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The Development of Cellular/PCS Telephony in Argentina, Brazil and Chile.

presented by

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THE DEVELOPMENT OF THE CELLULAR/PCS TELEPHONY IN ARGENTINA, BRAZIL AND CHILE

Ву

Veronica Ana Morales

A THESIS

Submitted to Michigan State University in partial fulfillment of the requirements for the degree of

MARTER OF ARTS

Department of Telecommunication

ABSTRACT

THE DEVELOPMENT OF THE CELLULAR/PCS TELEPHONY IN ARGENTINA, BRAZIL AND CHILE

By

Veronica Ana Morales

The goal of this thesis is to understand how the internal or in-country and external or international regulatory factors that have shaped the current development of the cellular/PCN market in Argentina, Brazil and Chile.

The three countries have similar patterns in their telecommunication regulatory framework through their privatization of their state-owned telephone companies. However, the liberalization processes, through their World Trade Organization commitments and foreign corporate strategy give the different industry outcomes. A descriptive regulatory and a comparative market analysis help to understand the different outcomes that has prevented the cellular/PCS industry from developing before the late 1990s. To my parents and brother

AKNOWLEDGEMENTS

I would like to acknowledge the guidance provided by my thesis advisors Dr. Steinfield and Dr. Muth in the preparation of my thesis. I am grateful for both their advice and availability. I would also like to thank them for their help and encouragement throughout my stay at Michigan State.

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Chapter 1

INTRODUCTION

Wireless Communications has become one of the fastest growing areas in the Telecommunication industry. This development has been shaped by a wide array of internal or (in-country) and external (international regulatory), technical, and market (corporate) factors. The goal of this thesis is to explain how these factors are shaping the current situation in the development of the cellular/PCN industry.

The countries of Argentina, Brazil, and Chile have been selected to understand the role of regulation, international institutions and foreign corporations in the development of cellular/PCS industry. The thesis will be a descriptive analysis in the shape of case study, using mainly secondary historical data. The study will be based in two levels, the in-country regulation strategy and the external influences of the World Trade Organization (WTO) in order to explore the cellular/PCS development from a trade on service approach. In addition, the foreign corporate strategy such as BellSouth and GTE will be analyzed in order to understand the commercial structure of the market in these three markets.

The selection of the three countries was based on several factors that will be briefly summarized in this chapter. The first factor is that the countries have over two-thirds of the population and domestic product of the South American Region. Thus, making them probably the most representing group of countries in South America. Second the similar patterns of political development they took through their experiences in privatizing their incumbent telecommunication companies. The third factor is the different liberalization strategies that they employed when introducing cellular/PCN competition to their markets.

Argentina was an early reformer of its telecommunications sector with the introduction of private cellular service in 1987 and the privatization of its state-owned telecommunications company Empresa Nacional de Telecommunicationes (ENTel) in 1990 (Noam, 1995 p.135). Despite these initial commitments to liberalize the industry in the last decade, the Argentine government has revealed the government's hidden protectionist approach. Now the country is struggling with ending of the duopoly (Telecom-Telefonica de Espana) in basic telecommunications services and the introduction of market access for wireless services. The Argentina's commitment to liberalize is in question because contradicting legislation works to liberalize and restrict market access simultaneously. While some laws promise to allow competitors to enter the market without

restricted access, other resolutions other resolutions create or decrees create obstacles for domestic and foreign competitors to penetrate the local market for basic telephone and value added services such as cellular/PCS.

Brazil is the 8th largest industrial economy in the world with a population of over 171 million, makes up half of Latin American density and an economy output of \$800 billion per year (Ettorre, p. 1). However, when it comes to telecommunications policy, Brazil has lagged behind throughout the Latin American Region. While Chile and Argentina have moved towards liberalization and privatization of the telecommunications sector since the early '80s, Brazil has kept the state-owned and operated company Telebras, that has run the country's telecommunications networks since 1972. However, the government has undertaken a complex restructuring of the telecommunications industry within the past couple of years. This included privatizing in 1998 and reorganizing the state telephone holding company Telebras into three-regional wireline, 10 separate regional A-Band cellular companies and a long distance carrier, which were privatized through auctions.

Chile has led the way in reform and modernization of the telecommunications sector as the first Latin America country to eliminate the state monopoly on telecommunications

services. Through progressive legislation, Chile introduced its market to gradual liberalization in the late 1980s. Eventually, all regulatory barriers to the local, longdistance and international markets were removed for both service providers and network operator.

Method

The Key factors that affect the development of the cellular/PCS industry and that will be used in this study are shown in Figure 1.



Figure 1 - Schematic structure followed during the study.

Regulation: regulatory policy aims to insure a harmonious development of the sector. It implies an arbitration role on numerous aspects such as frequency allocations, market structure and, technology standards. Providing the guidance for the processes of privatization or the sale of the

state owned enterprises to private ownership and liberalization or the set of rules that assures that privatization takes place through the opening of the market to competition

International influences or factors towards the development of the cellular/PCS market is going to be described by the implications of the WTO Agreement, GATS (General Agreement in Trade and Services) that these three countries have signed after becoming WTO members. The implications of this agreement for these countries will be shown by the conditions of Most Favorable Nation, Market Access and National treatment. As well as the commitments of these three countries to further liberalize their cellular/PCS industry.

Finally, the strategies of multinational companies such as BellSouth and GTE will be described as the ones that are using the cellular/PCS industry as the strategy to enter the market in a new country.

Outline:

The objective of this study is to understand how the shaping of a set of different factors has resulted in the current situation of the wireless industry. In other words, this thesis attempts to analyze and evaluate the past and present factors that influence the development of cellular/PCN

telephony in the countries of Argentina, Brazil and Chile. To gain a better understanding of the impact of these factors, the study will take the shape of a case study analysis, comparing the three countries. The second chapter is devoted to the literature review and will describe the model that will guide my study. Chapter three will analyzed the internal or in-country regulatory factors that shape the current situation of the cellular/PCS market. The external factors for regulatory reform that influences the three countries will be analyzed in chapter four through the role of the World Trade Organization in promoting liberalization of the industry and guidance for developing countries. Chapter five will describe some of the most relevant foreign corporate strategies as the outcome of the current internal and external regulatory framework. Finally, Chapter six will conclude that these countries share the similar patterns of telecommunication development infrastructure through privatization and not so similar patterns of liberalization of the cellular/PCS industry.

Restructuring Telecommunications in Latin America

This section attempts to describe the historical origins of the telecommunication systems in Latin America, and the fundamental transformations that are currently remaking the region's telecommunication environment. Reform in the telecommunication sector has been widely spread across Latin America over the last decade. Current trends are a shift

from the state as the supplier of telecommunications services to regulator of network operations and services; the gradual introduction of competition at all levels of the network system and the privatization of the incumbent operator. More than 40 percent of the countries have introduced new legislation or modified existing legislation to allow and consolidate this reform process (Peters, p. 2). Traditionally, Latin America has been characterized by major inequalities in access to telecommunications services in comparison to developed countries and inequalities within the region and within individual countries. By the end of 1998 the 800 people of the Americas region as a whole were served by some 258 million main telephone lines, giving an impressive overall teledensity (lines per hundred population) of 32.3 percent (Petters, p. 5). However, that figure is skewed by the fact that 198 of those 258 million lines are in the USA and Canada. While this leaves half a billion people in Latin America and the Caribbean with just 60 million main lines between them for a teledensity of only 7.5 percent. In addition, this number does not show that two-thirds of the installed telephone lines are located in Argentina, Brazil and Mexico.

System inadequacies have been another hallmark of Latin American telecommunication networks. National telecom monopolies owned and operated partially or fully by the state were the norm in the region. Domestic monopolies

failed to build widely accessible reliable public networks. Common complaints included insufficient lines to meet demand, poor-quality equipment, outdated technologies, and infrequent maintenance and repairs. Decade long official waiting lists for line installation reflected a high the demand for basic service. In addition, the systems were financially inadequate. For example, artificially high equipment prices at several times the international average direct payments to national treasuries transferred surpluses from network investment (often supplied directly by new subscribers who were expected to bear the full cost of line installation) to large equipment manufacturers and the national treasury (Noam, 1995 p. 140).

Although lack of capital and poor and/or highly politicized management of national telecom companies, these problems were as much a manifestation of general political crises as direct causes. In many countries in the region, chronic political instability, reflected by the alteration between authoritarian and democratic regimes and political violence, has had an enormous impact on the ability of national telecommunication administrators to set long-term policy goals and to carry out mandates that changed frequently. For example, the rejection of the first attempt to privatize the ENTel the Argentina's telecommunications incumbent company during the transitional government of President Alfonsin (1982-1989) after 5 year of military control. In

1986, Alfonsin announced its intent to sell ENTel, to Telefonica de Espana to improve the performance sector, and gather the necessary resources to service the foreign debt. However, the initiative was terminated by the Congress, which was controlled by the opposition Peronist Party . President Menem eighteen months later, divested the company within its first nine months in office.

The widespread changes in policy and industry throughout Latin America are part of a broad transition caused by diverse forces, both international and domestic. The brutal military dictatorships of the 1970s and the rapid rise of external debt during the 1980s have interrupted Latin America's progress. In the 1990s, most Latin American nations have emerged from the struggles of the 1970s and 1980s and are focusing on increasing their participation in the global economy. Because political and economic clout depends on access to information, many Latin American government and business leaders are making efforts to increase their nation's technological power. Policymakers began to recognize that the state-led, protectionist development model employed over the previous decades had finally exhausted itself. As a partial response, governments in Latin America instituted a series of economic stabilization programs with the twin goals of reducing inflation and public spending and debt. In other words governments focused on changing domestic market conditions

to stimulate private-sector economic activity. They actively promoted the sale of state-owned companies and foreign and private investment. For example, if countries were interested in reducing national debt, then the primary consideration would be getting the best sale price. In Argentina, that goal led to contracts with strategic foreign investors to by large shares of the telecommunications companies, supposedly because that offered the most immediate return. Domestic sales of individual shares or small blocks of shares cannot usually be sufficient. The main reason was that lack of domestic capitalization led to reliance on borrowing, thus ending in debt problems. However, Argentina is also taken as an example of a privatization process that was overly rushed by preoccupation with foreign debt, resulting in an inadequate regulatory structure and disappointing results from the privatization contract.

While the scope and pace of policy reform varied significantly across countries in Latin America, some regional generalizations are possible. The role of the state, so prominent in previous decades, was diminished in favor of the private sector and market forces. Between 1988 and 1993, Latin America accounted for more than half the total value of worldwide divestitures, surpassing both Asia and Eastern Europe

Deregulation and privatization of state enterprises fostered greater competition and helped reduce distortions in the economy. Finally, many countries unilaterally cut tariffs and eliminated various barriers to trade, helping accelerate regional productivity growth. Average tariff rates in Latin America declined from more than 50 percent in 1985 to approximately 10 percent a decade later. The creation of trade arrangements such as the North American Free Trade Agreement (NAFTA) and the Common Market of the South (MERCOSUR) also contributed to increases in regional trade. Stabilization efforts resulted in a significant decline of regional inflation. By 1997 most countries in the region had only single digit inflation, and the median rate had dropped to 9 percent, the lowest in any year since 1977.

The organization of national telecom sectors is base in these processes of sweeping reform of state responsibilities. As subscribers both business and residential were unwilling or unable to assume the burden to finance necessary network upgrades an expansion, the capital intensive telecom sector was a prime candidate for sell-of. The transfer of responsibility for the state to the private sector for network management and investment has ranged from complete privatization of the public switched network to the parceling out of value-added services or the so-called new technologies such as mobile cellular and data transmission. The impact of Telephone Company privatization on state

finances seems to have been most direct in providing large infusions of cash and/or foreign debt forgiveness. The transfer to private ownership of state-run telecommunications entities began in 1988 with Chile's privatization of the CTC (Compañía de Teléfonos de Chile) and ENTEL, followed by Venezuela in 1990 and by Argentina and Mexico 1991 respectively.

Established multinational equipment manufactures with subsidiaries in Latin America were opposed to sector organization. Since they have developed highly profitable supply relations with postal and telecommunications agencies (PTT), privatization threatened to disrupt their conformable situation. Thus, governments implemented plans to extend supply contracts into the postprivatization period.

The contemporary situation in the region is complicated by the fact that as a result of privatization, private monopolies, sometimes foreign-owned, have in many countries replaced the old state monopolies. In the first privatizations, the new private owners were guaranteed periods of monopoly on all basic voice services and preferences in the provision of other services. Governments argued that this policy was necessary to provide sufficient incentive in the form of monopoly rents to promote high levels of investment and greatly expanded network coverage.

However, a central problem in the region is that consistent regulatory controls of private monopolies have yet to be instituted. As part of the initial sale agreements, purchasers of telephone companies demanded policy changes that undercut many of the supposed benefits to the public of sector reorganization. For example, in Venezuela, the government and the state telecom company, CANTV, renegotiated the company's contract prior to the privatization to ensure CANTV's monopoly for the first 9 years after its sale and its continued contribution to the National Treasury; this policy was supported by the major political parties in Venezuela. In Argentina, the government increased tariffs prior to the sale of ENTEl to increase basic rates from which future increase would be calculated.

For Latin American countries, clear that the sale of stocks to domestic and foreign strategic investors has certain key advantages. In other words, investors may be bargained in to buying at a higher price or they may be required under contract to continue to invest in the telecommunication operation for a period of years. For example, in Mexico, the major domestic and foreign strategic investors have signed a specific contract which guarantees them a 6 year monopoly on fixed line services in return for a continuing obligation to invest a \$ 10 billion in network expansion.

Mobile cellular development

Mobile cellular services worldwide have grown much faster than expected. At the end of 1998 there were more than 300 million subscribers around the world up from just 11 million in 1990 (Vandenack, p. 2). Cellular networks, for instance, have grown most rapidly in developing countries where wireline networks are scarce and basic telephone services expensive.

There are three main reasons for the success of the cellular industry in Latin America: competition, calling party pays and prepaid cellular service. In Latin America, competition like privatization, has gained great momentum in recent years. The first service areas to be liberalized have been mobile cellular service. This is in part a consequence of the exclusivity periods that were granted to newly privatized operators for basic fixed-line services. As a result, governments have subsequently encouraged competition in market segments where there is no exclusivity. While privatization and foreign investment have spread through Latin telecom market, the movement to full competition in the mobile cellular market is not immediate. As in basic telephony, most of the region's government took a gradual approach to competition. This means that the countries are going through a transition process with often two-way competition (duopoly) in cellular or PCS before a larger number of entrants can compete. The fact that the most of

these nations have signed a World Trade Organization basic telecom agreement also helped to increase foreign investment in telecom companies.

In the USA and Canada the number of subscribers more than doubled from 36 million at the end of 1995 to 74 million by the end of 1998. However, in Latin America and the Caribbean the growth rates continue to be more impressive. The number of subscribers grew from just 4 million in 1995 to over 22 million by the end of 1998. By September 1999 that number had grown to 28. 6 million and its forecast to surpass 40 million by the end of the year 2000. With full mobile competition in the region's largest markets - Brazil, Mexico and Argentina- the ITU predicts that the mobile subscribers will have overtaken the number of fixed-line subscribers in these markets by the year 2005 (ITU, 1998).

The introduction of calling party pays (CPP) has made a significant contribution to cellular market growth. By shifting the cost burden of incoming calls to landlinecalling customers, cellular subscribers are more willing to answer calls and use cellular service in the first place. CPP for example helped Argentina experience 179 percent growth in 1998 (Vandeback, p. 2). Experience in other Latin American countries shows that CPP tends to promote customer growth from 50 percent to 100 percent.

Prepaid has penetrated the market faster in areas where local fixed service is difficult to get and expensive. Thus, making wireless a substitute for regular basic phone service. In 1998, Mexico's operators were experiencing most of their growth activation as prepaid, leading to a 100 percent growth in its cellular market. Of the country's entire subscriber base, more than 40 percent are prepaid customers.

CPP, coupled with prepaid, has had a synergistic effect on the market. The reason is that subscribers can sign up for prepaid with no monthly subscription and get inbound calls for free. These services has helped operators reach into the mass market of low-income marginal subscribers, who were attracted to mobile service because of the region's poor landline infrastructure, crime rates, and the high status accorded mobile phone users.

Regulation of mobile cellular has tended to be minimal. For example, fewer than half of the countries that replied to an ITU questionnaire in 1999 stated that their mobile operators had universal service/access obligations or that their mobile tariffs were regulated. The relative lack of cellular regulation is partly due to the belief that fixed networks have been too regulated, delaying innovation and network growth. Since mobile has developed at a time when this belief has become commonly accepted, regulation has

been limited. A related factor is that mobile cellular has typically been defined as a value-added-service. Thus falling outside the regulatory scope of basic voice telephony. For Latin America, the question is whether mobile cellular has grown so fast because of limited regulation or whether it will grow even more rapidly with greater regulation.

Conclusion

This chapter attempted to provide the framework for this study in order to understand how the in-country regulatory system and international forces, such as the WTO and foreign corporations have shaped the current development of the cellular/PCS industry in Argentina, Brazil and Chile. Although each country has shaped the reform process to accommodate its own political, economic, and cultural circumstances, three themes emerge from the analyses. First, the sublimation of telecom sector reorganization to the powerful dynamics of the privatization and liberalization programs that provided the basic policy platform for telecommunication reform. Second, the lack of basic telephone service via the public network also has a significant impact on the speed of introduction and acceptance of "new technologies". Despite the high prices and limited coverage, penetration rates for mobile cellular telephony have far exceeded initial projections. Cellular service became a replacement for, rather than an add-on to,

the public network. Finally, the struggle of current regulatory mechanisms from governments to regulate the telecommunications industry demonstrates that government officials need to make the necessary political and financial commitment to create and sustain credible regulatory agencies that will ensure that their privatization and liberalization goals are met.

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Chapter 2

LITERATURE REVIEW

This chapter provides the theoretical framework that will guide this study. Several authors have been chosen to help answer the research question of how the internal and external regulatory factors affect the development of the cellular/PCS industry in Argentina, Brazil and Chile. In other words, the literature overview section will cite some of the previous work about how the processes of privatization, liberalization and the regulatory structure affects the development of the cellular/PCS industry

The different factors that can determine the performance of the telecommunications industry are discussed by Bauer (1993, p. 14). He argues that from an institutional perspective, the overall performance of the sector is determined by its institutional matrix, which consists on a set of parameters at the various levels of cultural, political and economic organization. In other words, it comprises both informal rules such as code of conduct, traditions, customs, taboos, as well as formal rules such as the constitution, statutory and case laws and the specific assignment of property rights.

An important subsection of the institutional matrix is the governance structure of an industry, which is

operationalized as the set of rules that constrain and guide the operations within an industry. These rules can be part of the general legal framework of a country, such as antitrust laws or constitutional principles that guarantees the freedom of economic activities. For example, conditions for market access, such as prices, service quality standards and interconnection rules, as well as more discretionary policies such as industrial policy are part of this governance structure of telecommunications.

Bauer (1993) also notes that countries have pursued various strategies with respect to the organizational structure of their telecommunications industry. In other words, countries have accepted various models to regulate telecommunications that cover from the "internal" regulation through public enterprise to the "external" regulation through expert commissions.

Different approaches range from the traditional model of public administration such as Portugal, Germany and France to models of public corporations with much more degree of autonomy in the public sector like Sweden. In addition, national approaches can also differ in the degree of public policy directed towards telecommunications. Denmark or Sweden has pursued a rather open policy while France or Germany has adopted a relatively high degree of public planning of telecommunications infrastructure development.

Finally, the US has been characterized by a reluctance to engage in any open policy for telecommunications.

Thus, Bauer suggests that similar levels of performance can be achieved under different institutional settings with various roles for the private and state sector. As a consequence of that, privatization and liberalization do not guarantee improved performance of the telecommunications industry, however under the specific economic, political and foreign policy constrains of many developing countries, no better feasible solution might be possible.

Michael Paetch analyzed the key factors that influenced the development of mobile communication systems, for the purpose of this overview few of them will be described. He compared the technological, regulatory and market environment of the United States and Europe with respect to mobile communications. He argues that the field of telecommunications in general, and the sector of mobile communications in particular, is affected by a wide array of technical, economic, regulatory, market and socio-cultural factors. To a greater or lesser extents they all participate in the shaping of mobile communications systems.

The factors commonly mentioned as affecting the development of mobile services are regulatory policy, technology and market variables. The regulatory policy aims to insure a

harmonious development of the sector. It implies and arbitration role on numerous aspects such as interconnection tariffs, frequency allocation, market structure and technology. The technological factors are determined by the scarcity of the spectrum. Since the most useful part of the spectrum is already allocated, the development of cellular telephony depends upon the introduction of technologies that use the less crowed and higher frequency In addition, technological evolution makes new bands. communication services and new features possible. Manufacturers often allocate funds to the development of new services before the allocation of spectrum frequencies. Thus they attempt to impose a de facto standard to gain competitive advantage influencing the standard setting bodies. Finally, the market variables are determined by the price of equipment services and service charges, the number of year the first cellular system has been launched, the gross domestic product, and the coverage/quality of network.

The organizational boundaries of the telecommunications sector have changed dramatically. The pattern of evolution from internal reorganizations to external alliances and mergers has been set by the policies of privatization and liberalization worldwide. Lerner, (1991 p. 279) outlines the benefits and distinctions of privatization and liberalization. He defines privatization as the process of transferring to the private sector some or all the

operations, management, and/or ownership of the state-owned telecommunication facilities. He argues that the term "liberalization is often incorrectly used as a synonym for "privatization". Liberalization refers to the political and regulatory changes that must accompany privatization to ensure that private interests operate efficiently for the public good. In other words it provides the framework for replacing the rigid and all-encompassing state telecommunications regulation with reliance in a competitive industry structure and market forces.

Lerner also adds that with liberalization, the private sector may provide both new and innovative facilities and services in selected market segments such as cellular radiotelephone or competitive pressures on the basic monopoly network. Thus, the processes of privatization and liberalization shift the countries' telecommunication system towards greater commercial orientation, more efficient operations, and better management and planning. In turn these lead to an expanded and enhanced telecommunications infrastructure and contribute to a country's economic growth and development.

Regly (1997, p. 33) examines the use of wireless access as a tool to further competition and sustainable development of the telecommunication sector. The main focus of his research is on the potential impact of wireless

communications through existing models such as cellular and personal communications services/networks (PCS/PCN). He suggest one potential alternative to the present evolutionary course for wireless access, a policy called strategic liberalization. Strategic liberalization is defined as the implementation of specific policy measures to increase competition in the market for wireless access services, such as cellular, wireless local loop, and satellite communications. It argues that a strategic focus on wireless communications will provide a sustainable foundation for the continued growth of the telecommunications sector and the successful introduction of new product and services in an environment of facilities based competition.

A brief description of these theories is provided bellow for comparison purposes. Some of the most prevalent theories and perspectives on the future direction for the global telecommunication sector are cultural and technological protection, market subsidization, regulatory mainstream theory, strong liberalization and techno-libertarians. In addition, these schools of thoughts offer a basic classification of some of the policies suggested for the transition from a market dominated by state-run monopolies. In the cultural and technological protection theory, researchers such as Jill Hills, Gerald Sussman, and John Lent in agreement have drawn heavily from the Dependency
Theory to advocate a central role for the state in protecting the cultural heritage of various national groups, as well as the technological capabilities of local firms. In the market subsidization theory policy, researchers focus on the same concerns as the advocates of cultural and technological protection, but are more likely to suggest subsidization and the imposition of certain social goals, such as universal service, on information and telecommunications providers. The economic and social models that support this kind of thinking include the traditional analysis of scarcity in the telecommunications industry, and the belief that the sector cannot sustain widespread facilities-based competition. Thus, in the model for "market subsidization", the government looks at the evolving market, defines a need specific to the common good, and invests to ensure that a certain kind of access and service is provided. The goal of the Regulatory Mainstream theory is to identify services that are most appropriately competitive, liberalize them individually over an extended period of time, controlling the marketplace through traditional regulatory institutions. In addition, the focus is on defining the most effective practices of regulatory institutions. Thus ensuring that there are some similarities throughout the world in terms of approaches to telecommunications regulation. However, this approach often allows for a greater degree of market oriented liberalization because of the economic focuses of the

methodology, rather than the political economy of writers like Noam and Gore. The term strong liberalization describes a more complete liberalization of the telecommunications industry than the regulatory mainstream. The main argument states that liberalization in niche services, such as data transmission and value added services should take place in conjunction with the introduction of competition for all services in the local loop. Thus, under this theory, the introduction of competition at all levels is an appropriate model for telecommunication development. In the Techno-Libertarians theory argues that the technologies of the emerging telecommunication marketplace are inherently competitive, they do not promote market hegemony, and provide more than sufficient opportunities for direct, facilities-based competition between telecommunications companies and information service providers. Thus, if given the freedom to grow and expand, technologies will provide sufficient foundation for sustainable market conditions.

Finally, Regly (1997) suggests that strategic liberalization policy can help both public and private sector managers identify economic and technological trends and adapt political entities to facilitate development. The word strategic is meant to emphasize the fact that corporate and public managers have strategic choices to make in order to ensure the implementation of a successful policy. For

example, strategic choices about particular technologies are critical to the success of liberalization. Liberalization can start with low cost wireless technologies such as cellular telephony that would have an immediate impact on the establishment of competitive markets.

Several articles from the trade press have been used in this study to show the impact of the World Trade Organization (WTO) Agreement on trade of basic telecommunications services. It is important to notice that the telecommunications sector needed separate negotiations from other service sector because it has unique attributes as a backbone for other services and as a service itself. Although the countries define basic telecommunications services differently, overall the definition includes voice telephone services, packet-switched data transmission, telex, telegraph, facsimile, privately leased circuit lines and mobile services. The impact of these agreement will be shown based on the commitments that the countries agreed on to liberalize their cellular/PCS market.

A rapidly growing concern is to understand and explain the processes and consequences of the internationalization of the telecommunication industry through the role of foreign direct investment in host economies. Other major developments in explaining FDI investment are the concept of internalization (Buckley and Casson 1978) and the eclectic

approach to direct investment (Dunning, 1977). The concept of internalization shows the need for internalizing the intermediate products (technical and entrepreneurial expertise) within the Multinational corporation. As a result of such internalization, industry or firm specific advantages are increased (Buckey and Casson 1978). In addition, Internalization of intermediate activities within a multinational firm is also cost effective since it reduces costs of negotiation, buyer uncertainty, decision-making time lags and governmental interference (Calve, 1981). The eclectic theory states that a firm should possess the following three conditions if it intends to undertake FDI: (1) firm-specific advantages, (2) internalization advantages and (3) location-specific advantages or country-specific advantages. It is important to notice that the eclectic theory provides an explanation of the fact that once a firm possesses firm-specific advantages (knowledge advantage, management, marketing and financial skills) and successfully internalizes its proprietary know-how, the other variables that further influence the specific location behavior are country-specific characteristics. Location factors such as high market demand and the imposition of trade barriers in the host country would encourage foreign direct investment. Location-specific characteristics also play an important role in the choice of a particular location within a country. In the telecommunications sector, the eclectic theory can be applied to evaluate the ownership-specific or

competitive advantages, location specific or country advantages, and internalization or coordinating advantages. The ownership specific advantages, providing competitive advantages may include knowledge intensity, access technology and capital, scale economies such as the ability to operate international communications network, access to government channels in the home and host economies. Coordinating advantages may emanate from the ability to form consortia of firms to avoid large cost of operations. The location specific advantages are the characteristics of government regulation of trade and production, the characteristics of the infrastructure of the host economy and the need for FDI within the host economy (United Nations, 1989).

Conclusion

The literature review outlines the work of different authors in restructuring the telecommunications industry through regulation. The chapter explains that privatization and liberalization are the most common strategies employed for the development of this industry. At the international level the World Trade Organization shows the countries commitment to liberalize the cellular/PCS industry through the enactment of trade agreements in basic telecommunications services.

Economic theories such as internalization and eclectic theory shows the internal necessary reorganization of a firm multinational firm to invest in foreign countries with the use of joint ventures with local partners.

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Chapter 3

REGULATORY FRAMEWORK

This chapter provides a comparative description of the regulatory framework in Argentina, Brazil and Chile. The goal of this chapter is to provide historical background of the telecommunication development as well as the regulatory framework for liberalization. The first part of the chapter will describe the role of the regulatory institutions, which covers the enactment of laws and decrees that give the parameters for the management of the spectrum, the degree of competition through licenses agreements, frequency allocations, interconnection and number of operators. The second part will state the most significant laws and decrees that lead to the development of the cellular/PCS market.

Regulatory Agencies

In Argentina, Decree No. 1185/90 established a government agency called the National Communications Commission (CNC) with has regulatory power over the entire telecommunications industry in Argentina. The CNC's regulatory function consists on issuing licenses, authorizations and permits to facilitate telecommunications services. In addition, the CNC monitors the telecommunications service, approves technical plans and reviews the annual work plans of the licensees in order to ensure compliance with mandatory goals. However, a major limitation of the role of the

Secretary of Communications or the policy maker and the CNC is their dependence on the government. The President of Argentina appoints the President of the Secretary of Communications as well as the 6 members of the CNC. Thus, this lack of autonomy in the regulatory enforcement body makes it susceptible to pressure from the government.

Brazil adopted the General Law on telecommunications in June 1997 that defined the infrastructure of it telecommunications industry. This law establishes a national telecommunications agency (ANATEL) with administrative and financial independence and autonomy to fulfill regulatory functions. The agency issues guidelines for service provision, executes concession contracts, manages the radio frequency spectrum and the use of orbits, controls and define tariff reviews and issues norms and standards for equipment. Like Argentina, ANATEL is required to submit its budget to the Ministry of Communications. Thus, there is potential of government control in ANATEL decision making process (Noam, 1995, p. 245).

With the creation of the Subsecretaria de Telecommunicaciones (Subtel) a division of the Ministry of Transport and Telecommunications, the government of Chile adopted a policy of market opening and privatization. As the regulator, Subtel is responsible for studying the sector's development, making policy recommendations and

preparing the licensing of operators (Stehman, 1995, p. 669).

Thus, the three countries telecommunications regulatory institutions are highly dependable of the national government.

Argentina

The evolution of the telecommunications industry in Argentina is indicative of its commitment to liberalize the country's telecommunications industry. Prior to 1990, the telecommunications industry was controlled and operated by ENTel the incumbent wireline company. ENTel experienced important problems including outdated telecommunications technology, exorbitant costs, poor telephone services, and incompetent personnel. For example, during the 1980s a potential consumer could wait between five to ten years before getting access to a telephone and installation costs averaged US \$1,500 (Rubinstein, p. 12). Given the outdated technology and poor quality of telephone services, the Argentine government needed to drastically change the operations of the nationally run company.

The government started the ENTel privatization process by creating four corporations pursuant to the State Reform Act, also known as Law No. 23.696. By privatizing ENTel, the government hoped to demonopolize and deregulate the telecommunications industry and thereby realize efficiency

gains and social benefits. The newly formed companies were Sociedad Licensiataria Norte (SLN), Sociedad Licensiataria Sur (SLS), Sociedad Prestadora del Servicio International (SPSI) and Sociedad the Servicios en Competencia (SSEC). Under the State Reform Act, the government granted a monopoly privileges to SLN, SLS and SPSI on basic services for seven years to potentially ten and a "service in competition" license for SSEC. The government gave SPSI the right to provide international basic telephone services, international data, and telex services, data transmission services, and value added services. The license granted to SSEC allowed it to provide national telex and data; mobile radio and land radiotelephone services but included no monopoly privileges.

In 1990, Decree No. 62/90 initiated an international bidding process that resulted in foreign private companies assuming control of the telecommunications industry. Thus, SLN sold 60 percent of it shares to Stet S. p. A of Italy and France Cable et Radio (subsequently named Telecom Argentina). SLN sold 60 percent of its shares to Telefonica de Espana, (later renamed Telefonica de Argentina). SPSI and SSEC became Telintar S.A. and Startel respectively. As a consequence of the sale the government endorsed a change in telecommunications organizational structure from monopoly at the national level to monopoly at the regional level. This change in telecommunications strategy served to

increase investor confidence since more effective and efficient services were supposed to follow.

The conversion from state-owned monopoly to a privately held duopoly had various reasons. Selling off the telecommunications industry to two companies allowed the government to create a market check in which the state could evaluate the performance of two companies of comparable economic size and market area. Thus allowing the government to determine if any region was being under-developed. Although consumers may have preferred free entry to the market by any competitor, the government believed a duopoly would provide the capital-intensive investments necessary for the development of the telecommunication market.

The Argentina government granted each company an exclusive seven-year license for basic services in their respective regions. The seven-year license was supposed to end in November 7, 1997. As an added incentive, however, the government agreed to extend it for three more years as long as certain minimum standards for basic telephone services were met. These standards included providing services for areas that previously had no telephone service, meeting target levels for areas that previously did not have service, service quality, market penetration, and public and semi-public services. The services covered in the exclusivity agreement also included telecommunications

services such as data, telex and leased station to station circuits for telephones and data transmission.

As part of the conditions of the agreement, the government set forth-mandatory goals to be achieved by the telephone companies. Decree No. 62/90 approved a public auction for the privatization of the telecommunications industry for basic services. In addition, it set forth the requirements for quality, development and growth in the industry. It also authorized the government to extend the licenses for both Telecom and Telefonica for exclusive control of the basic services market for an additional three years as long as the mandatory requirements are met.

However, the debate exits as to whether the obligatory goals stated in Decree No. 62/90 were met by the telephone companies in order to legally grant the extensions. For example, the terms of the concession agreements gave the government the option to grant the extension only if obligatory goals were met, the extension was not an automatic right. In Decree No. 264/98, the government concluded that Telecom and Telefonica only satisfied a majority of the obligatory goals. The language of Section 10.1.8.1 of Decree No 62/90 is ambiguous as to whether all or a majority of the obligatory goals must be met to qualify for an extension. To resolve this statutory ambiguity, Argentine jurisprudence advances a method of interpretation,

which disfavors the party, granted the monopoly privilege. In other words, the government's argument that meeting a majority of the obligatory factors qualifies Telecom and Telefonica fails because the statutory language of 62/90 is ambiguous and must be interpreted in a manner that promotes a free market system in lieu of a monopoly.

If one assumes that the exclusivity extensions were granted legitimately, Decree No 264/98 is a positive step towards the liberalization of the telecommunications industry. However, shortcomings in the language of the decree serve to increase rather than remove barriers to entry. The strength of this decree is that it provides a transition plan for the liberalization of the telecommunications industry for basic telephone services beginning November 8, 1999. Article 5 and 6 set forth the license requirement for basic services. Licenses should be granted to two new operators for local, long distance and international telecommunications services by November 8, 1999. Thus, a general and comprehensive framework is established to grant competitors the licenses required to compete in the market in November 2000.

The objective to liberalize the telecommunications market by allowing competitors access to the market the market fails, because of various restrictive in Decree No 264/98.64. For example, it states that various requirements that limit the scope of potential operators, such as the condition that new

licensees must be corporations whose shareholders must include a current operator of mobile telecommunications services, a cable TV company operating in the major cities of Argentina and Independent operators of telephone services. Thus, the language of Decree No. 264/98 is underinclusive. CTI and Movicom are the only new cellular/PCS companies that qualify for the licenses.

In addition to the limiting access to the field of potential competitors, the restrictions of Decree No. 264/98 also violate Article 14 and 16 of the Argentine Constitution. Contradicting Article 14, competitors are inhabitants of the country and are being denied the right to participate in the telecommunications industry. In violation, of Article 16, potential competitors are not given equal protection under law because the restrictive terms create barriers to market entry. Thus these constitutional violations are compelling evidence that prove that certain provisions of Decree No. 264/98 are restrictive and that the government supports a partially projectionist telecommunications policy. In contrast to the disappointing government projectionist policies in 1997, more recent legislation affecting the telecommunications industry in the year 2000 and beyond appears more promising such as the country's commitments to the World Trade Organization to liberalize the cellular/PCS industry.

Brazil

Three factors formed the basis of the telecommunications body of infrastructure development in Brazil. These factors are the influence of the military, the need for international communications and linkages, and the goal of establishing a local equipment and technology-manufacturing base. The three of them brought a variety of economic and political interests together. The embodiment of that consensus is Telebras; the former state-owned and operated public telecommunications operator.

In the 1960s, the Brazilian military began to assert authority over the Brazilian economy and society, instituting a system of authoritarian control that would last through the 1970s. The assertion of this control included the reorganization of the country's information and telecommunications network and the creation of a single, government-owned telecommunications operator, Telebras. The first step to establishing a central authority for telecommunications operations and development was made in 1962, with the passage of Brazil's telecommunications code. The Code granted the state a monopoly in the operation and regulation of telecommunications activities and established a National Telecommunications Council (CONTEL) to reduce market fragmentation and rationalize equipment supplier (Regly, 1997). It also created Embratel, the Brazilian Telecommunications Enterprise that was in charged of the

national and international trunk operations and the development of linkages with the farthest reaches of the country.

A Ministry of Communications was established in 1967 as part of a broader government reorganization that reflected the military's entrenchment in the government and the starting of the period of political cohesion and terror. In 1972, the government announced the establishment of Telebras as a public enterprise to plan and manage financially and technically the development of the telecommunications system. Because Telebras was given a monopoly on the purchase of telecommunications equipment, it had the ability to dictate the technology policy and infrastructure development of the state companies. Through a series of purchases and mergers, Telebras gained the majority control of the country's telephone and telecommunications networks, reducing the total number of major network to 37. The government owned 80 percent of the enterprise, with Bradeci, Brazil's largest private bank, AT&T and Bell Canada as minority private shareholders.

Telebras has been placed as the coordinative and structural unit that the military government required in the 1960s and 1970s. However, tension between local interest of various governments and groups have been taken since the transition to democratic government in the late 1980s. The core of the

tension is based on the role of the pole companies, which are organized within each of Brazil's state and the centralized role of Telebras. In many cases, the pole companies started to build their own infrastructure to meet demand.

The Collor Administration which took place in 1990 did open the telecommunications market to limited competition in paging, cellular, cable television, infrastructure provision, and private data network as part of the presidential decree entitled "The Regulation of Limited Services" in July, 1991. In June 1995, the Brazilian government began to take the difficult steps toward privatization and liberalization. Provision 8987/95 removes the Telebras monopoly in the marketplace and gives the government the ability to privatize the company. The following features formed the plan for the full privatization and liberalization:

• Finalization of constitutional reform, permitting private investment in fixed telephony, cellular, satellite and value added networks,

• Licensing of the "B" band cellular services, which has been delayed and has undergone various difficulties and challenges from private sector companies wishing to be involved in this portion of the market,

• Privatization of band :A" cellular holdings, presently owned and operated by the pole companies as part of the Telebras system.

• Establishing a regulatory body to oversee the privatization process, as well as facilitate arrangements on issues like the interconnection and ensuring competition among the state operators and private concessionaires, and

• Dividing Telebras into five or six "mini-holing" companies by geography in advance of privatization.

The cellular telephony industry was divided into two bands, following the monopoly pattern established in countries like the U.S. in the initial phases of cellular development. Band A has been allocated to the local pole companies and Band B will be assigned to the private sector. In the private service competition, Telebras makes a technical preselection, and the local pole company makes the final decision based on financial criteria. Foreign firm participation is limited to 49 percent of the shares, although supply and installation of the system can be contracted out. To this day joint ventures have been established between foreign technology providers and Brazilian service providers, including some of Brazil's largest industrial and financial groups.

In 1998 the government privatized Telebras by dividing it into 12 units. Three fixed-line phone companies and eight mobile phone companies A-Band operators that will compete with the new entrants or B-Band operators formed these units. B-band operators were the first telecommunications subsector to be opened in Brazil. The country was divided into 10 regions with one license corresponding to each region. However, 9 B bands were awarded due to there was no bidders for the Amazona's region.

Chile

In the mobile telephony market the country is divided into two areas. In 1981 the government granted mobile and cellular telephone concessions to Telefonia Movil CIDCOM, a private company of local and North American investors. Using International Mobile Tracking System (IMTS) technology, the company started operating its mobile systems in Santiago, Valparaiso and Concepcion (three of the largest cities). In order to exploit the high-power coverage, CIDCOM offered fixed wireless service (private and pay phones) in rural areas within its service areas that wireless network wouldn't reach.

In 1988 CTC decided to establish a cellular system in Santiago and Valparaiso, and it went into operation in early 1989. By the end of 1991 there were over 25, 000 subscribers on the two systems. Most large Cities in Chile

obtained cellular service in 1991 when two other companies such as VTR and Telecom began operations in the rest of the country. In the digital market the Chilean government is following a new and more liberal approach than other countries. It is a common practice for regulators in the mobile network market to define certain standards, which become compulsory for all operators in the market. Only those transmission systems are approved which apply the previously defined standard.

In Chile, the regulator only allocates frequency bands and determines the number of players while leaving the choice of standard and technology to the operators. Thus operators are free to interoperability between the different systems; operators are however, obliged to use switching facilities which make interconnection feasible. By not harmonizing standards, the Chilean regulator imposes additional cost on mobile operators which have to use more sophisticated switching technology to ensure the interoperatively of networks.

Thus, in the long run this may become an advantage since operators are not locked into a particular technology, which may be out of date within a relatively short period of time. Therefore, it is hoped that this more flexible approach will encourage innovation in the Chilean mobile communication market.

The National Telecommunications Policy of 1978 was the basis for the elaboration of the General Telecommunications Law of 1982 and reflected the first policy changes. This law established that parties rather than the state, by means of concessions, permits and licenses would operate public telecommunications services in order to permit ample participation of the private sector. This law places no limitations on the number of concessions that cam be granted to provide specific services, except for those imposed for technical reasons. Concessions are required for local and long distance public services, cellular telephony, point-topoint transmission and private data transmission.

The law also states that interconnection among concession holders of public services is obligatory and must comply with the technical norms established by the Subtel. The terms of interconnection have to be worked out among them. Prices were left to be determined by market forces. Chile has placed no limitations on the participation of private industry in the telecommunications industry, types of services or the percentages of national or foreign ownership (Neal, p. 4).

Table 1 - Comparison of Licensing Regimes

	Argentina	Brazil	Chile
Public mobile voice telephony	Limited Concession	Limited Concession	Limited Concession
Private Wireless	License	License	License

Conclusion

Thus, this chapter shows that the three countries present similar telecommunications regulatory structure. The three of them have encouraged the process of privatization of the incumbent telecommunication company as the starting point for cellular/PCS market liberalization. Table 1 shows the similar structure that they shared for the licensing of wireless technologies. The challenge that these countries face is the ability of the regulatory agencies to provide the adequate policy for further development and industry growth.

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Chapter 4

THE ROLE OF THE WORLD TRADE ORGANIZATION IN TELECOMMUNICATION DEVELOPMENT

The World Trade Organization's "Basic Telecom Agreement" had a dramatic impact in the telecommunications sector (WTO, 2000). The agreement would open to foreign competition basic services of the 69 WTO members committing to it. The results of the WTO negotiations are important effects to the consumers increasing market competition, thereby decreasing the price of such services and increasing consumer choice. However, the WTO agreement still faces many challenges such as scheduling, regulator's independence, competitive safeguards, and interconnection of telecommunications The resolution of these issues will allow market suppliers. access and foreign ownership in over 90 percent of major markets. This section describes the consequences of the negotiations, the difficult issues that negotiators faced, and how those issues were resolved. In addition, it provides the commitments of developing countries to the development of wireless markets.

Consequences of Negotiations

The most important consequence of the WTO agreement is the quantity and quality of commitments made by the countries involved. In other words sixty-nine countries made commitments to open their markets for some or all-basic

telecommunications services to foreign competition. In almost all these countries, international services have been provided by a monopoly that will face competition for the first time. It is important to notice that in order to make these commitments of market access and foreign ownership, the countries agreed to adopt as binding commitments the "Reference Paper" which consists on a set of procompetitive regulatory principles. Thus, countries agreed to abide to competition rules in a multilateral setting for the first time.

Another way to measure the achievement of these negotiations is by the size of the markets that will be open to competition. For example, before the implementation of the agreement only 17 percent of the top twenty-Telecom markets were open to competition. As of the date of entry into force of the WTO Basic Telecom Agreement, 92 percent of major markets are committed to remove restrictions on competition and foreign entry

The GATS

The General Agreement on Trade in Services (GATS) is one of the trade agreements included within the WTO Agreement. The GATS consist on a set of multilateral rules covering treatment of foreign services and service suppliers and government regulation on trade in services. Thus, combining elements of both trade and investment agreements. Some of

the obligations of the GATS apply automatically to all WTO members, while others only apply depending on the type of commitment taken by each member. Thus, the extent of a WTO member's obligations can only e established by reference to the text of the GATS and the Member's Schedule.

The GATS requires WTO to provide "Most Favored Nation" treatment (MFN) to like services and service suppliers from other WTO members, regardless of the individual member's commitments. The Most Favored Nation treatment or obligation prohibits a WTO member from discriminating among services or service suppliers of other Members. On other words, a member that commits to open its market for a certain service cannot close its market on a selective basis to like services or service suppliers from any WTO member.

Another important provision created by the GATS is Market Access. This provision requires WTO Members to treat other members as is specified under the terms, limitations and conditions agreed in its schedule. In addition, the provision restrain from imposing certain types of quantitative restrictions, economic needs test, or local incorporation requirements in those services sectors where the WTO Member has undertaken specific market access commitments.

National treatment is a nondiscrimination rule that requires a WTO member to treat like services and service suppliers from other WTO members no less favorably than it treats its own services and service providers. It is important to notice that application of these obligations is subject to negotiation on a sector by sector basis and is contained in individual schedules of commitments. Thus, not all WTO members have the same level of commitments with respect to market access or national treatment.

The Negotiating Group on Basic Telecommunications

In 1994, The Uruguay Ground established a "Negotiating Group on Basic Telecommunications" (NGBT). The NGBT would address the issues of scheduling, competitive safeguards, the use of frequencies, as well as regulatory issues such as the maintenance of an independent regulator.

The GATS members focused on scheduling issues that included how to schedule services such as call-back or country directly and whether public interest test must be included as a market access limitation. Members agreed on a "positive list" approach to scheduling. In other words, participants only needed to list those services of categories in which it is making a commitment. In the telecommunications sector, it was necessary to distinguish between subsectors-such as international, long distance, or local-voice telecommunications services and technologies,

such as cellular services. Members also concluded that it was not necessary to schedule specific ways of offering a particular type of telecommunications service, such as call back. In addition, if a member committed to allow international service to be provided, it was not necessary to describe the ways in which that service could be provided. On the other side if a member committed to allow international service, it was not necessary to specifically exclude particular ways in which international service could be provided.

The Reference Paper

The WTO members recognized the need to develop a set of competitive safeguards against anticompetitive practices. In other words, these safeguards would have the goal to ensure that monopolies or former monopolies of basic telecommunications could not use their dominant position to disrupt market forces and competitors from supplying networks or services for which commitments would be made. In addition, the members would discussed the whether to establish or maintain independent regulators. The term "independent regulator" meant that regulatory functions would be removed from the control of the basic telecommunications operators and assigned to a separate body.

In December 1994, US members arranged a meeting of selected delegates to draft what became the Reference Paper, the core regulatory obligations that would provide major changes to telecommunications services. The Reference Paper never answers the question of what entity will carry out the obligations contained in it. In addition, it does not specify how those obligations would be carried out. Instead, negotiators agreed that it should focus on effective outcomes, rather than the processes to which those outcomes would be reached. In addition, negotiators agreed that the principles needed to be flexible enough to accommodate the differences on political, legal and market structures among them. For example, in some countries the obligations in the Reference Paper will be carried out by a government ministry of telecommunications or justice, while in other by regulatory agencies. Some countries may rely in antitrust law, while other may develop a complicated set of regulatory principles. Thus the objective was to ensure a level playing field for new entrants, not to determine the means by which the results would be achieved.

Competitive Safeguards

Prevention of anti-competitive practices in telecommunications falls under different categories. The first one consist on engaging in anti-competitive crosssubsidization. The second one consist in based on using the competitor information for anti-competitive results; and

finally, not making available to other service suppliers on a timely basis technical information about its network infrastructure, facilities and other relevant information which are necessary for them to provide services. There was a general agreement among WTO members that prevention of cross-subsidization and misuse of information, as well as transparency requirements, as essential to promote competition and allow new entrants into the market. However, much of the discussion focused on how detailed these obligations should be.

The Reference Paper intended the members to adopt specific measures to address competitive safeguard issues. Preventing anti-competitive cross-subsidization may mean requiring the structural separation of various lines of business of a major supplier, such as fully separate subsidiaries. Prevention may be accomplished by requiring nonstructural accounting separation. Similarly, protecting proprietary information may mean adopting prohibitions on unauthorized release of competitors' business and marketing plans, trucking configurations, peak usage, network architecture, and equipment types, supported by adequate penalties. In addition, members need to adopt measures to require public availability of technical and commercial information, such as standards, network changes, additions or deletions, processing requests, timing changes, and billing arrangements.

Interconnection

This section refers to linking with supplies providing public telecommunications transport networks or services in order to allow the users of one supplier to communicate with users of another supplier and to access services provided by another supplier, where specific commitments are undertaken. Members agreed that the interconnection definition needed to be very broad in order to cover all types of services. The definition of "linking with suppliers" rather than "linking of suppliers" was used in order to guarantee access to the networks or services necessary to provide services. In addition, the phrase "where specific commitments are undertaken" limits the interconnection obligation to those services for which a WTO Member has scheduled commitments. For example, if a country has made no market access commitment for international voice telephony services, then it assumes no interconnection obligations with respect to providers of international services.

Major suppliers have three sets of obligations regarding interconnection. The first one reflects the national treatment and MFN obligation. In other words, it requires the major suppliers to treat other telecommunications services and suppliers as it treat its own services and affiliated service suppliers, as well as treating all nonaffiliated telecommunication services and service suppliers without discrimination. Thus, it requires a major

supplier not to discriminate in location, information, ordering procedures and intervals, billing arrangements, credit terms, warranties or guarantees.

The second obligation requires that interconnection must be timely. The terms and conditions (including technical standards and specifications) under which interconnection is provided must be transparent. In addition, rates for interconnection must be cost oriented, transparent and reasonable. The term reasonable will be judged in economic Interconnection element must be unbundled so that terms. the supplier need not pay for network components or facilities that it does not require for the services to be provided. It is important to notice that negotiators did not try to define the scope of the many obligations concerning interconnection. Thus the meaning of "timely", "cost-oriented", "sufficiently unbundled", "reasonable", "unbundled", and "economic feasibility" will only be determined in dispute settlement.

In the third obligation, negotiators rejected an attempt to require unbundling only where technically feasible because it seemed to be an excuse to deny interconnection. It was assumed that there were standard interconnection points that were normally available, and as long as a service supplier was willing to pay the additional cost, it could obtain

interconnection at other points in the network not only at the network termination point.

The Reference Paper imposes additional obligations to assure that new entrants seeking interconnection will have the information necessary to obtain it. The first one requires that the procedures for interconnection to a major supplier will be made publicly available so that all parties know their rights and obligations. It prohibits a major supplier from negotiating different interconnection arrangements with different new entrants. The second one describes the procedures for a dispute settlement. A supplier requesting interconnection with a major supplier will have recourse either at any time or after a reasonable period of time which has been made publicly known to an independent domestic body which may be a regulatory body; to resolve disputes regarding appropriate terms, conditions, and rates for interconnection within a reasonable period of time, to the extent that these have not been established previously.

A WTO member has the right to define the scope of universal service obligations based on it sown needs. As proposed by the US these obligations will not be considered as anticompetitive per se and they will be administered in a transparent, nondiscriminatory, and competitively neutral manner.

Licensing Criteria

WTO members must ensure that if a license is required, the license criteria, terms and conditions of all individual licenses will be publicly available. The reasons for denying a license application must also be known to the applicant. In addition, the each member is required to establish a period of time that is "normally" needed to reach licensing decisions. However, a member does not violate its commitments if it occasionally exceeds that period. It is important to notice that most of the demands for a standard licensing period came from European and Japanese negotiators and were targeted to difficult (directed toward curbing) the ability of the FCC to hold license applications for months without explanation.

Independent Regulator

When defining the role of Independent Regulators, it required that regulators be separate from, and not accountable to any supplier of basic telecommunications operator. Thus, addressing the potential conflict of interest that arises when the body regulating the telecommunications industry is also the major telecommunications operator. In addition, the regulator has the obligation to be impartial with respect to all market participants. This imposes a requirement not to favor the local incumbent. Thus, adding to the obligations of regulators contained in GATS Article VI to administer all
measures of application in a reasonable, objective, and impartial manner.

Allocation and use of scarce resources

The procedures for the allocation and use of scarce resources, which includes frequencies, numbers and rights of way, will be carried out in an objective, timely, transparent and non-discriminatory manner. The requirement for transparency and nondiscrimination repeats obligations already imposed by the GATS Article III and general obligations of MFN and national treatment. In addition, the current state of allocated frequency bands will be made publicly available, but detailed identification of frequencies allocated for specific government uses is not required. Similarly, GATS Article III and Article XIV would allow Members to protect frequencies assigned for sensitive government operations.

Results of the NGBT

In making the reference Paper binding, members have to find the way to make the regulatory principles in the Reference Paper binding obligations and therefore subject to WTO dispute settlement. Pursuant to the Article X of the WTO Agreement, an amendment affecting Members' rights and obligations under the GATS only becomes effective upon ratification by two-thirds of WTO Members. Thus, the United States and others concluded that the most feasible way to

ensure that the regulatory principles would be binding was to include them as "additional commitments" permitted by GATS Article XVIII. Thus most delegations agreed to include the Reference Paper in their Schedule in the additional commitments column.

On April 30, 1996 the NGBT transmitted its final report to the Council of Trade in Services. This report included Schedules of Commitments (form the forty-seven countries), a draft "Fourth Protocol to the General Agreement on Trade in Services" and a decision on Commitments in Basic Telecommunications". The Fourth Protocol set the implementation date for January 1, 1998,where the Scheduled Commitments would go into effect and the MFN suspension would end. Finally, the Council of Trade in Services established a group on basic telecommunications to continue negotiations.

The Group on Basic Telecommunications

The Group on Basic Telecommunications (GBT) began negotiations in July 1996. The GBT needed to resolve issues related to international services. For the provision of international telecommunications, the issue of market access was the most important point of discussion. For example, the United States was concerned that competitive markets could face serious market distortions from WTO member carriers that did implemented effectively full market access

commitments in international services. Market distortion was possible in two ways. The first would be by a "one-way bypass" of the accounting rate system. Carriers from closed markets would have the ability to increase (exacerbate) the traffic imbalance (and therefore the settlement payments) of carriers from competitive markets by providing service into the competitive market over private lines. The reason is that all traffic sent over resold private lines is outside the accounting rate system. Carrier from competitive markets would not have the same opportunity to engage in similar traffic routing in the opposite direction because there is only one carrier that can terminate traffic. Thus. according to the United States, one-way bypass would further increase US outpayments under the current accounting rate system. Many more calls are originated in the United States for settlement purposes and the US settlement deficit grew steeply from 990 to 1996. In 1996, the US settlement deficit totaled \$5.4 billion, double what it was in 1990. The second way of distorting competition would arise from the ability of a carrier from a closed market to crosssubsidize its affiliate in a competitive market. Although the parent and affiliate would have to exchange traffic due to accounting system, any payments made to the parent would be intra-corporate transfers and not "real costs" to the affiliate. Thus the affiliate in the competitive market could engage in a price squeeze by charging lower rates for

international services than other carriers in the competitive market.

At the April 1996 meeting the FCC was able to convince the countries that the effect of one-way bypass of the accounting rate system was an important concern. There was a consensus that protection of conditions of competition in the licensing Member's market was a legitimate licensing objective. However, no consensus was made on whether a WTO member could refuse to issue a license to prevent one-way bypass. Thus each member was left to address the potential for competitive distortions in its market as it wished, within the parameters of its GATS obligations.

As the leader of the negotiations the United States committed to provide market access and national treatment to all basic telecommunications services. This included local, interexchange (long distance within and between states), and international services, delivered through any network technology (wire-based, radio-based, satellite networks, and cable television). Service could be provided either on a facilities basis or through resale of existing facilities. All types of services were included such as voice data, telex telegraph, facsimile private leased circuits, satellite mobile (PCS, cellular and paging). The US offer limited direct ownership of a common carrier radio license (wireless services) by a foreign government, a

non-US citizen, or a non-US corporate entity to 20 percent. One hundred percent indirect ownership through US holding companies is allowed. There are no restrictions on nationality of officer or directors in the licensee or its parent companies. It also included the Reference Paper as additional commitments.

The GBT produced significant improvements in the number of WTO members adopting the regulatory principles I the Reference Paper. Thus, annexed to the "Report of the Group on Basic Telecommunications" are Schedules from fifty-five members. The report noted that these Schedules would be attached to the Fourth Protocol to the GATS in replacement of those attached on April 30, 1996

Summary of commitments

The commitments are effective as of February 5, 1998 (GATS, 2000). For Argentina, Brazil and Chile did not ratify the Fourth Protocol. Therefore, their commitments are not binding.

The current degree of market liberalization for telecommunications service in the three countries is shown in Table 2.

	Argentina	Brazil	Chile	
Local Service	Monopoly	Monopoly	Competition	
Domestic Long Distance	Monopoly	Monopoly	Competition	
International Long Distance	Monopoly	Monopoly	Competition	
Data	Monopoly	Competition	Competition	
Telex	Monopoly	Competition	Competition	
Leased Lines	Competition	Competition	Competition	
Cellular Analog	Competition	Competition	Competition	
Cellular Digital	Competition	Competition	Competition	
Paging	Competition	Competition	Competition	
Cable TV	Competition	Competition	Competition	
Fixed Satellite	Partial Competition	Competition	Competition	
Mobile Satellite	Competition	Not Available	Competition	

Argentina adopted the Market access and national treatment limitations for domestic data and telex, domestic and international fax, paging, trunk radio and leased circuits (with a preference given to existing supplier until November 8, 2000). The Mobile Telephone Services (MTS) are supplied under a duopolistic regime. However in the case of PCS, the government or administrative authority will decide on a number of suppliers based on the light of present and future needs. In addition for the modes of supply cellular/PCS services through cross-border, consumption abroad, and commercial presence, the country had no restrictions under the market access and national treatment categories.

However, these categories will be applied for all other services as of November 8, 2000, including those provided via non-geostationary, non-fixed satellite services. The country adopted the Reference Paper and Most Favor Nation exemption for access to geostationary fixed satellite systems.

Brazil assigned market access and national treatment conditions for enhanced services, paging and nonpublic domestic and international services for closed user groups. As in Argentina, the analog/digital cellular mobile service will be provided in a duopoly basis in each designated market. In addition the local wireline company may be allowed to be one of the service suppliers directly or through a subsidiary. Brazil allows 100 percent foreign ownership of nonpublic service providers, 49 percent limit on cellular and satellite service suppliers until July 1999. The used of foreign licensed GSO space segment facilities is allowed whenever they offer better technical, operational or commercial conditions. The Most Favor Nation exemption for telecommunications services supplied for distribution of radio or television programming for direct reception by service consumers

In Chile market access and national treatment restrictions are applied for long distance and international wireline and wireless (including satellites). The country did not make

any commitment on local service or one-way transmission by satellite of direct-to-home, direct broadcast satellite and digital audio services.

Conclusion

Implementing the WTO Basic Telecommunications Agreement will be no less challenging than negotiating it was. Effective competition needs more than simple deregulation or market opening contained in WTO Member Schedules of Commitments. It will be some time before the real effect of the agreement can be measured, but the successful conclusion of the negotiations is evidence that liberalization is inevitable.

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Chapter 5

FOREIGN CORPORATE STRATEGIES

This chapter examines the most relevant corporate strategies in Argentina, Brazil and Chile. These firms are BellSouth and GTE. This section will specifically examine investments in types of service provisions being implemented in host countries by the telecommunication companies of BellSouth and GTE. The companies took similar paths in their Latin American investments. The both decided to invest in the three countries implementing joint ventures with powerful and influential local partners, because the latter know the market, the culture and its politics and how to move proposals through regulatory and government agencies.

In addition, they both share one goal: to become fullservice telecommunications carriers. The first part of this chapter is offers an overview of the current industry configuration. The second part will describe the corporate strategy of BellSouth and GTE as companies that invested in foreign countries using the cellular/PCS technology as market entry. Table 3 shows the current industry configuration for the cellular/PCS market in the three countries studied.

Table 3 - The Cellular/PCS Market Profile

OPERATOR	OWNERSHIP	NETWORK	SUPPLIER	SUBSCRIBERS				
	STRUCTURE	PROTOCOL &		2000				
		LAUNCH DAY						
Argentina								
5, 220,854 subscribers								
Compania	CTE (53%) Clarin (24%)	AMDS/	Luncent	952 946				
de Telefonos	TAICO (8.5% CAYMAN)	CDMA	Luncent	855,840				
del Interior	(5%)	Sen-94						
(CTI)	$T_{CW}(4\%)$	Sep-24						
Telecom	Telecom Argentina (100%)	TDMA	Ericsson	1,217,400				
Personal		May-96						
Movicom	BellSouth (65%) Motorola	AMPS/	Motorola	1 161 544				
(CRM)	(25%)	CDMA		1,101,511				
	BGH (10%)	Nov-89						
Unifon	Telefonica de Argentina	TDMA	Ericsson	1,220,000				
(TCP)	(100%)	Mar-96		-,,				
		Brazil						
	<u>18,</u>	193,673 subscriber	<u>s</u>					
	· · · · · · · · · · · · · · · · · · ·							
BCP	Safra Bank (42%.5),	TDMA	Nortel	1,970,867				
	BellSoutj (42.5%), Splice	May-98						
	(2%), OESP (6%), and RBS							
				2 1 1 2 000				
Telesp	Portugal Telecom $(28,2\%)$	AMPS/	Motorola,/	3,113,000				
	IISA (71.8%)		Luncent/					
Tess	Telia (49%) Ligthel (20%)	TDMA	Friesson	356.000				
1033	Eriline (32%)	Dec-98	Lifesson	350,000				
ATL.	SBC and Telmex (51%)	TDMA	Ericsson	1.141.000				
	Korea Telecom 931%) and	Dec-98	2					
	the Williams Companies							
	(18%)							
Tele	Telfonica Internacional	AMPS/	NEC/Nortel/Luc	2,001,000				
Sudeste	(92.2%)	CDMA	net					
	Iderdola (75)	Aug-90						
	NTT 7 Itochu (.1%)							
Maxitel	Telecom Italia (43.15%),	TDMA	Promon/Nortel/	569,0000				
	UGB (189.9%), Vicnha	Dec-98	Ericsson					
Talamia			Enissen (Nisstal	1 149 000				
Telemig	Wireless (40%)	AMPS/IDMA	Enssson/inortei	1,148,000				
	Whereas (49%) , CVC/Opportunity (27%)	100-91						
	and Pension Funds 924%)							
Global	Suzano (30%) $DDI(30\%)$	CDMA	Motorola	205.9000				
Telecom	Inepar (21%), Motorola	Dec-98						
	(14%),							
Tele-Sul	Telecom Italia 9100%)	AMOPS/TDMA	Lucent/	1,121,531				
		Aug-92	Ericsson	,,				
Americel	BellCanada, Citybank	TDMA	Ericcson	254,000				
	(20%) and Banco do Brasil	Jan-99						



Table 3- cont.

CRT	Telefonica International (52.93%), Portugal Telecom (22.99%), Iberdrola (6.99%), CTC (2.61%), Telefonica de Argentina 91.12%)	AMPS/ TDMA Dec-92	Ericsson	1,100,000			
СТВС	Algar Group (73.99%), Williams Communications (20%), IFC (6.2%)	AMPS/ TDMA 1992	N/a	162,100			
Americel	BellCanada, Citibank (20%) and Banco do Brazil	TDMA Dec-97	Nortel	236,000			
TeleCentro -Oeste	Splice do Brazil (100%)	AMPS/ TDMA, 1991	Nortel/ Ericsson	920,000			
Norte Brazil Telecom	Tele Centro Oeste (95%), and Inepar (5%)	TDMA Oct-99	Nortel	56,000			
Amazonia Celular	Telesystem (TIW) (49%), Opportunity (27%), and five Brazilian pension funds (24%)	AMPS/ TDMA 1994	Eriscsson	400,000			
TeleLeste	Iberdola (68%), and TISA (32%)	AMPS/ TDMA, 1994	Ericsson/ NEC	574,734			
TeleNordes te	Telecom Italia (100%)	AMPS/ TDMA, 1993	Ericsson	1,406,000			
<u>Chile</u> 2,866,500 subscribers							
Telefonica Movil (CTC)	CTC (100%)	AMPS/ TDMA Mar-99	Ericsson	n/a			
BellSouth Entel PCS	BellSouth 9100%)	AMPS/ TDMA May-89	Nortel	n/a			
Entel PCS	Entel Chile (75%)	GSM Mar-98	Ericsson	n/a			

BellSouth

Bell South Corporation is the fifth largest telecommunications operating company in the world (Wirelessweek, 2000). The Company is responsible for providing exchange access, long distance calling within LATAs, voice, data, and video networking, customer premise equipment, mobile communications systems, telecommunications-related software applications and directory publishing services. Internationally, the company is involved in mobile communications systems, telecommunications-related software applications and advanced network services.

BellSouth's business strategy for the future is wireless, entering the new markets in the form of joint ventures with other commercial companies or with the governments of other countries. Bell South International is responsible for handling the companies international operations. It decides where the company will invest and with whom. The company looks at historic and future projected revenues for a specific telco before deciding to make the investment focusing on countries with less developed networks because there is potential for future growth.

The option for investing in cellular services is sometimes simpler because there are less factors to consider with cellular as opposed to basic service. For example, with basic service, the investing firm would have to examine the condition of the telco and the state of it infrastructure. From this assumption, the company would need to assess the amount of investment necessary to improve the infrastructure.

In Latin America, the company has brought cellular services to five countries. In this process Bell South International

has entered these markets through joint ventures with other private companies and in some cases with the local government. For example, since entering Argentina in 1989, Bell South has expanded into Brazil, Chile, Ecuador, Nicaragua, Panama, Peru, Uruguay and Venezuela. Only its Chilean operations are 100 percent Bell South-owned. Customer growth in BellSouth's Latin American operations was up 117 percent in 1998, revenue was \$1.5 billion, up 90 percent over 1997. Subscribers number reach more than 4.6 million across the region. BellSouth most aggressive rival is Spain's Telefonica is in six countries. Unlike BellSouth, Telefonica usually purchases the incumbent wireline operator being privatized.

BellSouth's Latin American strategy is comprised by four major components: purchasing wireless assets rather than wireline companies, avoiding privatized assets, preferring to purchase licenses and build their own networks, and evolving into other services, such as wireline or data services.

In Argentina, the consortium Compania de Radiocomunicaciones Moville SA (CRM) is located in Buenos Aires. The consortium is made of BellSouth, which is a managing partner, Motorola, Citibank, and two Argentine companies SOCMA and BGH ARGENTINA, a \$200 million communications appliance and service corporation. All these companies together bid to

build and operate the first private cellular business in South America. They have invested approximately US\$220 million to create a network to serve 320,000 customers.

BellSouth has 65 percent ownership, Motorola 25 percent and BGH Argentina 10 percent in Movicom. A Motorola distributor BGH's relationship with the vendor goes back to 40 years. BHG owns two manufacturing plants. Like many large Latin American companies, BGH is a family-owned business. Originally, BGH and Motorola were bidding against a BellSouth-led partnership, and then they decided to team with BellSouth because they needed a member experienced in running a cellular company. On the other side, BellSouth benefited because the government required locally manufactured handsets, with BGH built.

All decisions are made by consensus. The goal is to triple Movicom's size within four years. Depending on each country regulations, the door is more or less open to expansion into other services. Argentina's Movicom recently received a license to offer local and long-distance services. It's building out a network that will support broadcast-quality video, frame relay and asynchronous transfer mode, highspeed Internet Access and IP virtual network services. This year BellSouth also launched a regional branding campaign Argentina, Chile, Ecuador, Nicaragua, Panama and

Peru, the Bell South name appears either on its own or jointly with the local brand.

Since BellSouth International's first efforts in Latin America 10 years ago, its business model has been that of a cellular provider. But now the RBOC plans to move forward as a competitive local exchange carrier, and it is feeling the pain of its competitive name tag as it waits for markets to open up and lionesses to be granted.

Bell South International hopes to secure marketplace from the traditional telecommunications carriers. To help secure that market share, BellSouth International is taking an incremental approach and is investing in various telecommunications providers in the region rather than bearing the brunt of building all its networks from the ground up. But as it continues on that path, the investments remain centered on the airwaves in high growth areas.

The majority of BellSouth's holdings are in Latin America. Throughout the region, BellSouth is combining its own current networks within that of local telecommunications providers. BellSouth didn't get into that relationship for free; it currently owns 65% of Movicom and has made several similar investments throughout the region to lessen its build out burdens. In Brazil, BellSouth has a part on the cellular provider BCP (Tomlinson, p. 3).

Because of the region's licensing constraints and the sheer inadequacy of its wireline infrastructure, Bell South has migrated from its U.S.-style wireline network-which was later supplemented with wireless-to a variety of wireless technologies in Latin America. Of Bell South holdings in the region, roughly 98% percent is wireless, with a 2% wireline infrastructure.

With the wireless model, new competitors can reach a good portion of the untapped customers and attempt to win over incumbents' customers effectively and cheaply. The wealthiest 30% percent of Latin American households have 58% of the region's home telephones, while the poorest 40% of houselholds have only 8% of the residential phones. Cellular service is a necessity for business customers, it also is a necessity for houselholds because of the dificulty getting wireline service. For one-third of the cellular users in Latin America, cellular service is the primary household telephone service.

Despite on the abundant need in the residential market, BellSouth International plans to concentrate on business customers and enterprises. The plan to reach those business customers varies from country to country and city to city. Technology is based on how much capacity is needed. The cellular network itself has a backbone to interconnect the sites with the switches. In general that's microwave but in

the densest part of the cities, that network is already fiber. BellSouth infrastructure can be converted from digital microwave, as it is currently to a fiber backbone as more capacity is needed. Once the needs for capacity are determined and the regulatory barriers are brought down, BellSouth International plans to supplement its wireless networks with some wireline infrastructure.

The carriers' tactic is to strengthen and ingrain the BellSouth International brand through the cellular service it is allowed to provide now in most countries, which will then be parlayed into fixed services. BellSouth will leverage its presence in the cellular market to enter the fixed business as markets open up. Their intent is to dominate in all aspects of communications-not just cellular. For example BellSouth plans to offer local telephony, longdistance telephony and data business. Bell South will generally meet those needs through fiber when appropriate and through different types of wireless, such as microwave, local multipoint distribution service (LMDS), point to point microwave and wireless local loops.

BellSouth currently has a hub in Santiago, Chile for its Chilean and Argentinean traffic, and the other countries hub off from Miami. In turn, each country may end up with a different network makeup and set of equipment vendors. Equipment manufacturers can be very instrumental in helping

carriers enter the market. BellSouth International plans to build in-country fiber routes and create a ring around Latin America through its consortium of carriers networks. That ring also will tap into undersea cables flanking the East and West coasts of the continent. Although no specific details are still not given, BellSouth is involved with a consortium to run the link back to the US. BellSouth likely will leverage its ownership stake in Qwest Communications to provide more fiber power in Latin America. For some time now, Qwest has been building a significant fiber optic network in Mexico, which is open to competition, although the two companies-have not announced plans to work together in that country.

Most of US vendors have invested heavily in Latin American operations and facilities in order to secure sales in the region. Some such as Alcatel, Ericsson and Siemens have been in the region far longer than the Latin American privatization date. In general, many countries still regulate what equipment can be used, where equipment is produced and what taxes will be paid.

Every country has a different methodology regarding licensing and permits, so it is hard for foreign carriers to know the specific regulatory constrains of each country. This is where the vendors step in their quest to enter the market. In addition, vendors can also help with import

rules, taxes and duties. For example, Alcatel helps service providers by contributing to the market assessment process, strategy, planning and network design. Tying wireless and future wireline networks together is another area where vendors can be of help to BellSouth International. Technologies such as dense wave division multiplexing will tie networks together while wireless local loops bring the last mile.

In 1991, Chile awarded a license to the consortium, Cidcom to provide cellular service. Bell South is part of this consortium. BellSouth took advantage of the deregulation opportunities as early as 1988, acquiring a share of cellular carrier Movicom and launching Argentina's first cellular network. The carrier now owns 65 percent of Movicom and serves more than 884,000 subscribers, operating in Buenos Aires, Argentina.

Chile was another early BellSouth investment. The carrier acquired 100 percent of an existing cellular operation that now operates under the BellSouth name. In Chile, it is a co-branded situation. BellSouth's most recent acquisition was two regions in Brazil, including Sao Paulo, the world's third largest city for a combined total of more than \$3 billion. It is estimated the Latin American investment totaled more than \$5 billion for licenses and acquisition costs alone, not including network upgrades and other

expenditures. BellSouth signed up more than a million Brazilian customers in less than seven months of operation. The core of its international strategy is partnering with top local companies with insight and expertise in local political, regulatory and marketing environments. BellSouth is the majority partner and or/controlling party in most of its ventures.

GTE

GTE has several Latin American holdings and has seen considerable growth gains, but it success is not as impressive as BellSouth International. CTI Movil is the GTE-led consortium in Argentina, providing services in the country's north and south interior regions. GTE holds a 58 percent ownership along with operational control. It ended in 1998 with 590,000 wireless customers and forecasts an additional 330,000 this year.

GTE surpassed international growth estimates for the last several years and continues to invest in its wireless properties. Despite that GTE doubled net income from international investments during the last three years; its wireless strategy doesn't appear coherent. The company has some wireless licenses, but in none of these markets share a common strategy. In some cases they are the PTT and BellSouth is their main competitor (Dziatkiewicz, 2000).

For GTE the process of entering the market: Argentina with its association wit Grupo Clarin began any spectrum license awards. Despite the A-list partnership, GTE's initial wireless strategy came short. While it provides wireless service in Argentina's interior, the alliance missed out on the lucrative Buenos Aires metropolitan area. For any business relationship has meant gaining operational control of the local company. When it comes to its international operations, GTE's objective is to become a full-service provider where possible, gain management control and continuously evaluate its business relationships. GTE increased its CTI investment to 50 percent and with management control has tripled the customer base, but the operation remains very local. CTI was the first to market but fell behind its competitors and may be behind in market share. An with the deregulation that is happening now with each carrier competing in all regions GTE's.

Conclusion

Thus, BellSouth and GTE have pursued aggressive foreign strategies in Argentina, Brazil and Chile. In order to enter these markets they decided to invest in cellular/PCS industry in the form of joint ventures with the local wireless companies. The Ultimate goal of these companies is to become a full service company and expand to other services such as data transmission, or wireline services.

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Chapter 6

CONCLUSIONS

The goal of this thesis was to understand how the internal (in-country) and external (international) regulatory factors that have shaped the current development of the cellular/PCS market in Argentina, Brazil and Chile. The descriptive analysis shows that some generalizations can be made.

The three countries have similar patterns in their telecommunication regulatory framework through their privatization of their state-owned telephone companies. However, the liberalization processes, through their World Trade Organization commitments and foreign corporate strategy give the different industry outcomes for the three countries.

The literature review outlined the work of different authors in restructuring the telecommunications industry through regulation. It concludes that privatization and liberalization are the most common strategies employed for the development of this industry. At the international level the World Trade Organization shows the countries commitment to liberalize the cellular/PCS industry through the enactment of trade agreements in basic telecommunications services. The study only focuses on liberalization from a trade in service approach. It did not

include for example the ITU efforts on technological standardization and spectrum management. It only focuses on the effects of multilateral trade agreements such as the GATS.

The World Trade Organization's "Basic Telecom Agreement" had a dramatic impact in the telecommunications sector (WTO, 2000). The agreement opened to foreign competition basic services of the 69 WTO members committing to it. However, the WTO agreement still faces many challenges such as scheduling, regulator's independence, competitive safeguards, and interconnection of telecommunications suppliers. The resolution of these issues will allow market access and foreign ownership in over 90 percent of major markets.

Terrana and a summer

The most important consequence of the WTO agreement is the quantity and quality of commitments made by the countries involved. In other words sixty-nine countries made commitments to open their markets for some or all-basic telecommunications services to foreign competition. In almost all these countries, international services have been provided by a monopoly that will face competition for the first time. The General Agreement on Trade in Services (GATS) consist on a set of multilateral rules covering treatment of foreign services and service suppliers and government regulation on trade in services. It combines

elements of both trade and investment agreements. Some of the obligations of the GATS applyautomatically to all WTO members, while others only apply depending on the type of commitment taken by each member. Thus, the extent of a WTO member's obligations can only e established by reference to the text of the GATS and the Member's Schedule.

The GATS requires WTO to provide "Most Favored Nation" The Most Favored Nation treatment or treatment (MFN). obligation prohibits a WTO member from discriminating among services or service suppliers of other Members. On other words, a member that commits to open its market for a certain service cannot close its market on a selective basis to like services or service suppliers from any WTO member. Market Access is a provision that requires WTO Members to treat other members as is specified under the terms. In addition, the provision restrain from imposing certain types of quantitative restrictions, economic needs test, or local incorporation requirements in those services sectors where the WTO Member has undertaken specific market access National treatment is a nondiscrimination rule commitments. that requires treating other WTO members no less favorably than it treats its own services and service providers. It is important to notice that application of these obligations is subject to negotiation on a sector by sector basis and is contained in individual schedules of commitments. Thus, not

all WTO members have the same level of commitments with respect to market access or national treatment.

Argentina adopted the Market access and national treatment limitations for domestic data and telex, domestic and international fax, paging, trunk radio and leased circuits (with a preference given to existing supplier until November 8, 2000). The Mobile Telephone Services (MTS) are supplied under a duopolistic regime. However in the case of PCS, the government or administrative authority will decide on a number of suppliers based on the light of present and future needs. In addition for the modes of supply cellular/PCS services through cross-border, consumption abroad, and commercial presence, the country had no restrictions under the market access and national treatment categories.

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In Chile market access and national treatment restrictions are applied for long distance and international wireline and wireless (including satellites). The country did not make any commitment on local service or one-way transmission by satellite of direct-to-home, direct broadcast satellite and digital audio services.

Implementing the WTO Basic Telecommunications Agreement will be no less challenging than negotiating it. Effective competition needs more than simple deregulation or market opening contained in WTO Member Schedules of Commitments. It will be some time before the real effect of the agreement can be measured, but the successful conclusion of the negotiations is evidence that liberalization is inevitable.

Another dimension of trade in telecommunications services that would be interesting to conduct further research is the role of regional trade agreements such as the Mercosur (Connolly, 1999). In March 1991, Argentina, Brazil, Chile and Paraguay agreed to form a custom union that created an integrated regional market whose members were committed to liberalizing trade among them, while impossing a common tariff on goods imported from nonmembers. There is also a role for public policy intervention through the simplification and flexibilization of rules and institutions in creating homogeneity in technological collaboration regulation across the Mercosur countries (De Onis, 1998).

The most relevant corporate strategies in Argentina, Brazil and Chile were examined such as the ones employed by BellSouth and GTE. The investments in types of service provisions being implemented in host countries by these telecommunication companies were evaluated. The companies took similar paths in their Latin American investments. The reason is that both decided to invest in the three countries implementing joint ventures with powerful and influential local partners, because the latter know the market, the culture and its politics and how to move proposals through regulatory and government agencies. The Ultimate goal of these companies is to become a full service company and expand to other services such as data transmission, or wireline services. Further research implies how these companies once they established themselves as wireless provider would invest in wireline structure.

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