

Telecommunications in Spain

Eli M. Noam

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Columbia Institute for Tele-Information  
Graduate School of Business  
809 Uris Hall  
Columbia University  
New York, New York 10027  
(212) 854-4222

## 22: SPAIN

Spain's telecommunications system is unusual. It is dominated by one semiprivate firm, Telefónica de España (formerly CTNE), which is strongly integrated vertically into equipment manufacturing and horizontally into Latin American telecommunications.

Telefónica has been assigned the role of a locomotive in Spain's rapid industrialization, and its powerful and entrepreneurial presence is likely to increase still further, as long as its primary mission of providing basic service does not lag.

### History

In 1884, a royal decree established a government monopoly over telephony. Two years later, service concessions were awarded to private firms through an auction of monopoly franchises for each city. Contracts were awarded to applicants who promised to provide the state with the highest percentage of gross receipts of at least 10 percent; bids for some cities far exceeded that percentage. Thirty-five local exchanges were established under the system, but problems soon became apparent; rate reductions could not be instituted, and the private companies were unwilling to extend service to rural and isolated areas. As a result, the government decided in 1890 to drop the monopoly system and to allow any interested parties to establish exchanges, while absolving the existing licensees of their revenue-sharing obligations. Commercial long-distance lines were also left to private firms. No competition emerged, however, since companies were unwilling or unable financially to enter into each others' territories. Thus, de facto unrestricted monopolies remained in

existence and were institutionalized in 1903. However, service remained unsatisfactory, and in 1924, the government granted a major concession to operate all of Spanish telephony to the Compañía Telefónica Nacional de España S.A. (CTNE), a firm that had only recently been formed by the American firm International Telephone and Telegraph (ITT) and private Spanish investors. Later that year, ITT acquired all the company's shares. This purchase was the first step taken by ITT in its efforts to become a major international presence in telecommunications. ITT's founders, the Behn brothers, had little capital and no manufacturing support behind them. Despite its grandiose name, the company was a midget in comparison to AT&T. The Behns now sought a manufacturing base; at the same time, AT&T happened to be looking to unload its European manufacturing operations because of U.S. domestic pressure. ITT bought them, and acquired a major presence in international telecommunications (Eurodata, 1986). ITT rapidly became Spain's dominant service and equipment firm. In 1945, however, it was forced to relinquish ownership of its network operation CTNE to the Spanish government, which then directly or indirectly controlled about half of its shares. In 1986, ITT's equipment subsidiaries became part of the French-dominated Alcatel. In 1986, CTNE was formally renamed Telefónica.

### Organization

Overall regulation of the Spanish telecommunications sector lies with the Junta Nacional de Telecomunicaciones (National Telecommunications Board), an interministerial commission

answering to the Ministry of Transport, Tourism, and Communications. The board is responsible for assigning radio frequencies, setting investment guidelines, and maintaining relations with foreign administrations.

Within the Ministry of Transport, Tourism, and Communications, two separate agencies have responsibility for telecommunications matters: the Dirección General de Correos y Telecomunicaciones (Directorate General of Post and Telecommunications, or DGCyT), which provides postal service as well as telegraph, telex, facsimile, electronic mail, and message switching; and Dirección General de Electrónica y Informática (Directorate General for Electronics and Informatics, or DGEI), which is in charge of promoting the development of a domestic electronics industry (MarTech Strategies, 1983).

An independent telephone network is run by the broadcast authority RTVE, which operates its own transmitters and relay stations (Lopez-Escobar, 1985). Most of telephone operations, however, are the domain of Telefónica, which was given monopoly status by government decree in 1970. Television and limited voice and data services have also been offered by Retevisión since 1989. Holding about 36 percent of shares in the company, the Spanish government acts as the majority holder of the company and, importantly, appoints its chairman. The remainder of the firm's stock is held by more than 750,000 private shareholders, including a number of foreign interests— mostly American, British, and German institutional investors. American investors

held 17.4 percent of the company's stock in 1990 (Bradsher, 1990, p. D12).

The company's stock is a favorite of small investors; in 1985, CTNE accounted for 17.2 percent of the entire Spanish stock market's capitalization! In comparison, the ten largest stocks on the New York Stock Exchange account for 15 percent (The Economist, 1985). Because Telefónica's capital needs are so great relative to the size of the Spanish economy as a whole, it had problems in raising adequate funds to finance its investments, and in 1985 it began to offer its stock on foreign exchanges, specifically through a large offering on the New York Stock Exchange. As a "strategic sector" firm, the Spanish government refused to raise the ceiling on the amount of Telefónica stock that could be held by foreign interests from 25 percent. A large portion of the state's holdings in Telefónica are administered by the central bank of Spain and the Instituto Nacional de Industria (INI), a public holding authority that was established in 1941 modeled after Mussolini's IRI. By 1982, INI firms had more than 200,000 employees, about 7 percent of the country's labor force. Its losses, however, amounted to \$1 billion. Telefónica's semiprivate, semigovernmental structure has made the privatization versus nationalization debate less pressing than that in most European countries.

Telefónica's presence in the Spanish economy is colossal and is reinforced by its vertical integration. With 71,000 employees, Telefónica is Spain's largest company. It holds stock

in numerous firms, including Amper-Elasa, SINTEL, TEFISA, TIDSA, and Cetesa (de Moragas et al., 1987). It accounts for nearly 4 percent of gross national capital formation in Spain and 2.7 percent of the gross added value in the service industry. Telefónica has one of Europe's highest rates of telecommunications investment as a share of gross fixed capital formation (39 percent) (ITU, 1990).

In 1985, the government proposed legislation to reorganize and centralize the telecommunications sector, with the specific objectives of creating an integrated network, defining telecommunications services in a consistent manner, and coordinating CTNE, RTVE (broadcast transmissions), and DGTyT (telegraph, telex) with the aim of moving toward construction of an ISDN system. But the proposed expansion of governmental influence was criticized by large users as running counter to the trend of reducing the state's role in telecommunications.

In 1986, three narrower bills were substituted for the more comprehensive effort, providing for the reorganization of telecommunications, private television, and the postal service. The telecommunications bill provided for keeping CTNE's monopoly as a telephone carrier intact and for the liberalization of the terminal equipment and VAN markets as well as for the transfer of responsibility for equipment approval from the telephone authority to the Ministry of Industry (White, 1986). The liberalization, intended to proceed gradually from 1988 to 1992, began with three corporations requesting Ministry of Industry

approval. Under this plan, Telefónica's carrier monopoly was extended for another thirty years.

### Services

The penetration of telephone service in Spain has lagged behind that in other European countries. In 1990, there were 30.4 telephone lines per 100 people (ITU, 1990). In the same year, however, applications for basic service increased 51 percent over the previous year, and the growth of usage of existing lines increased 5 percent. The wait for a new telephone connection was typically still over half a year, although this figure varied, depending on the region. In metropolitan areas service was faster, but in rural areas there were longer waits and greater costs of connection.

Luis Solana, a former banker, took over management of Telefónica in 1982 and led to a major expansion into worldwide markets. Eventually, this led to criticism that the globalization of Telefónica's activities was at the expense of the country. In 1989, there were 1.4 million applications for new lines, 535,000 of which went unfilled. This led business groups like the Madrid Chamber of Commerce and the Catalan Industrialists Association to complain that telephone failures and high costs hurt Spanish business (Purton, 1990, p. 15). Public dissatisfaction with Telefónica's failure to keep pace with demand for new connections then forced Telefónica's head, Luis Solana, to resign in 1988. He was replaced by Cándido Velazquez-Gaztelu. Telefónica increased network investment by 60

percent from 1988 to 1989, to reach \$5.8 billion by 1990, and it allocated another \$35 billion through 1994 (The Economist, 1990, p. 72). In 1989, Telefónica reduced the length of its waiting list for the first time in four years.

Other improvements were reflected by increases in subscriber numbers in a year: Iberpac, by 22 percent; Ibercom (Telefónica's business communications service), by 116 percent, and mobile telephone connections by 156 percent (Whitehouse, 1990, pp. 13-16).

In 1990 Telefónica lost its monopoly over second telephone terminals, and by 1992 it will also lose its monopoly over the first set, in accordance with EC rules.

In 1990, Telefónica faced two investigations, one by the Spanish antimonopolies board after a businessman was told his phone would be installed more quickly if he purchased more expensive equipment and one by the Spanish Consumer's Union over the new arrangement of tariff bands that decrease standard- and cheap-rate times in favor of peak-rate times (Warden, 1990, p. 8).

The telegraph administration, DGCyT, originally provided the bulk of data services but in time collided with the telephone carrier. DCGyT operates a telex network and leased telegraph circuits for slow transmission rates. In 1970, the government granted CTNE the authority to provide data transmission services, electronic mail, facsimile, and videotex. As a result, CTNE began to infringe on its rival's business. CTNE operates the



successful public packet-switched data transmission network Iberpac, which originated in 1971 as the first European packet-switched network and went through several technological evolutions. Worldwide access is provided through the international packet-switched data service TIDA.

As demand for advanced digital services increased in Spain in the early 1980s, Telefónica established Ibercom— a business communications service— as a step toward ISDN. Early customers were banks and retail chains; and by 1990, medium-sized customers were users as well (Martinez, 1990, pp. 18-20). Data transmissions comprise 9 percent of Telefónica's total income, which is a greater ratio than that for British Telecom or the Deutsche Bundespost (Purton, 1989, p. 29).

Videotex experiments began in 1978, with standards for the medium set in 1980. Limited "Ibertex" videotex operations began during the 1982 World Cup soccer competition. Attempts were made to involve the Spanish-speaking countries of Latin America in the project.

Telefónica was remarkably active internationally. Latin America became the site of Telefónica expansion, particularly in Argentina and Chile. In 1988, the Argentine government announced that, after forty-two years of state ownership, Argentina Empresa Nacional de Telefónica (Entel) would be privatized. In a consortium with Citicorp, Telefónica outbid six European and American competitors in 1990 for a controlling interest of Entel's southern operations. The winning package offered \$114

million in cash, \$2.18 billion in debt, and \$540 million in forgiven interest for a 60 percent share of the new company, to be called Telcosur.

The Telefónica consortium consisted of an investment company, including Citicorp's (20 percent), Telefónica (10 percent), and the Argentina's Techint Group (15 percent). Telefónica agreed to install 610,000 phone lines and 12,900 public phones by 1996, at a cost of \$1 billion (Morgan and Mason, 1990, p. 8).

In Chile, when the telephone system was privatized, Telefónica initially lost to Australian financier Alan Bond in the bidding for a portion of Compañía de Teléfonos de Chile (CTC) (Ryser, 1988, p. 44). But in 1990, Bond, in financial difficulties, was forced to sell his 43.7 percent stake to Telefónica for \$388.5 million. However, soon after the purchase, Chile's antimonopoly commission ruled that Telefónica could not own part of both CTC and ENTEL, Chile's long-distance carrier, in which it also held a 20 percent stake (Woolacott, 1990, p. 23). Telefónica appealed the decision to Chile's Comisión Resolutiva. If the decision is upheld, Telefónica will have five years to divest itself of either CTC or Entel.

Telefónica was also a bidder for a part of Mexico's telephone system; it also purchased a stake in the U.S. firms Infonet (5 percent), along with other European telecom organizations, as well as in Geostar (3 percent) and in Mercury's PCN subsidiary (10 percent) (The Economist, 1990, p. 72).

## Equipment

CTNE has a direct stake in determining which firms are allowed access to the equipment market, since it owns a majority of the stock of twelve equipment firms and holds minority interests in seven others. Telefónica controls 21 percent of Alcatel Standard Eléctrica; 20 percent of Citesa, another Alcatel subsidiary; 10 percent of Telettra, the Spanish subsidiary of the Italian telecommunication manufacturer of that name, owned by Fiat; and 7.6 percent of Amper, a Spanish telephone set manufacturer (Burns, 1985). Thus, until the 1986 reform giving equipment approval power to the Ministry of Industry, the manufacturer not only had to meet both CCITT and CTNE technical standards, but also often needed to cultivate a good relationship with Telefónica, their own competitor, including the disclosure of information, in order to secure approval for the sale of their products.

In the past, CTNE gave clearance to its own or to Spanish-made equipment. In 1981, foreign suppliers provided only 13 percent of the company's equipment (MarTech, 1983). However, the 1987 regulatory statute ley de ordenación de las telecomunicaciones (LOT) mandated open CPE markets, which led to the importation of a million handsets from the Far East, facilitated by a Telefónica decision to use the U.S. standard (Manning et al., 1988). Spain has been slow to accept digital technology; there are only limited plans for ISDN and digital Centrex service.

The Socialist government that came to power in 1982 increased Telefónica's importance in the equipment field by giving it a central role in its ambitious high-technology plans. Telefónica, RTVE, and the Ministry of Defense were each required to establish four-year plans of investment and development. When Standard Electric threatened to eliminate 6000 manufacturing jobs in 1985, the government pressured Telefónica to increase its purchases of that company's equipment.

Luis Solana, Telefónica's president until 1988, actively sought to spur the development of Spanish telecommunications by entering into still more joint ventures with Spanish and foreign companies. Pacific Telesis, the American Regional Holding Company, was invited to design a Telefónica telecommunications research center in Madrid. The main partner of Spain's Intelsa, Ericsson, financed the establishment of a large research center in Madrid, and in 1990 won 43 percent of a major equipment contract through Intelsa (Taylor, 1990, p. 4). In 1990, half of the digital exchanges in the Spanish public network were Ericsson's AXE exchanges (Martinez, 1990, p. 20). Telefónica entered a large semiconductor venture with AT&T in 1984. Together, the two firms built a plant in Spain that produces microcomponents, largely for export. Of the project's \$65 million direct investment, AT&T put up 80 percent and Telefónica provided the remainder. In addition, the Spanish government provided subsidies totaling \$60 million and credits worth another \$75 million. The transaction made Spain the major European

manufacturing base for AT&T. In 1987, this collaboration was expanded as Telefónica contracted with AT&T/Philips for 20,000 lines of an "intelligent" overlay for the Spanish network (Williamson, 1987). In 1990, Telefónica joined AT&T's Europe-wide equipment efforts by obtaining a 6 percent share in AT&T's network systems (Philips had 15 percent; Italtel, 20 percent; and AT&T, 53 percent), in return for its shares in the joint microelectronics venture with AT&T in Spain.

Telefónica is involved in other joint ventures: In cooperation with Corning Glass, it entered the market for optical fiber; it also engaged in a \$200 million computer production venture with Fujitsu. Given its history of close ITT connections, Telefónica also tried, unsuccessfully, to obtain a 10 percent stake in the CGE/ITT Alcatel venture.

In 1990, jointly with Amper, Telefónica won a contract to produce between 500,000 and 1 million telephones in the Soviet Union.

Piher Semiconductor, a firm headquartered in Barcelona, is the primary Spanish component producer, outside of Telefónica's ventures. The firm, part of the state-owned INI group, was fined \$1 million in 1985 by an American court, given five years probation, and denied all American export privileges for ten years after it pleaded guilty to illegally diverting more than \$2 million worth of semiconductor manufacturing and testing equipment to Cuba and the Soviet Union.

#### Telecommunications in Gibraltar

In Gibraltar, the British possession at the tip of Spain, telephone service first operated in 1892 for civilian service, with a parallel military system. In 1926, the city council established an automatic Strowger exchange service. In 1969, the operation of the telephone service was taken over by the government of Gibraltar, and in 1973 a crossbar exchange was opened.

International service was opened to Spain in 1927. This service was broken off in 1969 for several years because of the dispute over control of Gibraltar. In 1989, the Gibraltar government chose NYNEX to enter into a fifty-fifty partnership to run its domestic telecommunications network. NYNEX will invest \$10 million over five years to deploy an advanced intelligent network, with a fiber backbone, to serve Gibraltar's needs as a burgeoning financial center (Financial Times, 1989).

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