions of cellular users\(^{10}\). At December, 1996 the number of total users was 522,857, distributed per company as the following:

<table>
<thead>
<tr>
<th>Region</th>
<th>Network A</th>
<th>Network B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Company</td>
<td>Users</td>
</tr>
<tr>
<td>Eastern</td>
<td>COMCEL</td>
<td>165,838</td>
</tr>
<tr>
<td>Western</td>
<td>OCCEL</td>
<td>58,485</td>
</tr>
<tr>
<td>Atlantic Coast</td>
<td>CELCARIBE</td>
<td>33,513</td>
</tr>
</tbody>
</table>

Source: National Planning Department


\(^{10}\) El Tiempo, February 10-16, 1997.
4.5 Value-added Services

4.5.1 Description of the Service

Value-added services refer to those that use basic, telematic, or diffusion services, or their combination, as support to provide the delivery or exchange of information, such as voice, data and/or video. Electronic transfer of funds, transmission and reception of videotext, electronic mail, data transmission are concrete examples of this kind of service. The main users of this service are the financial institutions, the industrial manufacturers and service companies.

4.5.2 Operators

Traditionally, TELECOM through the COLDAPAQ and Telepuertos systems has provided the data transmission service for the entire country. However, during the past few years, new companies have entered to the market to provide the international data transmission service using satellite technologies (VSAT), through concession agreements with the Ministry of Communications. Below it is described the companies providers of value-added service in Colombia. It is also showed the investment budget for the first year of operation\textsuperscript{11}:

\textsuperscript{11} Ministerio de Comunicaciones, 1995.
Table 13. Providers of Value-Added Service

<table>
<thead>
<tr>
<th>Concessionaires</th>
<th>Investment 1st year (thousand of $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMPSAT S. A.</td>
<td>7,255.8</td>
</tr>
<tr>
<td>TELECOM</td>
<td>2,100.0</td>
</tr>
<tr>
<td>ORBINET S. A.</td>
<td>100.0</td>
</tr>
<tr>
<td>EPM</td>
<td>5,250.0</td>
</tr>
<tr>
<td>COLOMSAT S. A.</td>
<td>2,200.0</td>
</tr>
<tr>
<td>COMPUTEC</td>
<td>150.0</td>
</tr>
<tr>
<td>IBM DE COLOMBIA</td>
<td>35.5</td>
</tr>
<tr>
<td>PROCEDATOS S. A.</td>
<td>2,500.0</td>
</tr>
<tr>
<td>REPFIN LTDA.</td>
<td>200.0</td>
</tr>
<tr>
<td>NCR DE COLOMBIA (AT&amp;T)</td>
<td>1,540.0</td>
</tr>
<tr>
<td>DATACENTRUM</td>
<td>29.4</td>
</tr>
<tr>
<td>TELEGAN</td>
<td>4,762.5</td>
</tr>
<tr>
<td>INTERCITY COMMUNICATION LTDA.</td>
<td>2,132.5</td>
</tr>
<tr>
<td>FUNDACION MARIANO OSPINA PEREZ</td>
<td>101.2</td>
</tr>
<tr>
<td>SISTEMAS SOFTWARE SOPORTE LTDA.</td>
<td>40.2</td>
</tr>
<tr>
<td>FERRUM METALMECANICA LTDA.</td>
<td>712.8</td>
</tr>
<tr>
<td>REY MORENO LTDA.</td>
<td>146.7</td>
</tr>
<tr>
<td>CITIBANK COLOMBIA</td>
<td>300.0</td>
</tr>
<tr>
<td>ENTREPRISE LTDA.</td>
<td>15.3</td>
</tr>
<tr>
<td>CARACOL S. A.</td>
<td>300.0</td>
</tr>
<tr>
<td>TELEANTIOQUIA</td>
<td>152.7</td>
</tr>
<tr>
<td>SUPERCOLOMBIA S. A.</td>
<td>1,526.7</td>
</tr>
<tr>
<td>RADIO CADENA NACIONAL S. A.</td>
<td>2,373.8</td>
</tr>
<tr>
<td>VSAT LTDA.</td>
<td>340</td>
</tr>
<tr>
<td>TELEQUOTE LTDA.</td>
<td>15.4</td>
</tr>
<tr>
<td>KISA INTERNACIONAL LTDA.</td>
<td>150.0</td>
</tr>
<tr>
<td>TELEDUCTOS LTDA.</td>
<td>379.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>34,810.3</strong></td>
</tr>
</tbody>
</table>

Source: DNP
4.5.3 Other Services

New services: The implementation of digital technology of the main network of the country will allow new integrated services such as intelligent networks, expansion of the cellular telephony, leasing of telecommunications channels, intranets, International Business Service (IBS), and data transmission by wideband.

TELECOM is leading a plan of rationalization of nodes at the national network. That includes some projects such as the installation of a national network for assistance to the customers, an intelligent network, and a transmission and processing network for tariff data.

4.6 Television and Radio Services

In Colombia, television service has been offered based on a joint operation agreement, in which the state owns the infrastructure and the broadcasting material is produced by private companies leasing time spaces.

Today there are three public and five regional channels. Besides these, there are 10 local licenses for cable television services. Law 182 provides coverage for new grants. Up to this point, private companies licensed by the Ministry of Communications, cover the country’s largest cities, through radio broadcasting networks in ultra high frequency (UHF) and MMDS. The main operator, TV Cable Santafé de Bogota, has approximately 80,000 subscribers in the nation capital. Soon, it will offer Value-added services.
4.7 The Satellite Resource

Colombia has subscribed to the INTELSAT Interim Agreements since 1965. TELECOM has been the national signatory for such agreements. Since 1978, Colombia has rented satellite capacity from INTELSAT to satisfy state telecommunications needs. International satellite providers such as PANAMSAT have entered the Colombian market, offering satellite capability to private users and service operators. Satellite capability is understood to mean the services provided through the spatial segment and from satellites other than INTELSAT and INMARSAT.

4.8 Social Telephone Service

Currently, Ministry of Communications is working on the Social Telephone Project, which will take telephone service to communities that do not have it. Also, it is financing projects aimed at low-income users who cannot cover service installation costs. Financial resources to fund this plan will be drawn from granted rights, billed to cellular mobile telephone services, from national long distance and other telecommunications grants given by Ministry of Communications.

The project will be also financed by the nation’s general budget and by resources from international technical cooperation agreements. Funds to finance social telephone services will be managed by the Ministry of Communications Fund.
Chapter V  The Privatization Opportunity in Colombia

5.1 Colombia: The scenario

5.1.1 General Information

Strategically located at the northwestern corner of South America, Colombia covers an area of 1.14 million square kilometers. It is the only country in South America to have both an Atlantic (1,600 km.) and Pacific (1,300 km.) coastline. Colombia is therefore the meeting point between North and South America. It borders five countries; Venezuela and Brazil to the east, Panama to the north, and Peru and Ecuador to the south.

The population of Colombia - 35.8 million in 1993 - is increasing at a rate of 2.21% per year. 39.85% of the population, some 14.3 million inhabitants, is under the age of 18. Colombia is a country where urban development has been extensive - 26.5 million people (73.82%) live in urban areas, as opposed to 9.4 million (26.18) in rural parts of the country; 30% live in the four major cities – Santafé de Bogotá, Medellín, Cali and Barranquilla. There are a further 33 towns and cities with populations of over 100,000.

5.1.2 Socio-economic conditions

Colombia has adopted a new economic policy during the 90s, has tried to open the markets to the world, and had implemented political and social reforms to create an environment that is highly attractive to foreign companies. 1991 and 1992 were both years of significant economic change in Colombia. The new Political Constitution adopted by the National Constitutional Assembly in 1991 made structural changes to the institutional framework of economic activity.
Following a excellent period of growth in the 1970s because of a coffee bonanza, the economy reduced its rate of growth in the early 1980s (financial crisis). Colombia avoided the fall in output experienced by other Latin American countries when a high external debt and an economic recession for the developed countries eroded the economy and confidence on those countries.

Although Colombia has abundant natural resources and a fairly well diversified industrial base, it was for many years heavily dependent upon the export of coffee. This is no longer the case following the discovery of large oil reserves at Cusiana and Cupiagua in the eastern plains which will transform the economy over the next few years. Production of crude is forecast to more than double to 1.1m barrels/day by 1998, generating export income of around $5.2bn. Higher oil production will provide a boost to economic growth over the coming years. At the same time, it will create problems for non-oil sectors of the economy because of the tendency for the peso to revalue. Rising oil revenue also poses a problem in terms of public spending, which has grown strongly since 1990.

**Figure 9. Colombia’s GDP**
A boom in coffee prices in 1986 ushered in a period of more rapid expansion helped by the rapid development in 1987-1990 of non-traditional exports and the mining sector. Average annual GDP growth in 1986-1990 was 4.6%, one of the best performances in Latin America.

The Colombian economy has achieved positive growth rates again this decade. In 1991 output grew by 2% as the government squeezed domestic demand by holding down wages and maintaining high interest rates to reduce inflation. In 1992, the economy grew by 4% despite electricity shortages, drought and the fall in coffee prices. In 1993 and 1994 real GDP grew 5.2% and 5.7% respectively when the construction boom reached the highest level and oil exports were consolidated.

**Table 14. Growth in GDP**

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry &amp; fishing</td>
<td>5.83</td>
<td>4.16</td>
<td>-1.84</td>
<td>2.11</td>
<td>2.03</td>
<td>5.55</td>
</tr>
<tr>
<td>Mining</td>
<td>5.92</td>
<td>-0.64</td>
<td>-3.88</td>
<td>-4.00</td>
<td>0.63</td>
<td>17.39</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>1.95</td>
<td>2.06</td>
<td>1.90</td>
<td>4.97</td>
<td>4.68</td>
<td>2.90</td>
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<tr>
<td>Electricity, gas &amp; water</td>
<td>3.77</td>
<td>3.06</td>
<td>-5.80</td>
<td>10.99</td>
<td>6.57</td>
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<tr>
<td>Construction</td>
<td>-13.07</td>
<td>0.25</td>
<td>7.26</td>
<td>6.00</td>
<td>11.83</td>
<td>5.34</td>
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<tr>
<td>Retail, restaurants &amp; hotels</td>
<td>2.82</td>
<td>0.43</td>
<td>2.55</td>
<td>7.40</td>
<td>5.04</td>
<td>4.84</td>
</tr>
<tr>
<td>Transport</td>
<td>1.74</td>
<td>2.42</td>
<td>5.78</td>
<td>3.50</td>
<td>5.74</td>
<td>4.08</td>
</tr>
<tr>
<td>Communications</td>
<td>11.99</td>
<td>7.25</td>
<td>3.72</td>
<td>3.53</td>
<td>11.64</td>
<td>12.00</td>
</tr>
<tr>
<td>Financial Services</td>
<td>9.29</td>
<td>6.18</td>
<td>4.07</td>
<td>11.00</td>
<td>14.96</td>
<td>5.31</td>
</tr>
<tr>
<td>Real State</td>
<td>2.90</td>
<td>3.53</td>
<td>2.92</td>
<td>5.00</td>
<td>5.00</td>
<td>3.00</td>
</tr>
<tr>
<td>Government</td>
<td>2.85</td>
<td>-0.32</td>
<td>12.52</td>
<td>5.00</td>
<td>11.70</td>
<td>8.20</td>
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<tr>
<td>Personal Services</td>
<td>2.00</td>
<td>2.01</td>
<td>1.99</td>
<td>2.40</td>
<td>4.51</td>
<td>2.99</td>
</tr>
<tr>
<td>Imputed bank charges</td>
<td>-3.36</td>
<td>9.30</td>
<td>-3.61</td>
<td>15.73</td>
<td>20.80</td>
<td>10.00</td>
</tr>
<tr>
<td>GDP at factor cost</td>
<td>4.13</td>
<td>2.10</td>
<td>3.10</td>
<td>3.62</td>
<td>5.18</td>
<td>4.89</td>
</tr>
<tr>
<td>Taxes &amp; duties on imports</td>
<td>9.76</td>
<td>-1.36</td>
<td>36.68</td>
<td>46.00</td>
<td>16.00</td>
<td>11.80</td>
</tr>
<tr>
<td>GDP at market prices</td>
<td>4.28</td>
<td>2.00</td>
<td>4.04</td>
<td>5.18</td>
<td>5.73</td>
<td>5.28</td>
</tr>
</tbody>
</table>
Since 1980 annual inflation has typically been between 20% and 30%. Efforts to reduce inflation has been hindered by the high degree of formal and informal indexation in the economy. The minimum wage is typically adjusted at the beginning of each year in accordance with the rise in the consumer price index in the previous year. Public tariffs are increased in a similar manner. This policy has helped to keep the real economy on an even keel, but has sustained inflationary expectations.

The inflation rate has been falling since 1990, to 25.1% in 1992 and 22.6% in 1993 and 1994, measured by variations in the consumer price index.

![Figure 10. CPI variation vs. Growth](image)
higher food prices resulting from the drought, and bigger electricity rate increases. On the other hand, producer prices rose only by 20.7% in 1994, as a result of better competition in internationally-tradable goods because of the liberalization policies.

The Banco de la Republica de Colombia (Central Bank) has the responsibility for stabilizing prices and protecting the value of the peso. In 1992-95 inflation fell only slightly, remaining stubbornly above 20%. The central bank has been warning the government because those programs, if are not well coordinated and developed, would affect more the stabilization of the inflation.

5.1.3 Foreign Investment

In 1991, foreign investment represented less than 1.0% of Colombia's GDP. The economic policies of the past administration were designed to create a more attractive climate for foreign investment, in an attempt to develop natural resources, introduce new technologies, and support infrastructure development. Similarly, major reforms have been implemented under the economic liberalization process in the country's foreign investment system.

Not only has a positive trend in terms of the amount of investment been noticed, but also in the growing participation of countries located in the Americas. The main investment partner in 1995 is the United States, followed by the Antilles, Panama and Venezuela. In Europe, Holland, France, Great Britain and Spain rank among the highest investors.
Table 15. Foreign Investment ($ Million)

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture &amp; fishing</td>
<td>1.5</td>
<td>5.4</td>
<td>12.9</td>
<td>12.4</td>
<td>26.3</td>
</tr>
<tr>
<td>Mining</td>
<td>-42.8</td>
<td>75.5</td>
<td>6.0</td>
<td>25.8</td>
<td>74.9</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>132.0</td>
<td>69.8</td>
<td>197.9</td>
<td>364.9</td>
<td>276.8</td>
</tr>
<tr>
<td>Public Services</td>
<td>0.0</td>
<td>0.1</td>
<td>0.0</td>
<td>6.3</td>
<td>4.2</td>
</tr>
<tr>
<td>Construction</td>
<td>-1.0</td>
<td>19.3</td>
<td>18.9</td>
<td>33.0</td>
<td>27.4</td>
</tr>
<tr>
<td>Commerce</td>
<td>7.4</td>
<td>19.4</td>
<td>31.3</td>
<td>81.2</td>
<td>73.0</td>
</tr>
<tr>
<td>Transportation &amp; Commun.</td>
<td>-0.3</td>
<td>6.6</td>
<td>5.8</td>
<td>157.2</td>
<td>119.2</td>
</tr>
<tr>
<td>Finance</td>
<td>4.2</td>
<td>153.6</td>
<td>159.3</td>
<td>701.1</td>
<td>309.1</td>
</tr>
<tr>
<td>Social Services</td>
<td>0.5</td>
<td>0.4</td>
<td>1.4</td>
<td>1.8</td>
<td>16.9</td>
</tr>
<tr>
<td>Other</td>
<td>0.4</td>
<td>0.4</td>
<td>3.0</td>
<td>5.8</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Total (excluding oil)</strong></td>
<td><strong>101.9</strong></td>
<td><strong>350.4</strong></td>
<td><strong>436.5</strong></td>
<td><strong>1,389.5</strong></td>
<td><strong>929.1</strong></td>
</tr>
</tbody>
</table>

* Jan-July 1995

5.2 Growth of demand

According to the experts, local telephony demand will grow at annual rates of 15% during the next years. At the end of 1998 the country will have 7 millions of lines, 8 millions on 2000, and more than 10 millions of lines installed on year 2005. Most of the new lines will be installed in urban and industrial centers, but the demand will remain unsatisfied in Bogota, Barranquilla, Cali and other medium size cities.
5.3 Viability of the Competition

Most of the characteristics described above are favorable for the development of new companies to compete with the existent ones. First of all, the unsatisfied demand in an attractive market that requires a service with broad coverage and high quality, incentives the entry of other companies to the market to supply those deficits.

New companies in the market not only bring with them the benefits associated to a wider coverage and best quality but also they provide an incentive to improve the service into the existent companies. As an evidence of that, there is an illustrative example occurred in Barranquilla, the fourth biggest city in Colombia. EMTB (Municipal Telephony Company of Barranquilla) has been serving to the consumers for many years.
In 1990 its coverage was of 9 lines per 100 inhabitants. In 1992, when it was announced that a new company, Metrotel, would start to provide telephony service to the consumers, EMTB reactivated its expansion plans and has been improving the quality of the service. In 1998, Barranquilla will have 456,000 lines, compared with 360,000 lines owned by EMTB, right under pressure of competition (Chart 6). A similar case is happening in Santa Fe de Bogota where the competence will make the city reach an amount of 2.8 millions of lines installed in 1998, instead of 2.3 millions at the optimistic scenario for the telephony company of the city.

**Figure 12. Projection of Barranquilla’s demand**

![Graph showing installed lines in Barranquilla from 1987 to 1998](image)

Source: Telecommunications Expansion Plans
On the other hand, the cost structure of the telephony industry in Colombia allows the generation of medium size companies (with a capacity between 200,000 and 700,000 lines) and they can offer a suitable level of efficiency and productivity. That is the case of new companies that will be operate in Santafe de Bogota, where not only will they attend an important latent demand but also they offer economies of scale to reduce costs.

Considering the tariffs, there are two crucial elements that allow the competence. One is related with the regulation regime and the second with the subsidies. In general, rates of local telephony must be fixed according to the methodology and formulas that each company agrees with the Regulatory Commission, in meetings organized with this purpose. However, for starting companies, the competence rates are free but supervised. Companies determine their own tariff system and explain the decisions made to the Regulatory Commission.
Trying to reach the coverage purposes in a scenario of competitiveness, there are some segments where their payment capacity cannot afford the whole costs. To solve that, it has been considered two subsidy mechanisms: i) cross subsidies between users, and; ii) creation of special funds (i.e. Communications Fund) to finance the expansion projects. In the first one, customers with high income, and industrial and commercial clients, pay an extra fee to cover the deficit of those customers who cannot afford to pay the whole cost of the service. At the other option, the Communications Fund can bring financial support for the installation of telephone lines for users with low income. The Fund has resources around of $60 millions per year.

With those two mechanisms, companies do not have to subsidize users and can serve to the market without discrimination of level of income

5.4 Institutional and Regulatory Framework

5.4.1 Modernization Process of the Telecommunications Sector

The telecommunications policy during the past 8 years has been focused to increase the coverage of the service, to construct a modern infrastructure and to diversify services. That is the answer to social and economical developments, and the economy opening process to the international market.

Some mechanisms used to reach the policy’s objectives are encouraging of competition, incentives for private participation, decentralization and solidification of regulatory process.
The modernization process of the telecommunications sector started in 1989 with a regulation that defined new concepts and principles about the organization of telecommunications sector in Colombia\textsuperscript{12}. That regulation established that telecommunications service has the character of public service, and can be offered by the Government directly or through concessions to private providers. In addition, that law gave to the President of the Republic extraordinary faculties to restructure the sector.

Government issued on 1990 the Decrees 1900 and 1901 to allow the competition and private investment into the telecommunications sector, and restructured the Ministry of Communications to adequate to the new trend. Through the Decree 1794 of 1991, Government defined the rules to provide the added value service (private networks to provide satellite communications).

The Constitution of 1991 has made emphasis in four basic elements of public services:

\textsuperscript{12} Law 72 of 1989
1. Public services can be offered by the Government directly, organized communities, private organizations, or mixed companies.

2. According with the decentralization and local autonomy policy, local organizations and provides can offer the public services.

3. Foreign investment can take part as provider of public services in Colombia.

4. Government must promote the productivity and competitiveness at the provision of public services.

In addition, Law 37 of 1993 has regulated the cellular telephony service awarding six concession contracts to three private and three mixed (state-owned and private) companies. Two companies provide the service in each three main regions of the country. Also, it was accepted the participation of foreign investment in equal conditions to the national investors. Joint venture contracts are also encouraged to develop infrastructure projects.

Based on the Article 20 transitory of the new National Constitution, it was issued the Decrees 2122 and 2123 of 1992. The main dispositions of those decrees are related to assign the planning, regulation, coordination and control to the Ministry of Communications. Also, they bring more autonomy to the National Company of Telecommunications – TELECOM -, in order to promote the competition in the local and long distance telephone service.

The National Law of Residential Public Services, or Law 142 of 1994, has defined also important elements of the Telecommunications sector:

- Has regulated the local and long distance telephone services.
• Has created the Regulatory Commission for Telecommunications – RCT - and the Superintendence of Residential Public Utilities. Those organizations and the Ministry of Communications are in charge of planning, regulating, surveillance and controlling the sector performance.
• Establishes equal conditions for public, private or mixed companies at the operation of public services.
• Defines the norms and rules to provide a high quality and charge the customers for the services, in order to reduce the abuses by the suppliers. Establishes also the tariff regime developed by the RCT based on principles of economic efficiency, redistribution, financial sufficiency, and transparency.
• Allows and encourages the customers to be an active player controlling the quality of the service.

The current status of the Modernization Process, under the legal perspective, for the different telecommunications services consists of:

• *Local Telephony*: public, private or mixed companies, national or foreign, may offer this service.

• *National and international long distance telephony*: public, private or mixed companies, national or foreign, may offer this service through concession contracts awarded by the Ministry of Communications.

RCT establishes the procedures and norms to allow two new companies to compete with TELECOM, in a $1,200 millions business. Those companies interested have to participate in an international bid, with a minimum starting proposal of $ 150 millions. Those two companies with the higher offers will be awarded.
- **Cellular telephony**: public, private or mixed companies with foreign investment can offer this service, through concession contracts awarded by the Ministry of Communications and public bid.

- **Added value services**: public, private or mixed companies, national or foreign, may offer this service through concession contracts awarded by the Ministry of Communications.

**Television and Radio Services**: The Law 812 of 1995 opened television service to competition. According to the law, the country will be divided into three zones and the National Television Commission, regulatory agency for television services, will be in charge of allocating grants for new operators. Foreign investment in television service is limited to 15% of total ownership.

On the other hand, private companies operate radio broadcasting through networks with national coverage. The state operates a small-coverage national network with AM and FM stations.

**5.4.2 Players**

**Ministry of Communications**: Ministry establishes the general policies for the telecommunications sector and is in charge of planning and standardization of telecommunications services. It also defines the sector plans and technical, financial, and management terms in close coordination with National Planning Department. Regulation of basic services or public domestic ones is performed jointly with the Regulatory Commission for Telecommunications.
Ministry is in charge of managing, controlling, inspecting, and general surveillance of electromagnetic spectrum use. Also, it updates and leads the National Plan of Telecommunications.

*Regulatory Commission for Telecommunications:* This commission was established in 1994 to regulate public domestic services. It is a special administrative unit attached to the Ministry of Communications as part of its administrative structure.

The RCT comprises six members: the minister of communications, two public officials designated by the President of Colombia, and three experts, for a two-year period.

The RCT, in close coordination with the Public Domestic Services Superintendency, works to promote and regulate competition, to guarantee efficiency and quality of service, and to control companies operating in advantageous market positions.

*Public Domestic Services Superintendency:* Law 142 defined as public domestic services the following basic services: public switched telephone services, mobile rural telephone service, and national and international long distance service.

This Superintendency must watch over the companies that offer the basic services in telephony, in order to guarantee to the consumers that the law, quality and tariffs are respected.

*TELECOM:* The National Telecommunications Company is included here due its importance as provider of local telephone service to a large portion of the country, and the role played by the company in developing the telephony infrastructure in the country.
TELECOM has been involved in almost all the decisions made so far related to expansion of the service, and to the implementation of new technologies in the telecommunications sector. Those conditions have made TELECOM a powerful company, with a strong influence in the social, economic and political environments.

Since 1993, Telecom is an Industrial and Commercial Company of the Government, instead of being considered in the category of a National Company. That brings TELECOM the opportunity to define by itself its operation budget and the way to operate instead of follow the instructions of the National Congress. That brings more autonomy to the company in order to face the new changes of the sector.

TELECOM is currently developing a process of internal reorganization, in the areas of personnel, finance department, commercial activities, basic services department, and some other departments.
6.1 Feasible schemes of privatization in Colombia

Considering the privatization opportunity, today, three different schemes are possible regarding private participation in the telecommunications sector:

- New private service providers
- Acquisition of government-owned Companies
- Joint ventures between government owned telcos and private companies

These different schemes will be discussed below.

6.1.1 New Private Sector Providers

Current legislation (Ley 142/94) allows public, private or semi-public (or ‘hybrid’) companies to provide telephone service. Unlike many other countries that are in the process of privatizing their Telecom companies, no concessions are required in order to be allowed to provide local telephone service. The only prerequisites that have to be met are those relative to:

- Laws relative to the creation of new corporate entities in general
- Concessions for the use of the electromagnetic spectrum
- Municipal permits for the use of public space.

A few hybrid companies have been established so far. For example, in the city of Barranquilla (population 1.2 million), a company partially owned by Telecartagena and partially privately-owned was recently established. By the end of 1997, the company has
planned to have approximately 100,000 installed lines, which will enable it to compete directly with the incumbent public operator, Empresa Municipal de Teléfonos de Barranquilla (150,000 lines). The introduction of competition in the form of the new company has led to notable improvement in the quality of service as well as line penetration in the area.

The appearance of these new entities requires clear and thorough regulation. The RCT has so far issued three basic resolutions:

- RCT-23/95: lays down calculation methodologies for telephony costs and tariffs, which should come into effect during the present year.

- RCT-24/95: establishes criteria, indicators and models for both evaluation and management of telephony performance. These guidelines are to be used by the Ministry of Communications (in coordination with the Superintendency for Public Utilities and the RCT) in order to implement a managerial evaluation system. The result of the above will be that each public or private company will have the obligation to define for the benefit of the Ministry of Communications a business plan that includes a range of goals in terms of technical, financial and managerial objectives. The attainment (or not) of these objectives will subsequently be controlled by the Superintendency for Public Utilities.

- RCT-26/95: establishes general rules governing competition in local telephony. For example, business plans presented by new companies must include binding forecasts for future penetration levels for lower-income areas.
The main limiting factors that constrain the implementation of the plan to establish new companies are as follows:

1. Regulatory Definitions

- **Unclear process**: Notwithstanding the basic RCT regulations outlined above, in practice the process to be followed by new companies wishing to enter the market remains unclear. In addition, there have been several cases where local authorities have refused to grant authorizations for the use of public land in order to protect existing companies;

- **Required penetration levels**: in the case of RCT-26 for example, penetration levels for low-income housing areas have yet to be defined. Levels of penetration need to be defined in order to allow potential investors to formulate more accurate feasibility studies and business plans;

- **Interconnection regime**: once the new operator is in place, it is essential that incumbent operators guarantee interconnection to their networks. For this purpose, it is necessary that clear and specific rules be introduced that govern access, interconnection agreements, anti-monopolistic situations, etc.

- **Subsidy scheme**: Law 142 establishes a subsidy transfer scheme between different social strata. Its feasibility in a competitive climate depends upon the establishment of a subsidy transfer system between companies.

2. Strengthening and support of regulatory entities

- The above discussion illustrates the magnitude of the task at hand for the RCT, Ministry of Communications and the Superintendency for Public Utilities;

- This implies that enough budgetary resources be allocated to the privatization process. In practice, a substantial portion of the work carried out by the aforementioned parties was bogged down by delays in obtaining budgeted funds.
6.3.2 Acquisition of government-owned companies

Law 142 of 1994 establishes that companies that are public service providers must be organized as corporations (i.e. their capital is represented by shares) if the State is to be allowed to dispose of its stake in said companies. Based on this legislation, local government entities that own public service providers are currently in the process of carrying out the necessary tasks in order to transform the companies they own into corporations, thereby making it possible for private investors to acquire stakes.

The following examples provide good illustrations of the above:

- Recently Municipal authorities of Bogotá presented once again a project of Agreement (local law) aiming to privatize the Bogotá Telephone Company (Empresa de Telefonos de Bogota -- “ETB”). The first attempt in 1996 failed.

- Telecom intends to promote the transformation of the so-called “Teleasociadas” in corporations in order to reduce its participation. However, Law 226 of 1995 establishes that the sale of shares of the Teleasociadas to private parties will only be allowed as of 1998.

Due to the delay on the part of local authorities in carrying out the aforementioned legal transition to the corporation form, public companies have looked for other ways to improve their performance and maintain market share. In some cases, the methods employed have left customers worse off:

- Incumbent public companies have tended to slow down (or impede altogether) the authorization of new entrants, by lengthening the transformation process. This constitutes a clear case of abuse of monopolistic position.
• Some companies, confronted with the necessity to obtain funds, have considered the joint venture mechanism. Joint ventures (see below) facilitate the injection of private capital, but they do not necessarily imply the transfer of risks and do not guarantee general improvements in service efficiency.

6.1.3 Joint Venture Contracts

6.1.3.1 The agreement

As discussed above, Law 37/93 permitted any Telecommunications service provider to arrange joint venture agreements with local or foreign firms, without creating a new entity. These joint ventures would be subjected to business law.

This mechanism has been utilized extensively by Telecom during its expansion into local telephony, according to the following conditions:

• Telecom provides its existing infrastructure.
• The partner provides the full investment in equipment and networks
• Telecom manages the new lines and maintains ownership of the service.

The partner receives a portion of the revenue generated during the length of the contract. The revenues that are shared correspond to those originating from connection charges, fixed charges, local service charges, and outgoing long distance traffic charges. Revenues from incoming long distance or cellular phone access are not shared by Telecom.

Once the contract has terminated, ownership of the infrastructure is transferred to Telecom, which operates it for the remainder of its useful life, estimated at 15 to 20 years.
The contract includes a projection of net cash flows for the partner, which is determined in conjunction with Telecom. If this flow is higher than anticipated, the partner will give Telecom the difference, and if it is less, Telecom will compensate its partner for the difference.

In the event that revenues are below the projected band, Telecom can compensate its partner in the following ways:

- By increasing the duration of the contract
- By increasing the portion of revenues allocated to its partner or varying other terms of the contract
- By an immediate cash disbursment

Telecom reserves the right to choose the way in which it compensate its partners. On the other hand, the partner compensates Telecom in cash. There is also the possibility that Telecom will terminate the contract early through prepayment. Insofar as the contract duration is long and the future demand for telecommunications services is uncertain, this “call option” can have significant value.

These agreements have generally permitted Telecom to implement projects in a more efficient and expeditious manner. There were problems in the early contracts due to lack of experience from both sides, which have been corrected. It is hoped that the initial estimates of demand are exceeded.
6.1.3.2 Existing Contracts

As described before, Telecom has signed eight Joint Venture contracts (four of them in Santafe de Bogota). These contracts will provide a total of 1.084.000 new lines, increasing the penetration rate from 10.8% in 1994 to 12.8% in 1998. Contracts signed by other local service providers (such as ETB) will further increase the penetration rate. Most lines will be introduced in urban centers, further concentrating line distribution.

The terms of execution in past contracts have been between 15 and 36 months, and the total duration of the contracts has oscillated between 6 and 10 years. Total investment by partners in the private sector is expected to be US$ 990 millions. The JV partner obtains 100% of the local connection revenues, and 80% y 90% of the rest of the revenues.

The table below shows contracts which were signed and became operational between the second half of 1993 and the end of 1995.

<table>
<thead>
<tr>
<th>Agreement</th>
<th>NORTEL</th>
<th>ASEA</th>
<th>SIEMENS</th>
<th>NORTEL</th>
<th>SIEMENS</th>
<th>ERICSSON</th>
<th>NISSHO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of lines</td>
<td>266,168</td>
<td>157,598</td>
<td>88,350</td>
<td>220,000</td>
<td>110,000</td>
<td>110,000</td>
<td>110,000</td>
</tr>
<tr>
<td>Execution term (months)</td>
<td>36</td>
<td>36</td>
<td>24</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Area of Influence</td>
<td>8 Depots</td>
<td>7 Depots</td>
<td>1 Depots</td>
<td>Bogotá</td>
<td>Bogotá</td>
<td>Bogotá</td>
<td>Bogotá</td>
</tr>
<tr>
<td>Duration of agreement (years)</td>
<td>9</td>
<td>10</td>
<td>5.8</td>
<td>5.8</td>
<td>6.3</td>
<td>5.8</td>
<td>6.7</td>
</tr>
<tr>
<td>Investment by partners ($ millions)</td>
<td>163,571</td>
<td>195,748</td>
<td>130,075</td>
<td>192.7</td>
<td>98.4</td>
<td>98.4</td>
<td>98.4</td>
</tr>
<tr>
<td>Distribution of connection (partner/Telecom)</td>
<td>100-0</td>
<td>100-0</td>
<td>100-0</td>
<td>100-0</td>
<td>100-0</td>
<td>100-0</td>
<td>100-0</td>
</tr>
<tr>
<td>Dist of other revenues (partner-Telecom)</td>
<td>80-20</td>
<td>80-20</td>
<td>80-20</td>
<td>80-20</td>
<td>80-20</td>
<td>80-20</td>
<td>80-20</td>
</tr>
<tr>
<td>Date contract signed</td>
<td>3-Aug-93</td>
<td>15-Sep-93</td>
<td>12-Jul-94</td>
<td>18-Dec-95</td>
<td>18-Dec-95</td>
<td>18-Dec-95</td>
<td>18-Dec-95</td>
</tr>
<tr>
<td>Date contract became effective</td>
<td>10-Dec-93</td>
<td>15-Feb-94</td>
<td>-</td>
<td>18-Jan-95</td>
<td>18-Jan-95</td>
<td>18-Jan-95</td>
<td>18-Jan-95</td>
</tr>
</tbody>
</table>

By December 1995, 310,000 lines had been installed, corresponding to an investment of US$ 210 million. So far, no compensations have been required in any of the existing contracts.

Telecom has also signed joint venture agreements to provide other services such as voice mail and billing. Other government-owned companies, such as ETB have signed joint venture agreements for value-added services such as voice mail and Internet access.
6.1.3.2 Future Contracts

Telecom foresees that it will expand into local telephony mostly through the Joint Venture mechanism. By December, 1994, the company had already installed 573,000 lines, primarily in rural sectors, of which 54,000 corresponded to joint venture agreements for provision of services in urban centers. By the end of 1998, it is expected that Telecom will have 1.5 million lines, of which 1 million will be through Joint Ventures and will constitute 90% of the company’s installed capacity.

**Figure 15. Projection of Joint Venture Agreements**

Telecom foresees that it will sign agreements to install more than 312,000 lines in the next few months. Moreover, other companies are interested in utilizing this mechanism to expand. For instance, ETB has plans to install 500,000 lines in Bogotá. This will increase the level of competition in the capital city, and this will potentially decrease local service prices. So far, the equipment providers have not established exclusive alliances with either company.

In general, partners in the Joint venture assume all the risks corresponding to:

- The value of the equipment and installation costs
- Financing costs
- Third party damages
• Time distribution of compensations by Telecom

Other risks are shared between Telecom and its partner within an established range, or are assumed by Telecom if the revenues in real terms lie below the agreed upon floor. This risks are as follows:

• Traffic volume risks in local, domestic and international LD due to lower market growth or market share by Telecom
• Tariff risks, due to regulation, competition or requirements to provide service to lower income segments at specified prices
• Macroeconomic variables

Different variables can effect Telecom’s compensations to the Joint Venture partner. Across the board increases in tariffs have the largest effect, and will increase total revenues and therefore decrease the eventual compensation from Telecom to its partner. Compensation is more sensitive to local service to DLD given that the partner obtains about four times as much revenues from local service as from DLD.

Increases in traffic have lower impact, given that tariffs are structured such that additional minutes of traffic are charged a lower rate. Of all services, long distance traffic has the largest impact on revenues.

It is possible to assign all the risk to the private sector partner, given the nature of the industry and experience in other countries. However, given that the partner will only accept risks that it can control, this would entail that it participates in the operation of the business, as is the case in the oil sector. This could be realized under a joint venture scheme
in which both parties create a different entity that undertakes the investment, operates the business and assumes all the risks involved.
Management and employees of privatized firms are directly affected by the privatization process. Depending on the terms, privatization can affect employment conditions, job prospects, skills development, motivation and commitment. These changes are linked to the shift in enterprise culture. Management or employee buy-outs can radically alter the fortunes of the new owners if they succeed. On the other extreme, management and employees may be affected by job cuts following restructuring or the sale of the enterprise.

Bureaucrats will be affected by privatization to the extent that they have been involved with public sector enterprises. For many of them, SOEs have been a power base and a source of patronage.

Trade unions can be affected by privatization in two ways. Firstly, they stand to lose members or bargaining power in privatized firms that no longer allow trade unions. On the other hand, the shift from the public service to the private sector may in some cases increase union power, for example, by giving employees the right to organize themselves and to strike where before this was prohibited. Trade unions can play an important role in bargaining with the government or new owners regarding redundancy compensation packages, pensions, and other employment conditions.

Members of the general public, including management and employees of privatized firms, are affected by the quality and price of the products and services produced by the privatized firms. If privatization achieves the objective of increased economic efficiency, they will benefit from an improved range of goods and services at prices which more
accurately reflect costs of production. The general public could benefit from privatization if it succeeds in the objective of reducing fiscal burdens of loss-making SOEs enterprises, and releasing resources for other uses, such as increased expenditure on education and other public services.

On the other hand, the general public may lose from privatization if SOEs - which were investments made at taxpayers’ expense - are sold at significantly less than their true value, or if the proceeds are not used effectively. They can also lose from privatization if public utility companies, and other SOEs which provide essential public services are sold as monopolies, with inadequate subsequent regulation to prevent monopolistic pricing practices or cuts in service quantity or quality.

The balance of potential gains and losses to the general public from privatization will depend on the way in which privatization is carried out, and the extent to which all the key actors are able to fulfill their respective roles effectively.

Colombia is achieving important competitive advantages through macroeconomic stability, economic reform, deregulation, and responsible external debt management. These reforms have created a dynamic environment, increased investment opportunities and enhanced productivity and competitiveness. The stability of the economy, trade liberalization and the prospect of high earnings have done much to improve confidence in the Colombian economy and to channel significantly higher capital investment to the country. To prove that, some international agencies have graded the risk for notes and bonus issued in the last years by Colombian government and private companies in the world exchange market.
Table 17. Colombia’s perception

<table>
<thead>
<tr>
<th>Agency</th>
<th>Grade</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard &amp; Poor’s</td>
<td>BBB-</td>
<td>Low risk</td>
</tr>
<tr>
<td>The Economist Intellig. Unit</td>
<td>B</td>
<td>Low risk</td>
</tr>
<tr>
<td>Duff &amp; Phelps</td>
<td>BBB</td>
<td>Low risk</td>
</tr>
<tr>
<td>Moody’s</td>
<td>Baa1</td>
<td>Low risk</td>
</tr>
</tbody>
</table>

Macroeconomic prospects are solid. Colombia expects to enjoy economic growth at above 5% in coming years. The government fully intends to maintain a stable exchange rate to stimulate exports and the Banco de la República makes the best effort to use all available means to keep inflation in line with the targets agreed with the government. Reaching an agreement among all economic sectors is the centerpiece of the policy for controlling inflation. To this end, the government is playing a leading role in concluding a pact between the government itself, trade associations, workers and monetary authorities to undo price and wage indexing and thus be in a position to set credible and attainable targets for inflation.

Internationalization of the economy process takes time. Five committees are in charge of the processes which will translate into the economic achievements that will help Colombia meet the challenges of internationalization are in charge

1. Infrastructure development.
3. Improvement of management, quality and productivity.
4. Development of human resources.
5. Transfer and development of technology.

For infrastructure development there are exceptional investment opportunities for foreign and national investors such as:

- Explotaition of oil and natural reserves discovered in the Llanos Orientales (the eastern plains).
- Infrastructure Development
  - Electrical energy: hydro, coal, gas power plants.
  - Communications: long distance service, added value services.
  - Road construction concessions
  - Pipelines construction for oil and gas transportation.

In addition there are other opportunities to invest in Colombia through the privatization program. Banks, gas, power, telephone, mining companies are included in this program.

In order to make foreign investment in Colombia more dynamic, and to complement the attempts to attract investment in the private sector, the government has developed a three-part strategy. Firstly, it aims to adopt an attractive, new, legal framework, based on principles of fair treatment and access to all sectors of the economy. Secondly, to adopt international agreements in order to minimize the political risk. And thirdly, to introduce a proactive investment promotion program.

At the same time, Colombia is trying to growth in the manufacturing and industry sectors. Programs to improve management, quality and productivity, development of human resources and transference and development of technology are promoted by the government and the private sector.
For instance, in order to reach the targeted foreign investment share of the GDP, the government has proposed:

- To maintain a competitive foreign investment framework in order to make investors more confident.
- To increase marketing efforts in the United States, Europe, and the Pacific Basin.
- To strengthen and modernize legislation in order to attract more technology.
- To continue its efforts to reduce guerrilla violence and the drug trade.

The political crisis has frozen the investment’s dynamics. The international community and Colombian people are pressuring for the end of the crisis because they know the excellent prospects of the country. Investors are waiting for a while, to make their investment forever.

- There are three different privatization mechanisms in the Telecom sector in Colombia that are currently under consideration. As the summary table below shows, each method has different characteristics and reaches the goals set forth by the privatization process to differing degrees:
**Figure 16. Alternatives of private participation in the telecommunications sector in Colombia**

<table>
<thead>
<tr>
<th>Goals</th>
<th>Joint Ventures</th>
<th>New Companies</th>
<th>Acquisition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stipulate competition in order to obtain improvements in cost and quality</td>
<td>○</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Improve service quality of incumbent public companies</td>
<td>○</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Obtain funding for infrastructure development</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Reduce risks supported by public sector</td>
<td>○</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Political feasibility</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
</tbody>
</table>

The current joint venture scheme, as it exists today, is the mechanism that presents the fewest advantages with regard to privatizing the local telephony sector in Colombia. Nevertheless, for political reasons, it remains the method most widely in use. In addition, it limits the scope with which new operators can enter the market and makes more difficult the sale of public companies.

It is necessary to modify the current model of joint venture in order to re-allocate risk, re-define cross-subsidization and modernize accounting systems. Analysis of current revenue structure of joint venture contracts reveals that tariffs for local calls are insufficient to bear the cost of projected coverage expansion (i.e., access line penetration increase). It is
therefore necessary to stimulate both the establishment of new service providers as well as acquisitions of government-owned companies. Most of the conditions are given in order to have a healthy competition in the local telephony in Colombia. It is necessary that regulation could be assimilated, and mechanisms for control and resolution of conflicts could be developed properly. The success of this process depends on the agility and effectiveness to be executed.

In addition, it is necessary to have a dynamic regulation. That must be in a permanent process of evolution and adjustment according with the changes in the industry. Not only must the regulation go deeply into the technical development but also into matters as the integration of services of local telephony with others such as added value services (networks), cable TV, etc.

Incoming months will be very important for the future of the telephony service in Colombia. Investors, existent companies, equipment suppliers, regulators and consumers will face a new scenario, plenty of opportunities and challenges. The success of the telephony in Colombia depends on how all those players face this new and irreversible process.
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