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**TELECOMMUNICATIONS REFORM IN MEXICO: AN  
INSTITUTIONAL PERSPECTIVE**

### ***Abstract***

This paper examines the process of reform in the Mexican telecommunications sector and compares it to that of the U.S., New Zealand and Brazil. Differences in policy response are explained by the structure of the political institutions and the policy context in any given country.

The policy lessons to be drawn from the regulatory experiences examined are that the sequence and the pace of reform influence policy outcomes. The results of this paper support the theoretical argument that privatization, in itself, does not guarantee the development of the sector and point to the need of attaining an effective regulation of competition in telecommunications.

### ***Resumen***

Este documento examina el proceso de reforma en el sector de telecomunicaciones en México y lo compara con el de EE.UU., Nueva Zelanda y Brasil. Las diferencias en políticas son explicadas por la estructura de las instituciones y el contexto político en cada país.

Entre las lecciones de política que se desprenden de los casos estudiados, destacan el que la secuencia y el ritmo del proceso de reforma determinan en buena medida el desempeño del sector después de la reforma. Los resultados de investigación apoyan el argumento teórico que sostiene que la privatización, por sí misma, no garantiza el desarrollo del sector y apuntan hacia la necesidad de una regulación efectiva de la competencia en este sector.

## *Introduction* \*

During the 1990s governments throughout the world displayed a growing optimism regarding the prospects of market oriented reforms. Scholars in the economic literature considered privatization and deregulation as means to increase efficiency and promote social welfare. However, rather than a cross-national convergence towards open markets a variety of policy measures were implemented. Differences in policy response can be explained by examining the relation between domestic priorities as perceived by key players and the national context that shape the process of reform. Furthermore, the policy choices elected determine the extent to which the promises of re form are reached.

This paper analyzes the policy decision of deregulation<sup>1</sup> and privatization of the Mexican telecommunications sector during the period 1990-1997. Telecommunications has been of critical importance to economic development; its revenue as a percentage of GDP in the OECD area was 3.12 in 1999. In 1987, then-presidential candidate Carlos Salinas de Gortari asserted “Telecommunications will become the cornerstone of the program to modernize Mexico’s economy.”

In 1990, the national telephone company, Telmex, was privatized and in 1996, the long distance market was opened to competition. The element to be explained in the Mexican telecommunications case is the policy decision to maintain a vertically integrated firm. This policy decision is significant because it determined the further development of the sector in Mexico. The permanence of a vertically integrated firm in the market introduced consequential costs to the regulation of the industry. Moreover, due to the speed with which the reform was carried out, it lacked the institutional and legal support necessary to create a competitive and level playing field. An initial policy lesson is that the sequence and the pace of reform influence policy outcomes. The results of this paper support the theoretical argument that privatization, in itself, does not guarantee the development of the sector.

In contrast with other studies (Spiller & Levy, 1996; Petrazzini, 1995; Molano, 1997), this research goes beyond explaining why privatizations efforts were successful or not, it provides an explanation for cross-national differences in policy reforms. Towards this objective, this paper also compares the process of telecommunications reform in Mexico with those of other national cases. The deregulation carried out in the United States, the privatization of the New Zealand sector and the first failed reform in Brazil are examined. A central finding is that the

\* This document is an abbreviated version of the book *Unfinished Business: Telecommunications Reform in Mexico* forthcoming in Greenwood Press.

<sup>1</sup> Deregulation is a term that contains many meanings; it has been used interchangeably with liberalization and privatization. Deregulation is defined here as a policy that allows the forces of supply and demand to operate free from government interference. The transition from a regulated to a deregulated market is a process of liberalization. Privatization is the transfer of ownership from the government to the private sector.

political dimension is a key aspect that should be incorporated into the study of telecommunications policy. The salient political factors that determine differences in reform are classified as political institutions and policy context.

This paper first identifies the causes for telecommunications reform common to all countries. Second, it presents a framework to compare telecommunications reform across countries and then analyses each national case with a greater emphasis on the Mexican case. The final section generalizes the argument about how politics determined significantly policy decisions.

### ***Universal Changes***

Telecommunications, historically, has embodied a public function, the provision of an infrastructure service that is central to economic and social activities.<sup>2</sup> Technical characteristics in the process of production, namely economies of scale, conferred telephony a monopoly status. Prior to the 1980s, and as in most public utilities, traditional productive techniques employed in the telecommunications industry yielded a so-called natural monopoly where the only sustainable industry configuration was that of a single seller.<sup>3</sup> In a traditional telephone system, the cost inferred by the addition of a new customer is lower than the previous costs to serve the existing customers because much of the installed equipment is used in common by all customers. Because a new telephone company that wants to compete with an incumbent company has to duplicate the facilities of the existing company, the cost of serving each customer is greater.

These technical characteristics and the industry's provision of a public function explain why government directly intervened, by way of ownership or regulation in this industry. The telecommunications industry in all countries was regulated. Mexico, New Zealand and Brazil chose ownership and direct provision of telecommunications, while the United States elected the regulation of a private monopoly.

There were clear objectives to regulation: 1) to ensure the natural monopoly charged fair prices 2) to guarantee the universal provision of services and 3) to establish barriers to entry. This last objective was justified because, in the long run, a monopoly faces the problem of sustainability.

Starting in the late 1970s, global changes in the economic environment transformed the traditional role of government intervention. One agent of change was the international decline of the economy and national economic crises of varying degrees of severity that fostered a perception that the Keynesian economic paradigm had failed. The result was a shift from a strategy of state-planned

<sup>2</sup> Telecommunications network is defined as: *a system of interconnected facilities designed to carry voice, data, and other traffic units between a multiplicity of users, locations and services for a variety of uses* (Bolter et. al. 1990. p. 161).

<sup>3</sup> Natural monopoly conditions are given by economies of scale and scope.

development towards a market-oriented view of the development process. Economic structural adjustments were made, and the role of the state was redefined. This entailed a reduction in the size of the public sector, removal of government regulation, a fostering of competition and a greater reliance on market mechanisms. However, nations responded with varying degrees of enthusiasm and commitment to this trend.

Another nature of change was the increasing pace of technological innovation the telecommunications sector experienced which changed the natural monopoly status of this industry, and dramatically increased this sector's contribution to general economic and social activities. The advent of digital microelectronics technology altered the nature of telecommunications products, the processes by which they are manufactured and delivered, the size of the market; and the role of government policy. Technological innovation created the possibility of constructing networks at lower costs, originated new products and increased the size of the market. From the supply side, technological innovation reduced cost structures and from the demand side, it created innovative uses.

Thus, technological change required governments around the world to transform their regulatory policies. Indeed, there is a clear international trend for countries to liberalize market entry for telecommunications services and infrastructure, as well as to privatize incumbent operators. In the American continent, for example, two third of the countries have privatized their telecommunications companies. New patterns of competition arose as traditional industrial barriers changed and technology leaders were challenged. Technological barriers separating cable, local and long distance services were removed by innovations and now institutional barriers were dismantled by regulatory agencies.

In this technological context, countries around the world share not only the motives for deregulation, but similar objectives and challenges. Telecommunications reform emerged as the pivotal exemplar of the broader modernization program given the awareness that telecommunications became the backbone of a strong economy. The vitality of important industries and social activities —such as banking, healthcare, information services, transportation and education— are dependent on adequate telecom infrastructure and service.

A common challenge to all countries that implemented regulatory reforms is that they all inherited a monopoly system. After reform, the incumbent operator holds some bargaining power, given the fact it provides the public network. At the same time, it is also a competitor in the new industry structure. This double role poses an important challenge to a regulatory scheme that seeks to allow market forces to prevail.

Modern telecommunications policy throughout the world must address this problem of liberalizing the market and overcoming the traditional monopoly. Towards this objective, regulatory policy must establish clear rules that guarantee that new entrants will face reasonable interconnection rates to the public network and, in general, a fair playing field. The economic literature on telecommunications

reform, or the so called normative literature on regulation (Wenders, 1990; Brock, 1994; Baumol, 1994; Smith, 1979) focuses on this specific issue. It investigates the notion of efficiency as it relates to the determination of prices, interconnection rates and equal access standards. The policy suggestion that stems from this literature is the liberalization of the telecommunications industry; all segments of the market should be open to entry. There should be rules to guard against the erection of, or perpetuation of artificial barriers to entry and supply of interconnection should be required for all qualified applicants at identical technical and quality terms.

A modern telecommunications policy also faces the objective of ensuring social equity through universal service policies.<sup>4</sup> Aside from the increasing contributions of telecommunications to the overall economic success and international competitiveness of a country, the industry also supports social development. By allowing practitioners and learning institutions to consult with experts, for example, telecommunications may help reduce the rate of mortality and disease and overcome the shortage of teachers in remote areas. Technological innovation created new systems, such as wireless communications, that can provide basic telephony and other communication services to remote and information-poor regions of the world.

Access to information is now considered vital to such development, because the gap between the “information-rich” and “information-poor” often leads to increased social inequality. Thus policymakers must pay attention to the question of universal access; how will low income consumers and small businesses be served in a free market.

Mexico, the U.S., New Zealand and Brazil have all been exposed to the dramatic pace of technological innovations in telecommunications. However, each country has resolved the common challenges facing them in a different manner. The next section will synthesize the different approaches to telecommunications reform taken by each of these countries.

### ***National Traits***

Differences in national telecommunications reforms may be explained by the nature of domestic political institutions and the policy context each government faced when implementing the reform. Following the literature on positive economic regulation (Braeutigam, 1989; Horwitz, 1989; Noll, 1983 & 1989) that investigates the political sources of regulatory policy, economic regulation (and deregulation) is a political act that in fact redistributes income, creating winners and losers and thereby shaping interest groups and coalitions. Reaching a political consensus is thus a critical objective of regulatory authorities.

<sup>4</sup> Universal service is a policy which seeks access to telephone systems for the entire population.

The internal composition of the political system – the method of representation and the distribution of power among branches of government determine the nature of the reform. Horwitz (1989) argues, for the case of telecommunications deregulation in the US, that “while technology and economics are important material conditions, one must look at the broader context of American politics to fully understand the regulation question.”<sup>5</sup>

The more specific literature on telecommunications regulation that links domestic political systems to policy reform in developing countries (Molano, 1997; Petrazzini, 1995; Spiller & Levy, 1996) focuses on whether or not the attempted privatization and deregulation occurred. In contrast to this objective, this paper explains variations in the process, differences in degree of competition and regulatory oversight among countries’ reforms.

The focus here is on the Mexican telecommunications reform, on the path chosen towards reform and its outcomes. The cases of the U.S., New Zealand and Brazil serve the purpose of contrasting the Mexican case, as well as testing the argument that politics matter. The selection of cases responds to the need to contrast considerably different policy choices in telecommunications reforms with the objective of identifying how differences in political institutions and policy contexts led to different policy outcomes. The following sections synthesize how these factors determine policy choices in each of the national cases examined.

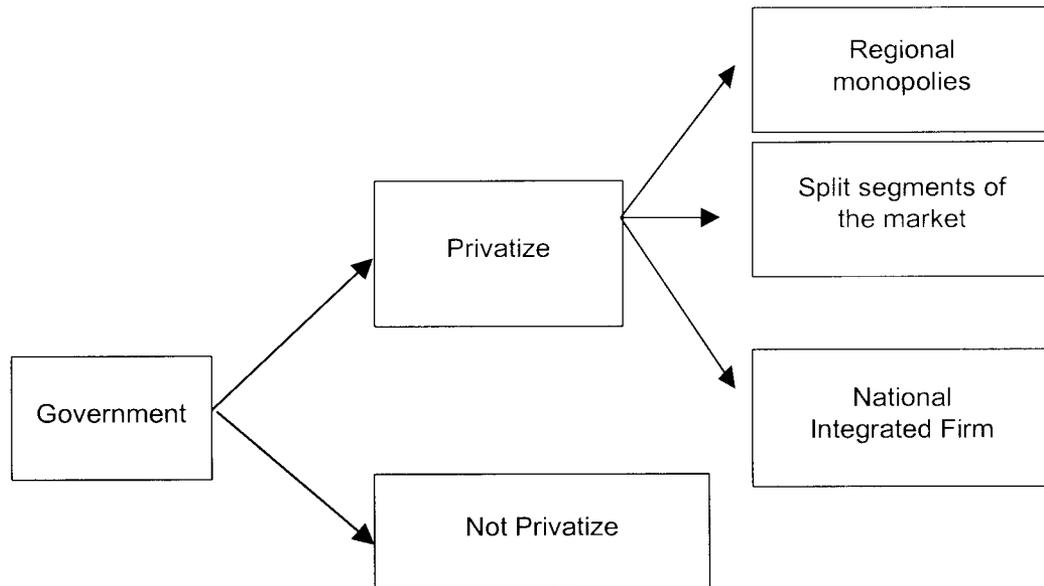
### ***Mexican Reform***

Telecommunications reform in Mexico was part of a larger reform which consisted in a shift from a closed to an open economy. This policy context determined, to a significant degree, the decision of maintaining a dominant firm in the telephone market and postponing the creation of governance structures to regulate telecommunications.

Maintaining a vertically integrated firm in the market was one out of several options policy makers faced. Indeed, once privatization was decided upon, as Figure 1 depicts, policymakers had to decide whether to maintain Telmex as a vertically integrated firm or to split it into regional monopolies, that is, to separate it vertically. Another policy option available was to separate it horizontally, that is, to sell the different telephone services separately: local services, long distance, cellular, value-added services and the national microwave network could have been unbundled and sold to different companies.

<sup>5</sup> Robert Horwitz (1998) mimeo.

Figure 1  
Policy options



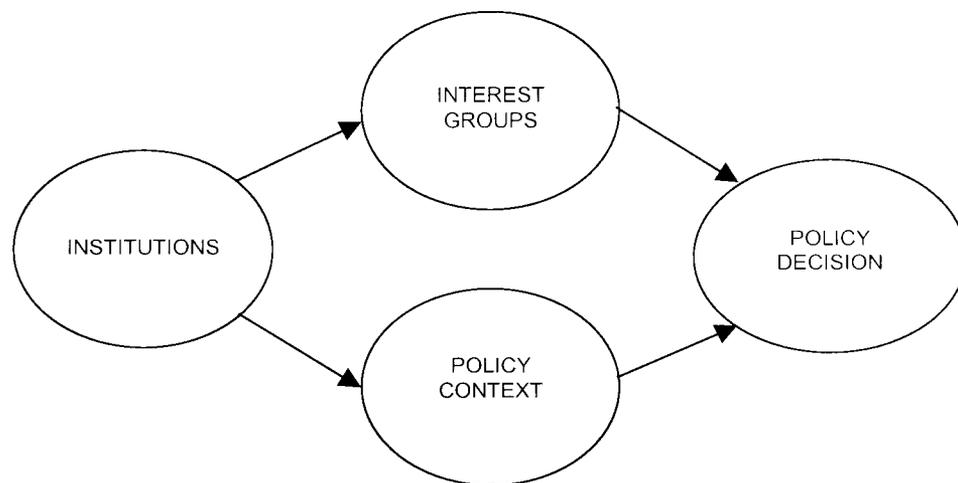
The option of splitting Telmex into regional companies was debated by policymakers. A paper written by Roger Noll and Fernando Salas (1990), advisors to the Trade Ministry, SECOFI, discusses this alternative. This paper argued that the company's segmentation would provide substantial benefits. Among these benefits were more accurate information to regulatory authorities and customers regarding costs through the possibility of firm comparison. A segmented market would also reduce entry barriers to non-monopoly services and reduce the company's potential political and economic power. An integrated firm would gain substantial political and economic influence simply because of its magnitude.

However, President Salinas (1988–1994) had a broader set of considerations in mind than those purely associated to the achievement of economic efficiency. In fact, it could be argued that the Salinas administration would have considered privatization even if a privatized Telmex had proved to be no more efficient than a state-owned company. Yet, that does not mean policy-makers did not pursue an increase in economic efficiency. Policymakers were certainly competent and there is

no apparent evidence of corruption.<sup>6</sup> It is important then to understand the nature of the problem policymakers intended to solve and its embedded constraints.

Indeed, the context of a transition to a new development strategy led policy makers to choose a path of reform that corresponded to existing political institutions and to the demands of key interest groups. The relation between these factors is depicted in a simple diagram (Fig. 2).

Figure 2  
Policy Decision Process



### *Institutions*

Mexican political institutions contributed to a smooth implementation of the reform process. In 1990, there was a lack of party system and an ubiquitous presidential power. In contrast to the U.S. or New Zealand's experience, antitrust concerns in Mexico (through agencies or laws) did not play a significant role in this process. The political power was concentrated in the executive, and the legislative and judicial branch in reality only endorsed the executive's decisions. The strength of the executive branch relative to all other powers in the Mexican political system, conferred to it by a hegemonic party system, explains its ability to transform the role of the state in the economy.

<sup>6</sup> There were unsubstantiated rumors, that in fact, Salinas bought Telmex. I found no evidence to confirm this. And if this had been the case some indication would have slithered out by now.

Privatizing the second largest company in the country signified that the state was no longer going to be the agent of development, this role was assigned to the private sector.<sup>7</sup> If the process of reform would had taken place after 1997, when Congress was not controlled by the ruling party (PRI), the process would have not been as smooth and the outcomes would surely have been different.

### ***Interest Groups***

The Mexican economic and political transition required the endorsement of key groups. The shift to an economy open, to international competition and private ownership was crucially dependent on the support of the private sector. Within the private sector, large internationalized firms were best able to adjust to external competition, acquire public enterprises, and thus support the government's initiatives for reform. Grupo Carso, a Mexican financial conglomerate, joined with the telephone union became the privatization coalition that played a crucial role in the shaping of Mexican telecommunications policy reform. A vertically integrated firm served the purpose of satisfying the demands of key players in the system, the domestic private sector and the labor union.

The definition of the auction process was articulated by the Finance Ministry, [Secretaría de Hacienda y Crédito Público (SHCP)], headed by Pedro Aspe. Within this ministry, a special task force was created denominated Unit of Disincorporation, directed by Jacques Rogozinski who was responsible for the privatization of Telmex.

SHCP was interested in macro economic objectives; increasing government's revenue through maximizing the sale value of the company and indeed, getting the privatization program off the ground. Achieving a successful privatization meant overcoming all economic and political obstacles. Telmex was financially strengthen in every way to make it attractive to investors. Financial restructuring of the company had three components: taxes were decreased, tariffs were upgraded and debt was reduced. The tax reform was a generous grant to the buyers of Telmex, it allowed them to increase its rate of return substantially and facilitated early completion of the five-year installments for the purchase of the company.

Surmounting political obstacles entailed achieving a political consensus. Pedro Aspe, the head of SHCP, stated in an interview conducted by this author, that he was not only interested in macro economic objectives but also in achieving a political consensus around Telmex's privatization. It is important to recall that Pedro Aspe had a special stake in achieving a consensus around a privatization of the Telephone Company, as he was a strong pre-candidate for the next presidency.

Policy makers needed the support of the labor union and Francisco Hernández Juárez, the head of the telephone union (Sindicato de Telefonistas de la República Mexicana, STRM), played a key role as the representative of a modernized

<sup>7</sup> Second to the national oil company, Petróleos Mexicanos, Pemex.

labor union, independent from the traditional corporatist union CTM. The telephone union initially voiced strong opposition to Telmex's privatization.<sup>8</sup> President Salinas became personally involved in negotiating with Hernández Juárez.

By 1991, Hernández Juárez described Telmex's privatization as the "star project" of the government's modernization and reform program. Hernández Juárez rationalizes his new support for Telmex's privatization on the need to modernize the company through a concerted process. The demands of the telephone union included maintaining the union's structure, preserving the rights of the workers as well as guaranteeing no layoffs. Sustaining the union's structure posed a difficulty to the option of vertically disintegrating Telmex, to which the union was opposed.

These points were all granted through an agreement established in April 1989 between the union and the federal government. In return, the union agreed to *flexibilize* its collective contract and indeed support the privatization. Moreover, during a union meeting in September 1990, when president Salinas publicly announced the privatization of Telmex, the telephone workers were granted shares of the firm. This was certainly another factor that led them to favor a strong market position for Telmex.

The national private sector also played a significant role in the privatization of Telmex. The financial and outward-looking business sector was in a position to support government policies towards a new economic project. The two very close finalists in the bid for Telmex, Roberto Hernández from Accival and Carlos Slim from Grupo Carso both belong to the category of new capitalists.<sup>9</sup> Before purchasing Telmex, Slim was fairly unknown in the international community. With the purchase of Telmex, the only Mexican Company whose stock was traded in the international exchange markets at the time, Slim acquired an international profile. This company is in many ways a strategic asset, any significant movements made by Telmex in the Mexican stock exchange influences the financial stability of the country.

Slim belongs to the *Consejo Coordinador Empresarial*, CCE and to the group known as Businessmen Group, (*Grupo de Hombres de Negocios*), key business organizations that were significantly involved in policy decisions such as the NAFTA negotiations and the support of the business sector to the anti-inflationary pact. It is safe to assume, Slim favored a strong Telmex.

According to preliminary consultations with international investors, interested in the Mexican telecom sector, most favored a regionally divided Telmex.<sup>10</sup> This was due to the fact that Telmex needed human capital resources and

<sup>8</sup> In 1989, Hernández Juárez argued: "There have been groups that already know the telephone business will be carried through. They have prepared and are pushing for Telmex's re-privatization to the benefit of their interests and not of the country."

<sup>9</sup> As Carlos Casasús pointed out, it was in fact a surprise that Slim beat Hernández. Hernández had his eyes set on Telmex buying this company's stock for a while. As it turned out Slim beat Hernández for a very small margin. Hernández bought the privatized bank Banamex and Slim, Telmex.

<sup>10</sup> The unit of deregulation within the Trade Ministry (SECOFI) were in charge of conducting these consultations.

it was easier to send a smaller work force to Mexico rather than a larger one. As Noll & Salas (1990) pointed out, a disintegrated Telmex would facilitate management.

The international community, represented by the World Bank was closely associated to the process; several task forces were sent to offer advice to the privatization squad. The World Bank is the largest multilateral source of telecommunications financing.<sup>11</sup> The Bank was active in the privatization of Telmex, it provided the government with advance funds for preparing reforms, quick-disbursing loans with policy conditions of trench release and financing for subsequent technical assistance.<sup>12</sup> The documents prepared by the World Bank on the Mexican reform show a preference for private ownership and more rather than less competition. However, the Bank recognizes that: "(...) sector solutions are shaped by the country's political institutions, and electoral arrangements, the interests of constituency groups and the role of the judiciary and the government judiciary. Regulatory arrangements that seem optimal from a sectoral viewpoint may not be feasible, and compromise solutions are necessary. In particular, the economic benefits of improved services following privatization of a state owned enterprise may well outweigh the rents captured by an imperfectly regulated monopoly."<sup>13</sup>

The World Bank's role in the Mexican telecommunications privatization was that of a follower rather than a leader.<sup>14</sup> The policy decision in terms of market structure was left to the best criteria of Mexican policymakers. Although the Bank had not articulated an explicit telecommunications policy, privatization was the key objective sought.<sup>15</sup> Moreover, the sale of a firm with substantial market power offers a significant source of income to the government and thus increases its ability to refund the Bank's loans.

SCT, the Communications Ministry had a secondary role in the process of privatization; administrative control of the company was transferred from SCT to SHCP, which was overseeing all privatization.<sup>16</sup> In the end, SCT's role amounted to one of validating the decisions taken by SHCP; the head of SCT was merely a witness of honor in the official sale of Telmex.

With Pedro Aspe as the head of the Board of Directors, possible opposition to privatization within Telmex's bureaucracy was then also neutralized. The Finance Director at Telmex, Carlos Casasús, played a significant role in the decision to

<sup>11</sup> On the role of the World Bank in telecommunications restructuring see Gwen Urey (1995).

<sup>12</sup> *op. cit.* p. 15

<sup>13</sup> *op. cit.* p. 11

<sup>14</sup> Ramamurti (1996) quotes an internal report of the World Bank.

<sup>15</sup> Urey (1995).

<sup>16</sup> Government officials attending cabinet meetings assert that during preliminary actions to prepare Telmex's privatization, President Salinas became aware that the Minister of SCT, Andrés Caso Lombardo, then President of Telmex's Board of Directors, was delaying this process. A successful move was to remove Caso Lombardo as the President of the Board of Directors and appointing Pedro Aspe himself, a true *privatizer*.

maintain a vertically integrated firm. Carlos Casasús, a close friend of Pedro Aspe, did not oppose privatization but lobbied against the firm's disintegration.<sup>17</sup> At the time, he considered that separating Telmex would consume more time and that Telmex was to become the *national champion* in the Mexican telecommunications sector.

Other players involved were cabinet members whose functions were indirectly associated to privatization but were closely involved in the overall direction of the new economic project. This is the case of Jaime Serra Puche, then head of SECOFI (Trade Ministry), who favored a more competitive setting in the telecommunications reform. Serra Puche was a member of the Interministerial Commission of Budget and Funding (*Comisión Intersecretarial de Gasto y Financiamiento*; CIGF), the agent responsible for analyzing purchase offers of public entities. He preferred a market structure composed of regional monopolies and pushed for a temporary delimitation of the monopoly in long distance services.

Consumers were not significant players in this process. On the one hand, even though society at large voiced a strong discontent with telephone services the process of reform in Mexico was and continues to be, in large part, a closed policy process that is not open to public participation. On the other hand, consumers in general, were hardly capable of transmitting or supporting a preference, both because of a lack of organization and a lack of technical knowledge of telecommunications issues. Large telecommunications users, that may have transmitted a specific demand, basically required the technological upgrading of telecom services that would come about despite the market structure.

Table 1 summarizes the positions of the key players involved in the process of policy reform. SHCP is excluded from this list as it is assumed it played the role of final decision taker whose preferences are revealed after consideration of all the factors involved. This table depicts the player's preferences with regard to the three options available in terms of market structure. The darker squares show the higher bargaining power these players have in the policy process.

<sup>17</sup> Casasús and Aspe were classmates in High School.

*Table 1*  
Actors and their preferences on Telmex privatization process.

<i>Options Players</i>	<i>National Investors</i>	<i>Union</i>	<i>Telmex</i>	<i>Foreign Investors</i>	<i>World Bank</i>	<i>SCT</i>	<i>SECOFI</i>
<i>Regional Firms</i>				■	■		■
<i>Market Segmentation</i>					■		■
<i>Integrated Firm</i>	■	■	■			■	

As Table 1 shows, a central player in the process, national investors preferred an integrated firm. Players with somewhat less bargaining power, the telephone union, SCT and Telmex's bureaucracy also favored an integrated firm. The World Bank, SECOFI and international investors favored either regional firms or market segmentation. Although SECOFI had a less prominent role in the privatization process and the World Bank decided to follow the Mexican government's decision, the preferences of the international investors were important. Moreover, policymakers knew that the option of regional firms or of market segmentation embedded the best policy solution in terms of social welfare. However, SHCP as the leader of the privatization had to weigh the above preferences in a policy context that included what they perceived to be significant constraints.

***Policy Context***

The policy context in Mexico included a government agenda with the chief objective of attaining a shift in its national development strategy. The economic crisis that hit all Latin American countries in the early 1980s had altered the foundations of economic growth upon which the legitimacy of the Mexican post-revolutionary regime rested and forced policymakers to undertake a process of economic restructuring that had enduring political consequences.

The central issue to understand of this reform is that, to policymakers, Telmex was a piece of a larger strategic game whose objective was to transform the economy: privatize state owned enterprises, open the economy to international trade and foreign investment and recover private sector's confidence.<sup>18</sup> The assessment of

<sup>18</sup> This confidence was lost in previous administrations that pursued statist policies including the nationalization of the banks.

telecommunications reform was examined in this larger economic and political context and thus the merits of an ideal sectoral reform were undermined in the process of achieving their ultimate objective.<sup>19</sup>

The government shied away from a more competitive market arrangement that would have led to a greater welfare-enhancing situation because it perceived a critical time constraint given by the policy context. Telecommunications reform contained spillover effects with huge benefits to the government's entire modernization program. Privatizing a vital sector of the economy and technologically upgrading telecommunications would consolidate a key objective in the Salinas' administration: the transition to an open economy. Salinas wanted to implement the privatization before his presidency ended in order to recover the fruits of its accomplishments. Moreover, the administration sought to present an image of strength and commitment for reform, to both the national and international financial community. It also considered necessary to prevent opposition forces from gaining strength. Indeed, it needed to get its entire modernization program off the ground, and Telmex's privatization was a key component of this initiative.

This impatience in selling Telmex led to selecting the option of a vertically integrated company, since it would require less time to implement.<sup>20</sup> This sense of urgency also contributed to defer the enactment of a telecommunications law and the creation of a specific-sector regulatory agency.

An additional constraint, not openly acknowledged by policy makers, was given by the need to respond to preferences from newly established alliances that favored an integrated firm. Those benefited by the post-revolutionary model resisted any change. Political alliances needed to be re-established in a new economic model. As in any change of strategies, there were to be winners and losers within the domestic arena. Maintaining a very strong Telmex satisfied the demands of strong interest groups.

### ***Policy Outcomes***

The privatization of Telmex achieved the government's main objectives. For one, it helped carry through the transition to a new development strategy without causing political instability; it was completed with a remarkable degree of political consensus in a very short period of time. In this regard, telecommunications reform was a notable success. Furthermore, as Table 2 shows, the reform accomplished a substantial degree of technological upgrading in the telephone network. The degree of network digitalization, in Mexico, is as high as that achieved in developed countries. A significant contribution of the reform was that it allowed the entrance of

<sup>19</sup> Ideal sectorial solution in telecommunications refers to the benchmark established by technological opportunities, where greater competition leads to lower prices and higher teledensity.

<sup>20</sup> The time factor was repeatedly stated in interviews with government officials including Pedro Aspe, Jacques Rogozinski, Carlos Casasús and Juan Díez Canedo, as a significant element that had to be considered during the privatization of Telmex.

key international telecommunications players into the Mexican market with the opening of the long distance market.

*Table 2*  
Digitalization in selected countries: 1990-1999

<i>Country</i>	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1997</i>	<i>1999</i>
Brazil	n.a.	n.a.	n.a.		36	46	73	n.a.
Canada	50	69	80	81	84	94	99	100
France	70	79	83	86	89	100	100	100
Germany	12	16	30	41	43	56	100	100
Greece	1	4	11	22	31	35	47	91
Ireland	55	63	68	71	75	79	92	100
Japan	39	49	60	72	84	90	100	100
México	31	41	57	68	82	87	90	100
New Zealand	72	92	95	95	96	97	100	100
Spain	28	34	36	41	47	56	81	87
United Kingdom	47	55	64	75	83	88	100	100
United States	43	53	60	63	72	90	95	98

Source: See OECD (2001).

*Table 3*  
Productivity Change in Selected Countries Access lines per employee  
(% of variation)

<i>Selected Countries</i>	<i>Employment change (%)</i>		<i>Selected Countries</i>	<i>Employment change (%)</i>	
	<i>1989-95</i>	<i>1995-99</i>		<i>1989-95</i>	<i>1995-99</i>
Australia	-14.2	-19.9	Mexico	2.5	47.5
Belgium	-1.4	-2.8	New Zealand	-43.5	-31.9
Canada	-12.2	-9.6	Norway	15.5	26.4
Hungary	4.5	-20.7	Poland	12.7	5.4
Ireland	-12.3	24.7	Switzerland	-5.7	25.6
Japan	-13	1	Turkey	-15.9	2.4
Korea	21.3	30	United States	1.6	16.4
Luxembourg	10.4	18.6	OECD	-6.6	8.2

Source: OECD (2001)

As Table 3 shows, Telmex's productivity as measured by number of lines per employee increased considerably after the 1990 reform. During the period 1995 – 1999, the increase in Telmex's productivity was significantly higher than many countries in the OECD area. Moreover, Telmex became one the most profitable

operators in the OECD area; in terms of revenue, in 1998, it was the 12<sup>th</sup> largest company in the world. Even though revenues fell by 18.4 during the peso crisis in 1994, its operating income according to Telmex's Annual Reports has ranged between 43.7% and 38% between 1992 and 1998.<sup>21</sup>

A decade after the reform was implemented, however, the country is experiencing the costs associated to the path followed. The substantial market power that Telmex enjoys today is a direct consequence of the mode of privatization. The maintenance of a vertically integrated firm introduced consequential costs to regulatory activities. The delayed creation of governance structures (a telecommunications law and a regulatory agency) as well as the lack of autonomy of the regulatory agency created, Cofetel, contributed to increase regulatory uncertainties.

As Table 4 displays, Telmex is the top highest earning operator Latin America. However, the percentage of investment in relation to revenues is significantly lower in Mexico than in other Latin American countries. Telmex has not received the appropriate incentives to further expand the telecommunications network.

*Table 4*  
Top Latin American Telecom Operators

<i>Operator (Country)</i>	<i>Net income (1999)</i>		<i>Investment (1999)</i>	
	<i>Total (millions USD)</i>	<i>Change 1998-1999 (%)</i>	<i>Total (millions USD)</i>	<i>As a % of revenue</i>
Telmex (México)	2629	46.4	1601.5	17.8
Telenorte, Embratel, Telesp y Tele (Brazil)	808	9.2	6930.4	46.1
Telefónica y Telecom (Argentina)	814	-15	1456.7	22
CANTV (Venezuela)	147	-43.7	745.6	33.1
CTC (Chile)	-99	-	926.5	40.1
Telefónica (Perú)	204	-11.8	738.9	51.1

Source: ITU (2000)

Moreover, overall telephone rates are high by international standards. Compared to other Latin American countries, as Table 5 shows, overall rates in Mexico are higher than the average. Business connection rates stand out as substantially higher in Mexico than in other Latin American countries. And compared to other OECD countries, as Table 6 shows, Mexican fixed (monthly subscription) and usage (per minute) charges are significantly high.

<sup>21</sup> Operating income is the excess of revenues over long run operating costs (including capital consumption).

*Table 5*  
Telephone Tariffs

<i>Country</i>	<i>Residential (1999)</i>		<i>Business (1999)</i>	
	<i>Connection (USD)</i>	<i>Monthly Subscription (USD)</i>	<i>Connection (USD)</i>	<i>Monthly Subscription (USD)</i>
Argentina	150	13.2	150	33.9
Brazil	23	6.0	28	9.0
Costa Rica	58	3.9	58	6.7
Chile	159	16.3	159	16.3
Guatemala	223	-	223	6.0
Jamaica	16	2.7	23	5.8
Mexico	111	14.5	366	19.9
Peru	130	14.0	130	14.0
Venezuela	101	9.5	328	23.2
Average	107	10	162	15

Source: ITU (2000)

*Table 6:*  
National and international telephone charge (2000)

<i>Country</i>	<i>Business Telephone</i>	
	<i>Fixed charge (USD)</i>	<i>Usage charge (USD)</i>
Mexico	323.40	1067.84
OECD Average	180.66	542.51
<i>Country</i>	<i>Residential Telephone</i>	
	<i>Fixed charge</i>	<i>Usage charge</i>
Mexico	233.42	182.40
OECD Average	171.34	159.78

Source: OECD (2001)

The most significant issue that reform has not improved sufficiently is the overall availability of telephone services. Even though the absolute number of telephones has increased, telephone penetration is still significantly low. The number of fixed telephone lines per 100 habitants for Mexico has risen from 6.4 in 1990 to 11.22 in 1999. This is a modest increase compared to other countries. As Table 7 depicts, compared to Latin America countries with similar GDP per capita, Mexico's penetration rate is quite low.

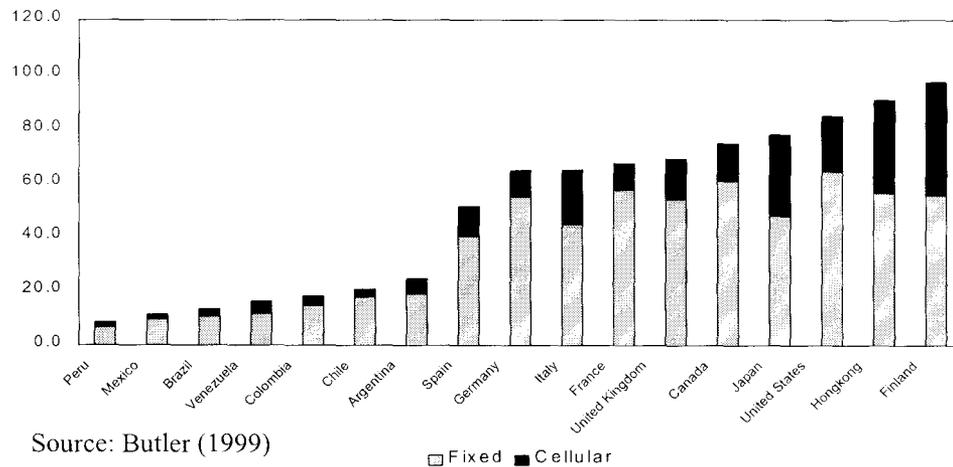
Table 7  
Teledensity in Selected Latin America Countries (1999)

Country	GDP per capita (USD)	Telephone lines per 100 people
Argentina	8,257	20.11
Colombia	2,427	16.03
Brazil	4,747	14.87
Costa Rica	1,273	20.41
Chile	4,912	20.70
Guatemala	1,754	5.51
Jamaica	2,707	19.71
Mexico	4,330	11.22
Uruguay	6,836	27.07
Venezuela	4,107	10.91

Source: ITU (2000).

As Graph 1 illustrates, this relative slow paced growth in telephone penetration is also observed in the overall access path that includes fixed and cellular services. Moreover, the geographical area in which telephone services are available is very narrow. In large urban areas the telephone penetration is much higher than the national average. As Graph 2 shows there is a strong geographical concentration of telephone lines in large urban areas. On the one hand, Mexico City (D.F) has the highest penetration rate with 27.7 lines per 100 inhabitants, and on the other, Chiapas, a typical poor state in the country, has only 2.3. Indeed, the most critical pending issue in telecommunications regulation in Mexico is the creation of effective incentives, through a universal access fund, to expand the network to non-profitable areas.

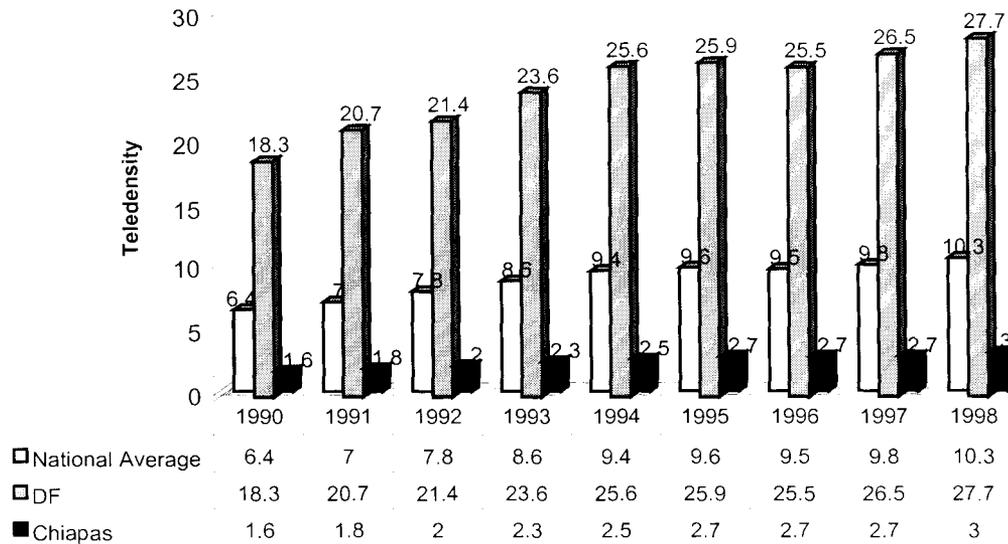
Graph 1: Number of fixed & cellular lines per 100 hab. (1997)



Source: Butler (1999)

□ Fixed ■ Cellular

Graph 2: Total fixed teledensity in Mexico.  
Number of line per 100 hab.



Source: Butler (1999).

### Other National Cases

Telecommunications reform in the U.S., New Zealand and Brazil offer three distinct examples of how the nature of political institutions and policy context determine regulatory choices. The main conclusions to emerge from the comparison of other national cases is that although all four countries faced universal changes, namely a move towards a market driven sector and an intensive process of technological innovation, each country implemented a substantially different policy reform.

### United States

The particular character of U.S telecommunications reform was determined, to a significant degree, by the specific demands that the policy community put forward. The pluralist system of political participation makes policy process permeable to interest group pressure, in particular to well organized groups. Interest groups, as Horwitz (1989) argues, consisted of two otherwise opposed logics (liberals and conservatives) that got together to demand deregulation. And, in contrast to Mexico, the U.S. holds a strong antitrust tradition that has restrained monopoly practices.

### *Political Conditions*

The process of deregulation in the United States was inscribed in a pluralist system of political participation. The defining characteristic of the American political system is its permeability to interest group pressure through voting, congressional testimony and campaign finance, among other means. Voting preferences in a pluralist model is a crucial factor that links regulatory policies with constituencies. Elected officials act as agents for their constituencies and the re-election process of officials generally provides the means by which citizens enforce compliance with their policy preferences.

Thus, while in Mexico a political consensus was achieved through the strategic interaction of key players of the system and political bargaining power, in the US the system is more permeable to citizens demands through the role of groups or coalitions in the policy process. The U.S. system, however, also tends to be more responsive to big corporations and large groups.

There are a variety of perspectives on the role of groups and coalitions in the U.S. policy process. For Kingdon (1984), the existence of a "policy community" is important in the process of getting a policy in the agenda and acted upon; it is part of understanding the "policy streams" which ultimately lead to the adoption of the policy. In this same vein, Sabatier (1991) labels groups as "advocacy coalitions" and characterizes them as public or private organizations that share a set of beliefs, but compete within the policy arena to manipulate outcomes in their favor. Being sympathetic to the Kingdon/Sabatier approach, this section on the U.S. telecommunications deregulation implicitly regards interest groups as members of a broader policy community. The telecommunications community includes telecommunications business and users, and the broader public utility regulatory community, political entrepreneurs and economists.

The central regulatory agency governing the U.S. telecommunications sector is the Federal Communications Commission (FCC). This sector has been historically regulated on two separate levels; the federal and the state. Thus, in addition to the FCC, the Public Utilities Commissions (PUCS) also have jurisdiction over the sector at the state level. Even though the functions of these agencies overlap, the FCC has shown a special focus on increasing individual efficiency while the PUCS have been particularly interested in fostering high penetration levels.

Additionally, all through the history of this sector, the antitrust agency has played a crucial role in its regulation. The antitrust tradition is uniquely characteristic of American society. The institutionalization of antitrust activities rested intellectually upon classical economic theory and upon the pluralism of American democratic thought (Hofstadter, 1994).

Deregulation in the U.S., emerged after the stagflation of the 1970s. Although the economic crisis this country experienced was not as severe as in the other countries examined, a transformation in the strategy of development was required. The pendulum in the social consensus drifted towards the free market and

a “small government” was favored. Telecommunications was one of many industries that was deregulated as inflation raised prices and the availability of new technologies created incentives for large service users to bypass the Bell System.

The U.S. government responded to the telecommunications policy community demand for a regulatory reform. A political phenomenon, identified by Horwitz as the irony of regulatory reform, took place: “The lovely paradox of deregulation is that left-liberal regulatory activists and conservative free enterprises both went after price-and-entry regulation consistent with their respective ideological frameworks.”<sup>22</sup>

Liberals were critical of regulatory agencies as they perceived a capture of agencies by regulated firms. Free market conservatives attacked these agencies on the grounds that they practiced an inefficient regulatory protectionism where the market forces should prevail. Consumer and environmental activist groups, known as the ‘public interest movement’, succeeded in pushing for legislation and social agencies to implement control over corporate prerogatives and consumer protection. The public interest movement subscribed to the regulatory failure perspective as the agencies came to serve the interest of those they regulated. A judicial transformation took place at this time that reflected this perspective where regulatory agencies not only had to listen to public interest groups but the courts had to step in and review agencies decisions. An alliance between the court system and grass roots movements took hold.

With the rise of social regulation, business became weary of the increasing costs it represented. They began to organize politically into lobbies, Political Action Committees (PACS) and trade organizations. The Business Roundtable was the most powerful of these organizations. The period of regulation had proved profitable for business; competition *per se* is not a businessman objective, the real concern for business was social regulation. Regulated businesses, on their part, were pursuing a return to a less contentious regulatory environment, not deregulation.

The irony according to Horwitz is that: “(...) this odd concatenation of ordinarily opposed political logics underlay the wholly unexpected ability of political actors to prevail over entrenched interests in the passage of deregulation legislation. The fact that these political actors clashed over social regulation meant that deregulation could occur only in traditional economic regulation.”<sup>23</sup> The U.S. telecommunications deregulation is embedded in this broad political change.

<sup>22</sup> Horwitz. (1989) p. 213.

<sup>23</sup> Horwitz (1989) p.213.

### *Policy Outcomes*

The deregulation process in the U.S. consisted in a long series of legislative events, usually the result of technological innovation, that were initiated in the 1959 *Above 890* case and culminated with the enactment of the 1996 Telecommunications Law.

The FCC allowed bypass of the public network when it responded to a petition from large private users for the allocation of radio frequency bands above 890 megacycles. Point-to-point microwave technology had resulted in expanded capacity and regulators determined that unused capacity could be used for private communication. This opened the door for reselling this means of communication.

In 1969, despite opposition from AT&T, the FCC gave Microwave Communications Incorporated (MCI) permission to operate microwave links between St. Louis and Chicago and sell these services to businesses. And the antitrust case, *US vs. AT&T*, initiated in 1974 was solved in an out-of-court settlement until 1982. The Modification of Final Judgment (MFJ) required the divestiture of AT&T. MFJ, AT&T had to divest its local exchange service in seven regional Bell operating companies. These regional Bells (RBOCs) remained as regulated monopolies and were forbidden from entering the production of equipment and value-added services. AT&T could enter the competitive long distance and advanced service markets.

Since its inception, the MFJ faced persistent problems of competition and monopoly that required judicial or regulatory rulings that in turn created another set of conflicts. The MFJ was not intended to be a permanent solution; it was meant to remain in place only long enough to nurture competition in the potentially competitive, adjacent markets.

Liberalized entry created new players in a context of competitive long distance markets and in turn made the boundaries between regulated and unregulated markets more diffuse. AT&T's competitors (MCI, Sprint, GTE, etc.) all had been deregulated. Thus, AT&T remained as the only provider of long distance services subject to federal regulation. Rapid technological changes and increases in demand contributed to upset the original justification for the MFJ against vertical integration. The advent of new technologies blurred the boundaries between different segments of the market. Ensuring separation between the various segments of the market became increasingly difficult for the regulators. Long distance companies acquired cellular and cable TV operators with the aim of creating vertically integrated networks. In July 1994, the RBOCs, which had been denied waivers to enter adjacent markets, filed legal action to abandon the MFJ decree. As a result of a broad support for a regulatory reform, the Telecommunications Act of 1996 was enacted.

The key concept in the New Telecommunications Law of 1996 is that government's involvement through regulation will occur only to the extent that it encourages a competitive telecommunications industry. Building competitive communications networks would be a high risk, capital-intensive projects. It would

require resources of large and flexible corporations. The agreements between large industry players redrew the policy map (Horwitz, 1998).

The law eliminates state barrier competition and requires the FCC to create a pro-competitive environment. The law provides ground rules to create competition in the only segment of the market that was still protected, the local service. The Act contains the following basic procedures designed to promote entry into the local market:

- 1) Reselling the service of the incumbent
- 2) Purchasing network elements from the incumbent
- 3) Using their own infrastructure and interconnect to the incumbent's network.

The entrance of ILECS to the long distance market has proven difficult to achieve. The alternative strategies of ILECS have been to establish mergers to defend their territories.<sup>24</sup> Moreover, despite interconnection and resale agreements, IXCs are not yet operating in the local market either. Thus, the paradox is that while ILECS are ready and willing to enter the long distance market they are legally hindered and the IXCs are encouraged to enter the local market but are not ready to do so.

Although there is a greater degree of competition in the U.S. telecommunications industry than in the Mexican case, there is also an increasing tendency for a concentration of ownership in the former. While the 1996 Act eliminates the legal basis for monopoly, it also encourages mergers and vertical integration.

### ***New Zealand***

Telecommunications reform in New Zealand was, as in Mexico, embedded in a broader context of deep economic reforms. And, as in Mexico, liberalization and privatization of the national public telephone sector was promoted by an elite coalition within government and industry. Privatization was also a key component of a larger agenda to set the economy into a market driven system. The New Zealand telecommunications reform resulted in what is regarded as one of the most deregulated sectors in the world.

The New Zealand Labor government, contrary to its traditional ideological stance, elected a very liberal regulatory regime that relies on private legal actions under a competition law to enforce regulation. Unlike the Mexican and the U.S. reform, initially there was no industry-specific regulatory agency in charge of overseeing telecommunication activities. Ten years after the reform was implemented, the New Zealand government retracted from its original approach and applied a more institutionalized regulation.

<sup>24</sup> M. Cimatoribus *et al* (1998) p. 506.

### *Political Conditions*

As in the U.S. case, an open political system allows the electorate to articulate its demands and opinions about policy choices. However, although New Zealand resembles the U.S. open political system that embraces a pluralist system of representation, its parliamentary character gives policymakers greater freedom to make decisions. In contrast to the U.S., where the "checks and balances" mechanism prevents authorities from implementing radical reforms, the elite coalition in New Zealand was able to introduce a radical reform. An important variant to the Mexican case is that New Zealand political institutions are rooted in an advanced democracy with a legitimate system of representation. The New Zealand government was not significantly constrained by the need to create political alliances and did not have the same sense of urgency that the Mexican government had in implementing the reform.

New Zealand has no state governments, and the Central Government is entirely responsible for economic policy, controlling the national budget. This means that the decision-making procedures rely completely on the members of the Cabinet, formed in turn by senior members of Parliament belonging to the ruling party. The leader of the majority party is the Prime Minister. The Cabinet has control over the whole economy, facing the political constraint that, in three years, there must be positive outcomes, or the electorate will withdraw its support, as was the case during the 1980s and early 1990s.

The 1960s and 1970s were decades in which the New Zealand's economy was governed by a Welfare State economic policy that was successful in achieving a sustained rate of growth and development. However, by the mid-1970s, the adverse effects of the oil price increase in the world economy affected the country by reducing the foreign demand for agricultural products. The heavy regulatory and interventionist approach that dominated the political economy from 1974 to 1984 was considered the source of the economic crisis and it was certainly the cause of the defeat of the National Party. The new economic team, headed by the Finance Minister, Roger Douglas, introduced a completely new policy approach aimed to solve the problems that the economic *dirigisme* was blamed to create during the 1970s.

This turn on economic policy is regarded as *Rogernomics*, comparing it with *Reaganomics* in the U.S. The free-market approach implied a drastic economic and social transformation from the traditional Welfare State and from the historical stand of the Labor Party. The liberal fraction of the Labor Party achieved the complete control of the economy and the privatization of the telephone company was one of the results of the so-called *Rogernomics*.

### *Policy Outcomes*

Telecom was sold on 12 September 1990 to a consortium led by Ameritech and Bell Atlantic for \$4.25 billion. The government maintained a single share (called Kiwi Share) with special voting rights to ensure that the company adheres to foreign ownership restrictions and complies with universal service obligations. These conditions required that new owners sell a portion of the initial holding to the New Zealand public. There would be a 49.9 percent ceiling on the shareholding of any single foreign buyer and the Board would include at least 50 percent of New Zealand citizens. Telecom would maintain a comprehensive residential phone network, with free local calls and increases in the line rental limited to the rate of inflation.

The unique feature of the new regulatory regime, known as *light-handed regulation*, is the fact there is no industry-specific agency to regulate this sector. Regulation relies on the Commerce Act of 1990 that provides the legislative basis of the antitrust policy. Section 36 of this Act aims to promote competition based on the premise that "society's resources are best allocated in a competitive market where rivalry between firms ensures maximum efficiency in the use of resources."<sup>25</sup> This section also prevents any dominant firms from using their position to restrict competition in any market.

The results of the light-handed regulatory approach implemented in New Zealand have been ambiguous. On the one hand, the Ministry of Commerce considers that since the regime was established in the telecommunications sector there have been several positive developments both for users and consumers.<sup>26</sup> These include considerable productivity gains, major capital investment program, which resulted in 98% of access lines connected to digital switches and significant increases in service quality. On the other hand, however, strong disputes arose between the incumbent firm (Telecom) and the newcomer (Clear) regarding interconnection rates to provide local service. Moreover, the recently created Party of the Alliance, opposed to Labor's policies, argues in a telecommunications study that the key problems with the regulatory regime are that the incumbent has the strategic and tactical advantage. By introducing obstacles into the negotiations over interconnection and taking an aggressive bargaining position the incumbent is able to delay competition for years. Prospective competitors have to be prepared to spend millions of dollars on Court actions to establish their access rights. Moreover, the Courts are reluctant, in general terms, to play the part of a dedicated industry regulator. The legislative framework of the Commerce Act prevents the Courts from becoming substitute industry regulators.

<sup>25</sup> Commerce Act as quoted by Blanchard (1994\*), p.157.

<sup>26</sup> NZ Ministry of Commerce (1995).

The *light-handed* regime allowed substantial productivity gains and encouraged the adoption of new technology. Average long distance tariffs decreased 30 percent in real terms (1991-1996) while local rates begun to decline since 1996, however, overall average tariffs are relatively high compared to international standards. (Spiller & Cardielli, 1997) Competition and its benefits were limited by the long-running interconnection and equal access litigations. The Clear and Telecom litigations reveal the fact actors have found the regime to be inadequate to promote competition. Indeed, in December 2000, the New Zealand government retracted from its original *light-handed* regime and established a rather more interventionist approach. A Telecommunications Commissioner was appointed within the Commerce Ministry. Its functions include dispute resolution and monitoring the Kiwi Share obligations in order to support universal service objectives. The New Zealand experience demonstrates the difficulty of promoting competition in the absence of institutional regulation.

### ***Brazil***

The Brazilian case, in 1991, is an example of a failed telecommunications reform. Although the privatization of the Brazilian national telephone company was finally implemented in 1998, the focus of this research was on examining why when the government initially attempted to reform this sector, it failed. The findings are that a weak executive branch and general policy instability explain this result.

### *Political Conditions*

Formal political organizations in Brazil, as in Mexico, follow federalist precepts. Brazil has been a federal republic since 1889 and is currently governed by the 1988 Constitution. Although the new Constitution grants broad powers to the federal government, the system is more decentralized than before. However, in contrast to Mexico, Brazil has weak political parties, fragmented interest groups and a long tradition of military intervention and politicization.<sup>27</sup>

Despite recent advances in electoral participation, the Brazilian society has been traditionally characterized by its limited role in politics. O'Donnell (1992) suggests that one of Brazil's most serious problems is "the existence of few and fragile institutional mediations between politics and society, a situation which both expresses and reinforces the enormous gap which separate the 'elite' from the overwhelming majority of the population."<sup>28</sup> This is an especially acute problem in the context of Brazil's extreme income inequality.

<sup>27</sup> The military today, however, are out of politics.

<sup>28</sup> O'Donnell (1992) p.39.

State corporatism and clientelism have been embedded in this political process. Clientism refers to a system where Brazilian politicians exchange benefits and protection for votes, obedience and support (Weyland, 1997). State corporatism was associated with the developmentalist character of the Brazilian State by which the state promoted and directed economic growth.<sup>29</sup> During the 1970s and early 1980s, the telecommunications sector in Brazil was one of the most advanced in Latin America. The Brazilian government decided to invest heavily in microelectronic-based telecommunications and achieved a process of *leapfrogging* earlier technological forms. These efforts were consistent with the state-led economic strategy of the Brazilian bureaucratic-authoritarian government. However, the financial and political crisis Brazil (as Mexico and New Zealand) faced in the early 1980s brought these efforts to a halt.

The early 1980s economic crisis in Brazil coincided with the transition to democracy. Brazil lagged behind Mexico and other Latin American countries in adopting macroeconomic adjustment. The inability to emerge from the crisis was due to a vicious cycle of stagflation that continued until the late 1990s as well as to a lack of a strong national direction.

Policy instability was a natural consequence of a long effort to consolidate the transition to a democracy. An extremely unequal distribution of income, an unstructured party system, and a prolonged economic crisis diminished the capacity of the state to implement policy. The need of servicing a huge foreign debt, general financial urgencies and direct pressure from multilateral lending agencies provided strong incentives to divest the large number of state-owned enterprises.

During the first phase of the transition towards democracy, under the government of José Sarney (1985-90), the Brazilian State suffered from increasing capture by strong interest groups, internal fighting and paralysis. This resulted in a weakened capacity of the state to achieve its goals. (Weyland, 1997). Even though Sarney announced a vigorous privatization program, there was no political commitment to privatization (Schneider, 1991). His administration's continued reliance on clientism and broad concessions to interest groups discredited established political forces and exacerbated economic problems.

Fernando Collor de Mello took office in March 1990 and turned to a market-oriented strategy. Collor imposed a severe stabilization program that included the confiscation of financial assets above a low limit (\$1,300 dollars) for eighteen months (Weyland, 1997). Also his administration implemented structural reforms that included eliminating industrial protection, weakening unions, deregulation, privatization of public enterprises and reduction of public employees. He sought to attain these economic goals by decree, without consolidating political alliances and political support. The result was to further fragment society. The reasons for Collor's failure in managing the crisis are numerous; they include errors in style,

<sup>29</sup> A developmentalist state implements the following policies: 1) intensive vertical import substituting industrialization; 2) expand capital accumulation from foreign private and public sources of capital 3) expanded involvement of the state in directing development. Sikkink (1988)

inexperience, technocratic excesses, miscalculations in negotiation, and distortions in the country's political system and social organization (Schneider, 1991).

Even though these policies were clearly market oriented, they were implemented in a gradual, partial and reversible fashion. Unlike the Salinas' economic team in Mexico, which was distinctly technocratic, the Brazilian economic staff was a heterodox group that implemented a confiscation of financial assets and admitted some commitment to the welfare state (Schneider, 1991).

### *Failed Reform*

The Collor administration launched a privatization initiative before Congress in 1991. Resisting forces in Congress claimed privatization contravened the 1988 Constitution. Despite opposition the measure was approved, but the political instability prevented its implementation. The strategy for reform in the telecommunications sector was contained in the administration's 1991 National Deregulation Program. The Decree 99.179 in this program allowed private capital to provide information services, private telecom exchanges to be placed in residential and business buildings, community telephones and cellular mobile telephones services. The government also issued a so-called provisional measure with the following objectives:

- To restructure management of the Telebrás system in 7 regional operating companies (versus the current 28).
- Opening up telecom services markets, including long distance, cellular, paging, cable infrastructure development and private data service, to foreign and domestic private capital.
- The local service was to remain with the state and state companies were allowed to compete in value added markets.

There was strong opposition within Congress to these measures. In terms of law, it was argued that these measures contravened the state monopoly provision embodied in the 1962 National Telecommunications Code and the 1988 Constitution. The nationalist perspective claimed that the decree eroded support for domestic equipment and service industry as well as the technological capability for domestic production. Although there were other opposition groups outside Congress, such as the labor unions and the political party PT, none were strongly organized against privatization. And the only organized group in favor of privatization was the *Banco Nacional de Desenvolvimento Economico e Social* (BNDES).

However, unlike the case in Mexico or New Zealand, Brazil's privatization program lacked the pressure of rightist political parties, and as was mentioned before, lacked the capture of the state by a neo-liberal technocracy (as in Mexico).

(Schneider, 1992). Without a strong ideological or partisan movement, telecommunications privatization faced significant constraints.

The interim government of Itamar Franco (1992-94) is generally characterized as a period of political and economic standstill (Weyland, 1997). However, under his presidency, the stabilizing program Plan Real —developed by the Minister of Economics, Fernando Cardoso— was adopted. Fernando Henrique Cardoso, that took office in 1995, sought a more consensual policy process to attain market reform. The new president assumed office in a position of great political strength after stabilizing Brazil's enduring inflation. Even though these efforts did not result in lasting institutional solutions, the Cardoso administration was able to follow through with economic policies including the privatization of Telebrás.

The required amendments to the Constitution that allowed the break up of the Telebrás state monopoly and the permission for private companies to provide public telephone services were approved in June 1995. Foreign ownership was to be limited in the first three years and restricted to 49 percent participation in some cases.

The Brazilian government announced the completion of the legal reorganization of Telebrás by the summer of 1998. Telebrás was transformed from a holding company with 28 subsidiaries to 12 separate companies. These include three local service companies (Telesp Wireline, Tele Centro-Sur and Tele Mar), one long distance carrier (Embratel) and eight cellular companies. All of these companies are traded in the New York Stock Exchange.<sup>30</sup>

President Cardoso, unlike Sarney that was not committed to privatization and Collor who was committed but lacked political strength and capabilities, had both the political strength and the commitment to complete the process. Although it is not the intent of this paper to examine the precise character of this reform, it is interesting to note that the market structure left in place shows a greater degree of competition in regional companies than in the nationally integrated Mexican firm as well as a more limited degree of foreign ownership. The election of a regional scheme, however, was the result to a significant degree of the pre-privatization structure in Brazil.

### ***Generalizing the Argument***

Previous work on political institutions and telecommunications reform are persuasive on calling attention to the role of a strong executive in achieving privatizations (Spiller & Levy, 1996; Petrazzini, 1995; Molano, 1997).

The focus of this paper went a step further and questioned the differences in policy outcomes between countries' reforms. Clearly, there is no single political determinant of policy differences among countries, however, this paper has

<sup>30</sup> Merrill Lynch Report (1998).

classified the salient political factors that determine differences in reform as political institutions and policy context.

Table 8 provides a comparison of the four studied countries. It attempts to generalize the argument by identifying the most salient aspects of political institutions that determined the differences in telecommunications reform.

*Table 8*  
Comparative Analysis

<i>Institutions/ Antitrust</i>	<i>Divided Government</i>	<i>Non-Divided Government</i>
<i>Stable Institutions with Antitrust Tradition.</i>	U.S. Greater Competition / Non-radical Reform	NEW ZEALAND Greater Competition/ Radical Reform
<i>Transitional Institutions with no Antitrust Tradition.</i>	BRAZIL Less Competition/ Non-radical Reform	MEXICO Less Competition / Radical Reform

Table 8 presents the countries into four sets of regulatory outcomes. On the first row, the U.S. and New Zealand share the characteristics of having chosen a relatively greater degree of competition. This is attributed to the stability of their political institutions and to the long tradition of antitrust concerns. The second row portrays the lower degree of competition introduced in the Brazilian and Mexican telecommunications sector, as the result of a policy context consisting of transitional political institutions. The process of transition to new political (and economic) institutions placed constraints on policy choices. Policymakers in Mexico experienced a sense of urgency to completing reform quickly and Brazilian authorities, in 1991, were prevented all together from implementing reform. Their lack of historically rooted antitrust concerns also explains the low level of competition.<sup>31</sup>

The first column groups the U.S. and Brazil together because they share the characteristic of a non-radical reform. The fact that both countries confronted a divided government, including a Congress not willing to fully endorse the executive's initiative, explains non-radical reform. In contrast, the second column depicts New Zealand and Mexico, whose executive did not have to fight with Congress to implement his initiatives. New Zealand's parliamentary system and Mexico's authoritarian presidential system allowed for a greater leeway in policy-

<sup>31</sup> The market structure that resulted from the 1998 Brazilian reform was determined, to a significant degree, by the previous regional structure that existed prior to privatization.

making. Both reforms constitute a radical transformation from the previous industrial structure.

In terms of policy outcomes Table 9 shows a comparison of key telecommunications indicators among these countries<sup>32</sup>. The U.S. is the country with the highest level of telephone penetration (66.1), fact that is attributable to universal service policies pursued in this country for many years. The lack of strong incentives to expand the network in Mexico and Brazil, either by a strong universal service policy or by competition, explains the low teledensity in these countries.

New Zealand is the country with the highest degree of digitalization (99%), closely followed by Mexico (97.7%) and the U.S (89.3%) which have also achieved a high rate of technological modernization. The modernization of the telephone network is a strong achievement of the Mexican reform. In terms of the price of access to telecommunications services as a percentage of GDP, Mexican consumers face higher tariffs than the rest of the countries. The fact New Zealand's access tariffs are higher than the U.S. may be a consequence of how competition has been delayed by long processes of litigations.

*Table 9*  
Selected Features on the Telecommunications Sector  
(1998)

<i>Feature</i>	<i>Brazil</i>	<i>New Zealand</i>	<i>Mexico</i>	<i>United States</i>
Market Status	State-owned; monopoly	Private-owned; open competition	Private-owned; monopoly for local service; long distance competition)	Local Carriers: (Private-owned; open competition)
Teledensity	12	48.6	10.4	66.1
Digitalization	69%	99%	97.7%	89.3%
Subscription as a % of GDP	2.2	1.7	3.9	0.7

Source: OECD (1999); ITU (1998)

<sup>32</sup> The comparison is made in 1998 given the research interest of examining Brazil before reform took place. Reform in Brazil was initiated in late 1998 thus it is assumed the outcomes were not yet visible.

### ***Final Comments***

Telecommunications reform is a complex phenomenon that has a myriad of dimensions; there is no single determinant of this process. It is closely associated to technological innovation and the economic changes occurring in the world economy today. Yet, a central finding in this research is that the political dimension is a key aspect that must be incorporated into the study of telecommunications policy.

By applying a multidisciplinary perspective that draws from the economic and the political science literature, this research has been able to separate motives and needs for reform from the intricacies of the policymaking process and thus achieve a deeper understanding of reforms. Policymaking reveals a rational process constrained by the nature of domestic political institutions and policy context.

This research went beyond explaining why some privatizations are successful or not, it provided an explanation for cross-national differences in policy reforms. By doing so, this research found support to the theoretical argument that privatization, in itself, does not guarantee the development of the sector.

The analysis of the Mexican telecommunications reform shows a final balance with high social costs. The neglect to universal service objectives led to dramatically low telephone penetration rates. Telephone penetration in Mexico is lower than many Latin American countries and developing countries. The regional distribution of telephone services, mostly located in urban developed areas, imply that the benefits of technological innovation in telecommunications have not reached the majority of Mexicans. The study of the Mexican case suggests that policymakers focused on short-term needs, at the expense of long-term telecommunications development, which led to neglect the role of competition when Telmex was privatized. This neglect was possible given the lack of strong antitrust laws in the country. A long-term outlook would have given competition and telecommunications development a higher priority in the government's agenda.

The research findings in this paper support the theoretical arguments (Vickers, 1989) that suggest that privatization, in the absence of competition, does not guarantee an improved performance. Furthermore, in a sector such as telecommunications, regulation needs to support competition and provide mechanisms to achieve universal access.

However, another finding is that market forces by themselves cannot guarantee improved performance. At the other end of the spectrum, the New Zealand case showed that leaving regulation of the industry to market mechanisms led to long Court battles and, in the end delayed telecommunications development. The policy implication is that in a highly competitive telecommunications sector there is a need for mediating bodies. The privatization and liberalization of this sector must be accompanied by a clear and strong regulatory and monitoring structure that ensures a fair playing field and the attainment of telecommunications development.

To secure a path towards telecommunications development, policy reform must be an open public process. An open public process limits the influence of narrow interests. The Mexican case indicated how by fulfilling the demands of the strong actors in the telecommunications sector, (such as the national private capital and the telephone union) and focusing on short-term objectives, the Salinas administration neglected the objective of universal access and long-term consumer welfare. In the age of the *information revolution*, telecommunications policy must be open to the participation and needs of the larger community.

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