

# 6

## Peru

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Peru has several millennia of rich history—and political and economic instability. Despite significant silver and copper deposits, as well as plentiful fishing and some petroleum, it is a poor country. The population of almost 24 million (July 1994 estimate) is well over a third higher than in 1980. Over two-thirds live in cities with more than 5,000 inhabitants; Lima and its port, Callao, have a population of 7 million.

Sitting astride the Andes, the country has three distinct geographical regions in its total area of 1.3 million square kilometers. The lowlands along the Pacific (*costa*) are one of the world's driest and coolest low-altitude deserts. However, they are traversed by rivers fed by rain in the Andes that form extensively cultivated valleys. About a tenth of the country's total area, the *costa* is home to 55 percent of the population. The *sierra*, covering just over a quarter of the country, extends astride the Andes at altitudes ranging from 1,000 to over 6,000 meters. This is where the mineral resources are, as well as the cattle raising. It also has farmland and is where the centers of Inca culture once flourished. About 40 percent of the population live here. Both to escape guerrilla terrorists and to seek better economic opportunities, the population has steadily migrated from this region to the big cities of the *costa* and the highlands of the Amazon forest (where one attraction since the 1970s has been the coca culture promoted by narcotraffickers). Over half the country is in the *selva*, the lowland jungles of the Amazon and eastern foothills of the Andes. The native population of this region used to migrate seasonally looking for good lands for yuca culture and fishing. The area has seen several earlier waves of immigrants from other parts of the country: at the end of the nineteenth century there were rubber extractors; after 1920 there were miners seeking gold in the highland forest rivers; after 1940 there were loggers; in the 1960s there were palm oil and sugarcane growers (most of whose crops were destroyed by terrorists) who have attempted to convert the rain forest to plantation and farmland. For all that, only some 5 percent of the population live in the region.

A republic, Peru is led by a president who is elected for a five-year term. The legislature is unicameral. The constitution was adopted in 1993; before then, presidents could not succeed themselves. Until the 1990s the legislature had two

chambers. For much of its history since independence from Spain in 1821, Peru has been controlled by military juntas or dictators, but there have been elected civilian governments since 1980.

The economy, particularly in per capita terms, was stagnant or declining from 1975 until the early 1990s. The 1985–90 government of Alán García Pérez alienated foreign investors and creditors and pursued an expansionary fiscal policy. The inflation rate in 1989 was almost 3,400 percent and peaked at 12,000 percent for the fiscal year ending July 1990. The government of Alberto Fujimori, which took office on July 28, 1990, undertook dramatic fiscal action, drastically cutting the budget and moving to combat bureaucratic corruption and promote a free-market economy. Inflation was brought down to 15.38 percent in 1994, and was 10.2 percent in 1995. GDP grew by 6.5 percent in 1994 and is expected to grow by 4.5 percent annually through the year 2000.

## 6.1 History

The history of telecommunications in Peru as outlined here recounts the struggle of a people who desire to regain their place in history but who battle repeatedly with governments that do not understand the significance of this history. The account is a raw confession of frustrated triumphs and aspirations. While writing an account or making history for future generations, we assume a commitment to make up for lost time and to place our country where it belongs.

### 6.1.1 Telegraphy

A March 1857 law conferred on Augusto Goné the exclusive right to construct the lines from Lima to Callao, about 13 kilometers, and to Cerro de Pasco, a mining center in the mountains some 180 kilometers (in a straight line, 250 by road) to the northeast. This privilege was revoked ten years later, as only the connection to Callao had been built. The telegraph system was nationalized on June 25, 1867. Goné was paid compensation for the facilities he had built and assessed damages for breaching the contract for what he did not build. A public auction was set for the right to operate the services (*administracion*); the government would keep ownership and have ultimate control, including regulatory oversight. In the interim, the Army and Navy Communications Departments provided operators and a Treasury Ministry official was charged with management.

An offer by Carlos Paz Soldán was accepted. Then, in September of the same year, it was decided it would be more economical if the system was entirely in private hands. It was sold to Compañía Nacional de Telegrafos (CNT), which was established by Paz Soldán for this purpose and which set about connecting cities. However, in April 1875 the country's first civilian government, headed by Dr. Manuel Pardo (president, 1872–76), decided to take over all the lines Paz Soldán's company had already built because the company had not fulfilled its obligation to establish communication lines throughout the country. Thus, ownership and operation of the telegraph service returned to the state.

In July 1876 a new military government, headed by General Mariano Ignacio Prado (president, 1876-79), assumed power. Because of atrocious management and increasing costs, which became too much for the meager national budget, the new regime was willing to divest CNT. Paz Soldán had friendly relations with high-level members of the new government and was a logical choice to take it over. CNT thus returned to his ownership in 1877 with an eight-year concession that imposed conditions requiring improvements that would benefit the state. However, in 1878 the service was again nationalized, with Paz Soldán remaining as chief manager. By then the system had 2,525 kilometers of line, 53 offices, and 65 machines.

During the War of the Pacific (1879-83), in which Peru was allied with Bolivia against Chile, new lines were built to replace old ones in order to speed communications. Free schools were opened to provide trained personnel for the telegraph department. Shortly after the end of the war, in 1884, Paz Soldán retired from running the service. His successor was Melitón Carvajal, a high-level Navy officer and hero of the war. Carvajal faced the task of rebuilding the lines destroyed by the war and repairing damaged offices. The previous staff had almost entirely disappeared, so in 1884 a Telegraphy Training School was established in CNT's Lima headquarters. In 1895 Carvajal returned to Naval duty as part of the combining of the postal and telegraph services. The new institution, named Servicio Postal y Telegráfico del Peru, was under the charge of the chief manager of the postal service.

Augusto E. Tamayo, an engineer, established radiotelegraphy in Peru in 1904 under the government of Don José Pardo. In 1911 installation of the first station in Lima was completed by students of the Telegraph School. In 1912 President Leguía inaugurated the powerful Telefunken del Cerro San Cristobal station, opening communications between Lima and Iquitos in the Amazon basin.

A January 22, 1911, law consolidated the general administration of the postal, telegraph, and radiotelegraph services into the Dirección General de Correos y Telégrafos.

In January 1921 President Augusto B. Leguía's government contracted the Marconi Wireless Telegraph Company of the United Kingdom to operate the telegraph services under a management agreement with the government. According to the contract, Marconi was to receive 5 percent of the gross revenue plus 50 percent of net profits. The opposition parties criticized the contract. In rebuttal, the government pointed out such advantages as the reorganization of services, the modernization and development of the system, and the profits that would accrue to the state as owner of the system. In April 1935 the Oscar R. Benavides government signed a new contract with Marconi, with substantially the same terms as the 1921 agreement.

In July 1945, in his first message to the nation, President José Luis Bustamante y Rivero announced his intention to introduce legislation to cover telecommunications. As a result, in 1946 the Marconi contract was canceled and telegraph service was again placed under the management of the Dirección General de Correos y Telégrafos.

### 6.1.2 Telephone System

According to some authors, the Chimus, inhabitants of the sacred city of Chan-Chan near modern-day Trujillo, between A.D. 300 and 600 used a "telephone" system. The "sets" were the ends of gourd necks covered with leather; some 50 meters of cotton string, knotted on the inside of each gourd, connected the gourds. As many children who have done this with cans know, when the string is taut, the device can transmit voices. The first "modern" telephone line in Peru was established in 1888, connecting the House of Senators and the House of Representatives.

The same year, during the General Andrés Avelino Cáceres government, a public auction was called for the establishment of a telephone service in Lima. The only offer was from Casa Cohen, a trading and representatives firm, which bid in partnership with foreign investors and equipment makers. Its formal offer differed from what had previously been indicated, so the bid was refused. Soon after, a bid was accepted from Casa Bacigalupi, also a trading and representatives firm. With other Peruvian partners and technical and financial support from ITT, Casa Bacigalupi founded the Peruvian Telephone Company to accept the grant of the right to install telephone networks in Lima, the surrounding districts, and Callao.

On September 7, 1888, Lima was connected to Callao, and on September 13 the lines were opened for public service. A connection and five-minute conversation cost 10 silver centavos. Before long, competition appeared. Casa Cohen established the Compañía de Teléfonos del Peru, which laid cable to Callao and offered free calls while building its offices. Communication with Rimac, 3 kilometers to the northeast of central Lima, was made with an apparatus installed in the Backus and Johnston Beer Factory. In December 1888, ITT bought Compañía de Teléfonos and merged it into the Peruvian Telephone Company. By that time there were twenty telephone lines in Lima plus links to stations in Callao and various suburban districts; 30,000 meters of telephone cable had been laid. On January 13, 1889, a new line was opened between the Government Palace and the home of General Andrés Avelino Cáceres, the country's president, in suburban Miraflores, about 12 kilometers south of central Lima.

In 1910 cable was strung between Lima and Chosica, a spa village about 75 kilometers along the main road to the *sierra*. By the next year, the Postal Management had established service between Lima and Ancón, about 33 kilometers along the main road to the north, a beach resort and fishing village outside the area of Lima's concessionaire.

In 1920 Compañía Peruana de Teléfonos (CPT) was founded. It acquired the fixed assets of the Peruvian Telephone Company, which then had approximately 4,000 manual telephones in operation. This was not a matter of a mere change of an English to a Spanish name: facing the need to expand and modernize service, but lacking sufficient local capital, it was agreed that ITT would own 60 percent of the new company and Peruvian investors 40 percent. This allowed ITT to control management. CPT was the concessionaire for the cities of Lima and Callao and surrounding urban and suburban districts such as San Isidro, Miraflores, Barranco, and Chorrillos (most of which are within modern-day Lima).

In December 1930 Peru's first automatic switch went into operation at Jiron Washington in Lima with a capacity of 2,000 lines. This brought to 10,000 the number of telephones in metropolitan Lima, the others being on semiautomatic switches.

During the 1930s the government authorized telephone service in the interior of the country, granting concessions to several companies.

The Compañía Nacional de Teléfonos (CNT), a Swiss-Peruvian private company, started by providing service to Ancón, Pisco, Ica, and Huancayo. It then expanded to include the northern cities of Piura, Tumbes, and Lambayeque; Cusco and Abancay in the south; and Iquitos in the jungle. CNT also set up long-distance service by means of radiotelephone channels between the cities in which it had concessions and with Lima, where it interconnected with CPT.

Sociedad Telefónica de Arequipa (STA), owned entirely by private citizens in that district, served the southern part of the country, including Arequipa (long one of Peru's major cities), Mollendo (a Pacific port), Juliaca, Desaguadero, Puno (a port on Lake Titicaca), and all the towns along the railroad between Mollendo and Puno. The company provided radiotelephone links with CPT and CNT, as well as to the Bolivian network. STA received technical support from Swedish equipment-maker L. M. Ericsson.

All America Cable, by the late 1920s an ITT subsidiary, had been providing international radiotelegraphy service via a submarine cable from Callao to Panama since the beginning of the twentieth century. In 1930 it extended its service to include an eight-channel radio link for telephone or telegraph from Lima to New York, where it connected with ITT service to the principal cities of Europe. This led to its changing its name to All America Cable and Radio.

Cable West Coast, an Anglo-Canadian company, initially provided telegraph service by submarine cable from Callao to Valparaiso, Chile. From 1930 radiotelegraph and radiotelephone connections were provided with Buenos Aires, Santiago, and London.

In 1931 local telephone service in metropolitan Lima more than doubled, expanding by 10,800 telephones, all on automatic switches. Growth continued with installation of 25,000 lines in the San Isidro, Magdalena, and Miraflores central stations. By 1933 there was a total of 21,000 telephones, and the service became completely automatic.

### 6.1.3 Telex

In 1958 the All America Cable and Radio Company, a subsidiary of ITT, set up two circuits between Lima and New York exclusively for twenty international-traffic telex subscribers. In 1962 Cable West Coast also started to offer this service. It operated only eight hours a day until 1964, when it began to operate semi-automatically twenty-four hours a day.

In 1968 All America Cable implemented a completely automatic service with a Pentaconta switchboard connected as a subscriber exchange to the main switchboard in New York. In June 1969, Cable West Coast also opened an automatic station, linking thirteen correspondents. Both were exclusively for international service from the Lima metropolitan area.

### 6.1.4 Internet

In 1991, a small nonprofit organization was created with U.S.\$7,000 in seed money from the United Nations Development Fund. Called the Peruvian Scientific Network, or RCP, the organization is dedicated to providing access to the information resources of the Internet to all Peruvians. RCP is growing rapidly from 40 subscribers in the beginning to 22,000 in 1996, with estimates of over 60,000 by 1998. For U.S.\$15 a month, a subscriber not only gains access to the Internet but also to computers and classes on how to use them. All of the profits are reinvested in maintaining and expanding the network.

A setup like this is unique in South America; most of the other Internet providers, to date, have been government-funded and operate under the assumption that users would have access to computers. In some ways, RCP can be viewed as a role model for "universal net access," to provide Internet access to more than the few (5 percent in Peru) who can afford computers.

## 6.2 Nationalization and the Creation of ENTel-Peru

The All America Cable and Radio and Cable West Coast Company concessions ended in 1967, and the government notified them they would not be renewed, although they could continue operating until the expropriation process was complete. Beginning in 1969, CITI (Comité Interino de Telecomunicaciones Internacionales) took over operating the international telex service, and the companies were paid in 1970.

In 1968 the revolutionary military government of General Juan Velasco Alvarado began to nationalize companies. In 1969 the first steps were taken to expropriate CPT. By means of a Basic Conditions Treaty, on October 29, 1969, the government acquired ITT's shares, which had grown to 71 percent of the total because of continued acquisition, and those of the private Peruvian investors who held the rest. A formal transfer ceremony took place on March 25, 1970. Part of ITT's compensation was a piece of choice Lima real estate on which the company built a five-star Sheraton Hotel.

On November 9, 1969, the Empresa Nacional de Telecomunicaciones del Perú (ENTel-Peru) was created by Law 17881 as a 100 percent state-owned company to take charge of public telecom services. ENTel held 29 percent of the shares of CPT and, as provided by the law, 100 percent of the voting rights. It thus took over CPT's management, including designating the chair and members of the board of directors.

CPT was not fully nationalized: ITT's shares in CPT were distributed to some 37,500 existing telephone subscribers, who paid for them through a monthly charge on their phone bill. The reissued shares were transferable once paid for, but they carried no voting rights. In a sense, this is the reverse of the way telegraph service had been provided in the 1880s: then the government owned the service but contracted out its operation; with CPT after 1969, its subscribers owned (most of) its shares but a government-owned company operated it.

Immediately after the expropriation, CPT announced a 50,000 line expansion, primarily in the suburbs and area around Lima, putting a central station into operation in Chorrillos to provide service for the first time in the districts of San Juan de Miraflores, Villa Maria del Triunfo, and the area south of Surco, as well as to expand and upgrade with automatic equipment service in Chorrillos and Barranco. The costs were to be borne by new subscribers by obliging them to purchase newly issued shares in ENTel at the time of signing up for a phone line. These were paid for in installments while construction and installation was underway. Subsequent expansions have been financed in the same way. CPT shares were listed on Lima's stock exchange, and the government routinely bought shares, so that by 1994 its holdings had increased from 29 to 35 percent.

The company also set up the Magdalena Central, which serviced Magdalena, part of San Miguel and Pueblo Libre, and the Miraflores Central, which serviced the majority of Surquillo.

### **6.2.1 The 1970s and 1980s**

In December 1971 a new General Telecommunications Law (Law 19020) was promulgated. Its stated purpose was to "make available to Peru the most modern methods of mass communication services and serve the needs of society as a whole, not just private interests." The law gave ENTel full authority over the exploitation of public communication services in the country and, more gradually, responsibility for the provision of services that private companies had been offering. Thus, in July 1972 the Swiss-Peruvian company *Compañía Peruana de Teléfonos* was folded into ENTel, and the *Sociedad Telefónica de Arequipa* followed in July 1973.

Immediately after formation, ENTel absorbed the international telex service that had been operated by CITI since its expropriation from its private owners in 1969. Service had been limited to the Lima area, but in 1975 the government implemented, under ENTel, a domestic telex network. On July 2, 1981, this domestic network was tied to the international service, called EDX.

The 1971 law put ENTel in charge of telegraph services, which had been operated by the *Dirección General de Correos y Telégrafos* since 1946. The actual transfer of facilities did not occur until December 22, 1976.

Under a telephone expansion plan, an automatic exchange providing national and international direct dialing was put into operation in Piura in April 1977. New exchanges were steadily introduced in other towns during 1977-78, when the pace of expansion slowed. By 1988 almost every town with a population of over 50,000 had automatic exchanges.

In February 1985 a DMS-10 exchange, the first digital switch in Peru, with 1,200 lines went into operation in Ayacucho. ENTel contracted Ericsson do Brasil in September 1983 to provide 40,000 lines in nineteen cities. This involved installation of nineteen AXE-10 exchanges. The same month, ENTel and the Italian company Telettra SPA, represented by Intertec SA, signed an agreement for the supply and installation of digital microwave systems and satellite links, with eight being installed.

Peru

In February 1992 Ericsson do Brasil was contracted to provide 65,000 new digital lines in thirty-two cities over a two-year period, and in March, Mitsui was awarded the contract for complementary equipment.

In February 1983 mobile telephone exchanges went into operation in Chimbote, a fishing port of about 300,000 people 350 kilometers north of Lima, and Huarás, a department capital of 90,000 located 320 kilometers northeast of Lima. ENTel earlier had begun using small-scale mobile exchanges to provide emergency service while permanent wireline facilities were being built, but these two exchanges were the first large-scale, permanent ones.

Traditionally, revenues from international long-distance services and business have subsidized local services. In 1992, a residential user paid U.S.\$1.27 monthly for a line, while a commercial user paid U.S.\$5.15. The installation of a residence line was U.S.\$705, but the installation of a business line was U.S.\$1,319. About 5 percent of ENTel's users accounted for 29 percent of its revenues. About 6 percent of CPT's users accounted for 28 percent of its revenues.

### 6.3 The Current Situation

ENTel now provides local telephone service directly or indirectly and operates the domestic and international long-distance network, as well as the telegraph system. CPT is the local-service provider in the metro Lima area, including Callao, as it has been since its formation in 1920. Since 1969 ENTel has operated CPT and, on behalf of the government, owned 29 percent, until 1994 when it increased its holdings to 35%.

Communication facilities are totally inadequate and do not meet demand. The majority of installations are analog, having been installed before 1980. Indeed, many cities are still served by manual exchanges. Installed capacity is in full use, which meant as of estimates in 1994 that only 44 percent of those wishing to make a call were able to get a dial tone immediately.

CPT and ENTel had bloated bureaucracies in 1993. The number of lines installed per employee was 48 in Peru; Mexico, by contrast, had 156 lines per employee. Operating costs per line neared U.S.\$900 in 1992. In Brazil and Mexico, costs were only U.S.\$230 and U.S.\$270, respectively.

ENTel has facsimile machines available in its offices for public use, and private parties can offer fax services over their phone lines (including residential lines) if they obtain a municipal license and declare the revenue for tax purposes.

#### 6.3.1 Infrastructure

In 1990 ENTel operated thirty-six automatic exchanges, mostly Philips PRX, with a capacity of 195,950 subscriber lines, out of a total of 563,000 lines nationwide. In 1992, CPT's digitalization reached 41 percent, but ENTel's reached only 18 percent. Over 60 percent of total lines are in the Lima area. Total lines were about 36 percent greater than in 1985.

A microwave network runs from Tumbes in the north through Lima and



Arequipa to Tacna and Puno in the south. Many branches run along the *costa* and *sierra* linking other communities. During 1995, Alcatel finished a 2,000-kilometer fiber-optic cable running from Piura through Lima and the other principal coastal cities to Arequipa. By 1993, CPT and ENTel's infrastructures were still outdated; CPT had 60,000 rotary lines in service, and ENTel still had 21,000 manual lines in service. The cabling for both companies was more than sixty years old in Lima and more than twenty years old in other areas. (This cable has a life expectancy of fifteen years.) Alcatel Standard Electric is an important fiber cable supplier. Two local manufacturers, Indeco and Ceper, are important copper cable suppliers.

Peru's first ground station for satellite communications, which is at Lurin, about 30 kilometers south of Lima, was put out for bid in December 1967. It went into operation on July 14, 1969, aimed at an Intelsat satellite, although Peru, through ENTel, did not join Intelsat until 1979. The station was under the administration of CITI until ENTel was created. The country joined Inmarsat in 1987. There are fourteen satellite ground stations for domestic long distance and ground stations for international service in Lurin and Huancayo (the latter built in 1980). Many of the domestic stations are in the Amazon area, where microwave links are impractical; the others reinforce the microwave backbone. This network is called Domsat.

By year-end 1994, Peru's cellular infrastructure was dominated by a duopoly: Moviline (part of Telefónica del Peru) and Cellular 2000 (part of Tele 2000), with a market share of 53.5 percent and 46.5 percent, respectively.

Two types of concessions—wired and wireless—have been created to operate cellular systems in two regions: Lima and Callao. Tele 2000 (previously named Telemovil) has operated wireless cellular since April 1990, and Telefónica del Peru has operated the same since April 1991. Tele 2000 offers telephony services via a joint venture with Empresa Difusoria Radio Tele (Radio Panamericana), with exclusive rights for twenty years to operate cellular and television services over cable. ENTel-Peru has the wired concession for the rest of Peru.

A license for wireless services has not yet been granted in the rest of Peru. Cellular 2000 provides traditional services via mobile cellular, connecting with CPT's network for calls in Lima—Callao and with ENTel for the rest of Peru. Tele 2000 charges about U.S.\$0.35 a minute, and Moviline charges about U.S.\$0.205 per minute.

In 1994, revenues for cellular services in Lima reached U.S.\$22 million. The provinces accounted for U.S.\$3.7 million and subscribers reached 49,000, divided as follows: CPT, 26,000; ENTel, 3,700; and Tele 2000, 20,000.

The Peruvian Data Transmission Network (PERUNET) permits the exchange of data between computers, or between terminals and a computer, including packet switching, via dedicated lines. Service started in July 1989. International connections are possible. The tariff is set in U.S. dollars and is paid monthly in local currency at the market rates at the time of payment. PERUSAT is an integrated digital service that provides private networks with voice, data, and facsimile transmission.

### 6.3.2 Research and Training

The National Institute of Research and Telecommunications Training (INICTEL) was established by the General Telecommunications Law of December 1971, as a result of a study undertaken in 1970 by the Transportation and Communication Ministry. It is separate from the Communications Sector of the Ministry. Scientific and technological research related to telecommunications are among the institute's objectives, as well as training specialized personnel for both the private and public sectors. In addition, INICTEL is responsible for the development of technical standards and their implementation, including certification of telecom equipment. It also conducts technical studies sponsored by public or private entities.

Despite limited financial resources, INICTEL has made significant strides. It has selected three broad priority areas for research and development programs, each involving several projects. The areas are radio and television, informatics, and telecommunication services.

ENTel also does research and development, both on its own and in partnership with INICTEL. Making use of advanced technology, during 1988-90 its engineers and technicians designed and built a prototype of a digital telephone exchange with 1,000 lines. Called Antara, it successfully passed laboratory and field testing and has been installed in Cañete. It allows urban and rural centers with low demand to be linked to the national network and provides national and international direct dialing as well as telematic services.

### 6.3.3 Regional Cooperation

The State Companies Association of Telecommunications of the Andean Sub-Regional Agreement (ASETA) was formed in July 1974 by five Andean countries (Bolivia, Colombia, Ecuador, Peru, and Venezuela). Headquartered in Quito, Ecuador, it coordinates programs related to the integration of networks and telecom services in the region.

The Hispanic-American Association for Centers of Research and Study of Telecommunications (AHCIET) works to increase coordination of company efforts toward the study of telecom development. ENTel (since 1984), INICTEL, and CPT are among the twenty-nine members.

## 6.4 The Move toward Privatization

The Fujimori government's commitment to privatization has been clear since it assumed office in July 1990, both reflecting and building a consensus that the state should have a significantly reduced role in the economy compared to the 1968-90 period.

In November 1991 Legislative Decree 702 (*Ley de la Promoción de la Inversión Privada en Telecomunicaciones*) acknowledged achievements that had taken place in telecommunications and set standards to regulate the development of pri-

vate investment. The intention was for ENTel to become a modern, efficient, and productive company. The law requires that telecommunications move toward a digital network offering integrated services. Many specific projects were undertaken to implement this goal in terms of local and trunk service, as well as upgrading and expanding the PERUNET data network and international links. Cellular systems are also planned for the three largest urban areas (Lima-Callao, Trujillo, and Arequipa).

Under an August 1994 law, OSIPTEL (Organismo Supervisor de la Inversión Privada en Telecomunicaciones) was created as the regulatory body for the sector. Reporting directly to the president, the body is composed of representatives of service providers, users, and the state. Besides having oversight on tariffs, OSIPTEL's primary function is to promote a competitive environment, including assurance of interconnections, as part of furthering the rationalization of telecommunications.

In January 1994 Decree 26285 established "progressive monopolization" of telecom services. For five years (June 1994-June 1999) CPT and ENTel will control basic and long-distance services. Competition is allowed in telex, telegraph, public phones, cellular, cable television, value-added equipment, and other services.

FITEL (Fondo de Inversión de Telecomunicaciones) was created by the same law to finance telecom services in rural areas and other places that are marginal to private providers. FITEL is funded by a 1 percent levy on the annual gross revenues of telecom providers, with additional funds from the general sales tax (IGV) and other sources.

In 1994, twenty-eight companies were privatized, attracting investment of U.S.\$2 billion. Telecommunications accounted for 46 percent of total foreign investments in newly privatized companies.

#### **6.4.1 Telefónica Perú**

In February 1994 the government sold 35 percent of CPT and ENTel. A number of international telecom players—AT&T, GTE, Southwestern Bell, France Telecom, Cable & Wireless, Telefónica Internacional, Korean Telecom, and Stet—had joined with local interests to bid. The winner was a joint venture of Telefónica Internacional de España with the Peruvian firms Graña y Montero SA and Banco Wiese (the country's second-largest bank, it issued stock in a global underwriting in September 1994). The venture, Telefónica Perú, bid just over U.S.\$2 billion in cash and investment commitments, 2.3 times the next highest bid and almost 3.6 times the minimum bid.

In connection with the privatization, new concession contracts were signed with ENTel and CPT. Running for twenty years, the agreement calls for tariffs to be rebalanced during the first five years so that they relate to costs. By 1998, the monthly rental for business and residence lines will be the same: U.S.\$31.93. Installation for both types of lines will also be the same: U.S.\$420. Costs per minute of long distance will fall. The companies are obligated to expand and improve service if they wish to retain their monopoly positions past June 1999.

Telefónica Perú assumed management of CPT and ENTel on May 1, 1994; in January 1995, CPT and ENTel merged to form Telefónica del Perú. The new com-

Peru

pany had 772,000 lines in service, equal to 3.4 per 100 inhabitants, 54 percent of which were digital. Imbalances existed between urban and rural areas. In 1993, Lima had 6.61 lines per 100 inhabitants, but the rest of Peru had only 1.23 lines. The goal is to have 1.75 million lines by 1998 with 96 percent digitalization. This includes bringing service to 1,514 small towns and increasing the number of public phones, particularly in the barrios, to 0.21 per 100 people as part of a plan to expand service to those who cannot afford their own lines. In 1993, there were only 0.41 public telephones per 1,000 inhabitants. Imbalances also existed between the wealthy and the poor populations. In 1993, only 1.6 percent of poor homes had a line, but 21.1 percent of the middle class and the wealthy had a line. In 1993, the average time to get a line was almost ten years.

From 1994 to 1998, CPT will modernize 125,000 lines and expand by 506,000 lines. ENTel will modernize 75,000 lines and expand by 472,000 lines. In April 1995 the company was installing 1,100 new lines a day. Some of those getting service had been waiting six years; the 1998 goal is fifteen days. Although the wait for lines has declined, the backlog has remained steady at about 250,000 as new people sign up. Increased efficiency and scale economies have reduced the cost per new line to U.S.\$400 from U.S.\$1,000. As part of this aggressive expansion plan, in July 1995 Telefónica del Perú announced a U.S.\$800 million investment budget for its next fiscal year.

To finance its investments, Telefónica del Perú has been allowed rate increases that have generated substantial profits: it is estimated the company will have net profits of U.S.\$280 million on revenues of U.S.\$11.27 billion in 1995. Telefónica Internacional de España receives management fees from Telefónica del Perú, as well as a dividend.

Ericsson will continue to be an important supplier of equipment. In 1994, U.S.\$40 million of equipment were imported from this supplier for various projects, including the installation of 120 central office projects in Lima and the provinces. As of March 31, 1996, Telefónica del Perú had roughly 1.2 million lines in service, with 79 percent of local and 100 percent of trunk connections being digitalized.<sup>1</sup>

## 6.5 Conclusion

Peru has been undergoing a major transformation in the 1990s. Although still fragile, the country is achieving political stability and economic growth despite the legacies of guerrilla movements and heavy government involvement in the economy. Telefónica del Perú is a major force in the country's revitalization.

### Note

1. Telefónica del Perú, *Prospectus Survey*, 1996.