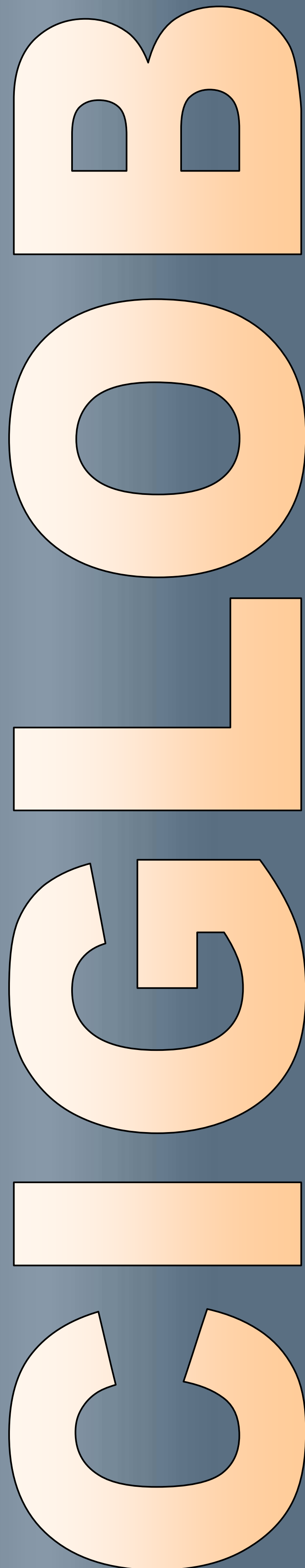
Centro Internacional de Globalización y Desarrollo

International Center for Globalization and Development



Documento de Trabajo
Working Paper
05

Governance-Investment Interactions in Chile

The Influence of Economic and Political Factors, and the Pension Funds

Mario Gutiérrez

Abril, 2008 – April, 2008

CIGLOB – www.ciglob.org
Contact Us / Contáctenos: contact@ciglob.org
Santiago, Chile.

Governance-Investment Interactions in Chile

The Influence of Economic and Political Factors, and the Pension Funds

by
Mario A. Gutiérrez[1]
April, 2008

Introduction

Chile has exhibited remarkable growth since the mid-1980s. Economic liberalization during the late 1970s and 1980s and the return to democracy during the 1990s have been accompanied by the building of sound governance (public and corporate governance)[2]. Its has become increasingly recognized in the literature that sound national systems of public and corporate governance are essential for economic development and growth in terms of their influence on investment behavior and productivity growth. Rules-based systems of governance encourage real productive investment behavior and long-run productivity growth, and also help suppress unproductive investment practices (Oman, Fries, and Buiter, 2003; Oman and Blume, 2005)[3]. Investment and productivity growth have been key growth sources in Chile's performance (see for example Gutiérrez, 2005; Loayza, Fajnzylber, and Calderón, 2004).

---

[1] Professor Sciences Po and international consultant. The author is grateful for comments and collaboration from Andrea Butelmann, Augusto Iglesias, Charles Oman and Ramiro Pizarro; all errors are his own.

[2] Principles of good *public* governance comprise "respect for the rule of law; openness, transparency and accountability to democratic institutions; fairness and equity in dealings with citizens, including mechanisms for consultation and participation; efficient, effective services; clear, transparent and applicable laws and regulations; consistency and coherence in policy formation; and high standards of ethical behavior in government" (from the OECD website on public governance and management, 2006). *Corporate* governance comprises: "a country's private and public formal and informal institutions, rules, practices, and mechanisms that govern the relationship between corporate managers and investors" (from Oman, *et al*., 2003).

[3] "Real investment" behavior refers to the behavior of domestic and foreign investors in the real economy over time, both in terms of quantity of investment and the extent to which investment is "productive" (productivity-enhancing) or "unproductive" (not contributing to productivity growth). "Unproductive" investment behavior includes all types of non-productivity enhancing types of rent-seeking behavior. "Investors" include suppliers of equity and debt finance, but also may include the suppliers of firm-specific human capital (employees), and supplier of other tangible and intangible assets that firms use to operate (Oman, Fries, and Buiter, 2003; and Oman and Blume, 2005).

This paper examines Chile's experience in the building of public and corporate governance since the 1980s. We show that economic and political factors, the private pension funds industry, and adoption of pro-competitive regulations have been key components of Chile's success in the building of sound governance standards as reflected in their influence on investment behavior and productivity growth.

Sound fiscal and monetary discipline, economic and political stability, and accountability are main elements of Chile's sound public governance. Economic and political factors have influenced the adoption of rules-based fiscal and monetary governance mechanisms that have contributed to economic stability. Political stability has been supported by strengthened accountability during the successive democratic governments that followed the end of the military rule in 1990. Corporate governance has equally been developed on the basis of rules-based and pro-competitive regulations that have helped protect investors from confiscation and vested interests. The operation of the private pension funds industry since the early 1980s has been a strong force not only for improving public governance in the area of fiscal management but also in the design of corporate governance mechanisms to protect investors, including minority shareholders.

Chile's public and corporate governance have continuously adapted to the challenges created by competition and globalization to stimulate real productive investment behavior. Chile's experience shows that positive reinforcing interactions exist not only between public and corporate governance but also between governance and investment behavior. Chile's experience can be understood as the formation of a virtuous circle among governance mechanisms, investment behavior and productivity growth. This interaction is reflected in the data both on investment and productivity growth in the country.

Sound corporate governance requires the building of sound public governance. Good economic management, political stability, and accountability are required to build sound governance standards, especially when, as in Chile, family relations and corporate

insiders have maintained historically close relationships across corporations and between the economic and political power structures.

In the second section of this paper we examine the influence of economic and political factors on public and corporate governance. We observe that the building of Chile's public governance has been influenced by the evolution of Chile's economic and political systems. Public governance institutions and mechanisms have been created to preserve economic and political stability. Sound public governance made possible the introduction of sound corporate governance mechanisms that stimulated the expansion of the capital market and the adoption of pro-competitive regulatory frameworks in the utilities sector. We also show that the continuous expansion of Chile's capital market and investment have become a reinforcing element to help maintain high public and corporate governance standards.

In the third section, we examine the influence of private pension funds in the evolution of public and corporate governance. The creation of a private pension funds industry required improvements of fiscal discipline and became a major source of expansion of Chile's capital market. Laws, regulations, and institutions have emerged to sustain fiscal discipline and the growth of private pension funds' investments. Regulations to protect minority shareholders and capital-market investors have been triggered by the operation of private pension funds.

In the fourth section, we examine Chile's experience with corporate governance in two key utilities sectors: electricity and telecommunications. We show that regulations in these two sectors evolved from an almost pure "self regulatory" approach of natural monopoly structures adopted in the second half of the 1970s and early 1980s, to a "pro-competitive" regulatory framework in the 1990s and 2000s with regulations adapted to induce investment and efficiency in the different segments of each sector subject to different degrees of competition. Efficiency improvements in these two sectors also spread across the Chilean economy as electricity and telecoms are basic inputs in most economic activities.

In the fifth section we review two key components of Chile's governance structure. First, we examine the "efficient-firm model" and its interactions with regulatory governance in the electricity and telecommunication sectors. This model has been used to limit problems of regulatory "capture" by participating firms, though it is still exposed to asymmetric information problems. Secondly, we discuss key features of Chile's institutional and accountability mechanisms supporting public and corporate governance.

The last section summarizes the main conclusions and policy lessons from Chile's experience in the building of public and corporate governance, especially as that experience is reflected in the interactions among public and corporate governance, investment behavior, and long-term productivity growth in Chile.

II. Economic and Political Factors influence Public and Corporate Governance

The evolution of Chile's economic and political realities helps to explain why the building of sound governance standards has not been blocked by powerful vested interests as it has in many other developing countries. The economic transformations introduced by both the military government, which ran the country for about 16 years (from September 1973 to February 1990), and the subsequent democratic governments, have contributed to building reliable public and corporate governance in Chile.

The military government injected better public governance of the economy by redressing the macroeconomic imbalances that built up during the 1960s and were exacerbated during 1970-73 under the socialist-oriented government. During 1972-73, Chile's economy was shrinking, and inflation reached hyperinflation levels in the second half of 1973 due to a growing deterioration of public finances and loose monetary management (Table 1). Inefficiencies proliferated across state-run enterprises (many of which were nationalized during 1970-71), fueled by high trade barriers, price controls and rationing. Financial and capital-market institutions were in a precarious situation as

interest rates were controlled by the government and credit was allocated according to the government's political priorities instead of by market forces. Political divisions and social confrontation accentuated to a point where the socialist government was unable to govern. During 1973 foreign and domestic investment almost disappeared as a consequence of almost non-existent public and corporate governance.

Macroeconomic performance improved during the second half of the 1970s. The government restored economic stability, imposing fiscal and monetary discipline, and strengthened competition by freeing prices and interest rates, leaving to the market and the private sector the responsibility of driving the allocation of resources and economic growth. The unilateral dismantling of trade barriers and adoption of a uniform tariff level injected competitive standards across most activities. Congress was closed between September 1973 and March 1990, which made it easier for the military government to expedite the approval of laws and regulations. The military dictatorship concentrated on the restoration of macro governance, which has been maintained under all successive democratic governments.

The military government also set the basis for Chile's current competition standard. The principle of free-market competition has been maintained under the successive democratic governments. Although the democratic governments have been leftist-oriented, there is consensus that the principle of sound competition should guide public and corporate governance.

The democratic governments, in power since 1990, have kept the private-led growth model and pro-competition orientation but have brought greater attention (and government resources) to broad-based consumer interests and social demands (education, health, and the poorest segments of the population). Congress has been actively involved in regulatory reforms and provides a key accountability mechanism for the executive branch of the government.

During the period 1990-2005, the three democratic governments have contributed to building efficient pro-competitive public and corporate governance standards and institutions, also strengthening accountability standards. Public institutions became accountable to Congress and rules-based mechanisms have been developed to ensure fiscal and monetary disciplines.

For analytical purposes it is useful to divide the evolution of governance in Chile into three sub-periods. This division reflects the main stages of economic and political transformation and governance in Chile since the 1980s.

1980s: Privatization, Private Sector Development, Self-Regulation

The 1980s marked a period in Chile's economic history of deep political and economic transformations. This period witnessed the process of divestiture of government assets imposed by a *laissez-faire* economic model of governance based on the free functioning of markets and minimal state involvement. The state-centered economic model of the 1960s and 1970s was gradually replaced by a model that assigned the leading role and engine of economic growth to the private sector.

The political and economic model of socialist orientation and state-run economy in place during 1970-73 was abruptly dismantled by a military government that took power by force in September of 1973. The military government embraced free-market and private-sector growth policies as the paradigm of economic development. In December of 1973, the government enacted a Competition Law (decree law 211) that set the basis for Chile's current high competition standards.

Financial repression was abandoned, the government budget was drastically cut, and an ambitious trade-liberalization program was adopted. Firms and banks previously nationalized during the socialist government were privatized in what has been called the first-round of privatization (Hachette and Luders, 1992). By 1980, a free banking system was operating, the fiscal accounts were balanced and inflation was brought down, and

growth accelerated. The economy was opened to foreign competition through the elimination of all trade barriers.

The 1980s followed a period of negative growth during 1972-75 and of steady growth during the second half of the 1970s (Table 1). Economic groups strengthened during the late 1970s by acquiring privatized firms and banks. The economy followed a path of de-regulation and self-regulation of all types of economic activity as the principle of free market competition was initially considered to allow no room for regulations.

Although the *laissez-faire* self-regulation approach reigned through the 1980s, it was partially attenuated by the introduction of regulations required for the operation of the private pension funds (AFPs) which were created in the 1981[4]. The financial and foreign-debt crisis during 1982-83, which caused per capita GDP to slump by almost 20 percent in 1983, also triggered regulations in the financial sector and the capital market.

A pension-funds law was enacted and capital-market reforms were undertaken to standardize formats for corporate balance-sheets and enhance corporate transparency, including public disclosure of related-party transactions by corporate insiders. The new pension-funds industry induced corporate-governance regulations that restricted cross-holdings of property among firms (see Agosín and Pastén, 2003).

The operation of unregulated private monopolies in the electricity and telecommunication sectors was left to self-regulation, in line with the initial adherence to an unrestricted free-market approach.

The economic crisis of 1982-83, triggered by debt defaults by Mexico and Brazil, was aggravated in Chile by excessive foreign indebtedness of local economic groups that operated under few restrictions on cross-ownership of firms and related-party bank loans, i.e., concentrated bank lending to firms owned by the same economic groups (bank-based

[4] Chile's private pension funds are referred to as "Pension Fund Administrators" (*Administradoras de Fondos de Pensiones* – AFPs).

economic groups). In 1983, the authorities took control of eight financial institutions, of which three banks were later liquidated (Lefort and Walker, 2000). The traumatic experience of this financial crisis triggered an additional set of regulations related to the banking sector: (1) a tax reform in 1984 that encouraged firms to use equity over debt finance; (2) mandatory risk-rating requirements were established for firms seeking investments from AFPs; (3) in 1986, a new banking law set limits on the concentration of bank lending and the mismatching of assets and liabilities; (3) also in 1986, a new banking law was dictated that prohibited banks to invest in equity and become the main source of finance of economic groups, as credit portfolio and related-party restrictions were imposed on bank lending.

During 1985-89, the economy grew at the record average annual rate of close to 7 per cent. Relationships with foreign creditors were normalized from 1985, which injected new foreign financing into an economy that was learning from an unrestricted free-competition laissez-faire model. A second round of privatization included the banks nationalized as a consequence of the 1982-83 financial crisis, and the natural monopolies in the electricity and telecommunications sectors. The privatization of electricity companies began in 1983 and that of telephone companies began in 1987.

The AFPs mobilized new financial savings into the capital market, as they were authorized since 1985 to invest in stocks (previously they could invest only in government paper, banking deposits, corporate bonds, and mortgage-backed securities). Despite the failures of self-regulation in the financial sector, the self-regulation approach guided the official view of unrestricted operation of the natural privatized monopolies.

The economic authorities of the military government continued to believe that the market was the best regulatory institution and that it would even lead to the disappearance of all types of monopoly. Public governance was, however, strengthened during the military rule. Sound macroeconomic policies were reflected in macroeconomic indicators that improved steadily through the 1980s, and in 1989 the Central Bank was

declared legally independent from the government, providing the basis for a monetary policy independent from political influences.

The absence of political checks and balance during the military government opened multiple spaces for personalized relationship-based governance, notably regarding minority shareholder expropriation and vested-interest problems. The handling of economic policies was nevertheless guided by efficiency and competition objectives, which drove initial improvements in public and corporate governance. Fiscal and monetary management improved, as reflected in better fiscal balances and reduced inflation, and the operations of the AFPs forced the introduction of regulations and institutions aimed at protecting investors, especially minority shareholders.

Three distinctive characteristics of Chile's privatization processes have contributed to better corporate governance and accountability: (1) the requirement, following the crisis in the early 1980s, that the privatized electricity and telecommunication companies be listed in the stock market; (2) the sale of company shares to company workers (a process known as "popular capitalism"); and (3) the opening of the sectors to investment by private pension funds. A new ownership structure was created, as a consequence of the privatized public utilities, which combined with regulations on pension funds to create mechanisms that helped protect minority shareholders from corporate controller groups (majority shareholders).

Through the 1990s and 2000s, the continuous participation of pension funds in the ownership of electricity and telecommunication companies, as well as across all economic sectors, would further fuel the gradual replacement of a self-regulation of markets approach by a pro-competitive regulatory approach oriented to correct market inefficiencies and help to stimulate investment and productivity growth across all economic sectors.

1990s: Return to Democracy, Transition from "Self-regulation" to "Pro-competitive" Regulation

In the 1990s Chile entered a phase of economic consolidation and democratization of social institutions. Economic stabilization was in place and structural reforms were well advanced by the end of the 1980s. The new democratic government that took power in 1990 decided to keep the free-market-oriented economic model, but gave emphasis to social progress, mainly in education and health. The economy faced the challenges of increased globalization of the world economy. It was well placed as the industrial and banking sectors were well exposed to open competition. However, the self-regulation approach to governance had failed to resolve growing conflicts among private monopolies and between them and their sector-specific regulatory bodies amid increasing pressures from growing competition and innovation (see Meller, 2002). The main source of conflicts was related to the setting of user tariffs, including the interconnection charges (charged to suppliers for accessing monopolies' infrastructure). Year 1997 marked the end of a period of sustained high economic growth (1991-1997 average annual GDP growth was 8 per cent) as the country began to suffer the effects of a series of external shocks that began with the Asian crisis in 1997.

Regulatory institutions were gradually reformed in the 1990s and Congress became directly involved in the approval of reforms oriented to the improvement of accountability and regulatory standards. Self-regulation was gradually replaced by a more pragmatic pro-competitive regulation-of-markets approach that accepted the benefits of competitive markets but recognized the need to regulate market failures, in particular imperfect competition and the private operation of natural monopolies. Private monopolies in the electricity and telecommunication sectors were gradually unbundled, and various segments were opened to competition and domestic and foreign investment. Electricity and telecommunication services expanded strongly as a consequence (discussed further below).

Governance regulations were also adapted in other key sectors to enhance competition. In 1991-92 banks and the AFPs were allowed to invest abroad. A major capital-market reform was approved by Congress in 1994 that injected further flexibility to pension funds' investments. In 1997, new amendments were introduced to the 1986 banking law that reduced entry barriers for new banks, widened the scope of authorized banking activities, and required banks to adopt the Basle capital-requirement standards. Two other capital-market laws (the Securities Market Law and the Corporations Law) were also amended in 1994, to broaden investment alternatives for institutional investors, to improve conflict-of-interest regulations and risk rating, and to strengthen minority shareholder protection[5].

Since 1998: Consolidation of Democracy, Strengthened Public Governance and Pro-competitive Regulation

Chile entered a period of recession in 1998 and of slow recovery until 2004. The economy received an impact from a series of external shocks – from Asia (1997), Russia (1998), Brazil (1999), and Argentina (2000-2001) – which triggered capital flight from Latin America, including foreign direct investment. The economy was forced to muddle through a period of low direct investment, sluggish growth, and increased unemployment. Signals of good governance were given high priority by the third democratic government (2000-2006) to overcome the decline of domestic and foreign investment.

In 2001, the Congress approved a structural-surplus rule for fiscal policy and a new set of capital-market reforms[6]. The structural fiscal rule signaled a strong

[5] The reforms allowed for the calling of extraordinary shareholders meetings by at least 10 per cent of shareholders or by the regulator (Superintendency of Securities and Insurance) if required. The reforms established that extraordinary meetings should consider all special issues such as changes in board attributions, mergers, statutory reforms), and that all matters decided in these meeting must be approved by at least two-thirds of shareholders, thereby allowing minority shareholders to block decisions they consider confiscatory by controller shareholders.

[6] The fiscal structural-surplus rule forces the maintenance of a structural budget surplus of at least 1 per cent. According to the rule, government spending has to remain 1 per cent below cyclically adjusted government revenue, which is obtained by adjusting estimated revenues by the gap between potential and actual GDP and the gap between the long-trend and actual copper price. The rule protects spending from cyclical economic downturns and forces the government to save copper revenues when the copper price

commitment to fiscal discipline. The capital-market reform introduced incentives for saving and investment. It raised the ceilings on pension funds' investments abroad and allowed AFPs to offer a menu of five different risk-return types of fund to beneficiaries. It also introduced tax benefits for voluntary savings for retirement, for the trading of emerging-market stocks, and for foreign investments in the domestic capital market.

A strong signal of good governance in Chile was equally provided by the signature in 2003 of a trade agreement with the Unites States and the European Union. These agreements are effective locking mechanisms for governance standards at the macro and micro levels. In addition to a scheduled reduction of trade barriers, the treaties include rules on investment and competition policy that require the maintenance of consistent governance standards. The treaty with the US triggered the creation in Chile of Competition Courts (TDLC) in 2003[7]. These courts have played an important role in promoting further competition in the utilities sectors.

Investment and Productivity Growth

Chile's relatively strong economic growth over the last two decades (see Table 1) reflects the strength since the mid-1980s of both investment and total factor productivity growth, which have benefited from the strengthening of governance in Chile. As shown in Figure 1, physical capital formation has played a positive role but the key force making the difference between faster and slower growth has been total factor productivity (TFP) growth (see also Gutiérrez, 2004; Loayza et al., 2004). Chile's TFP growth accelerated from the mid-1980s and this change in trend helped to accelerate economic growth. Sound governance has enhanced TFP in Chile (TFP comprises all factors that contribute to efficiency including changes due to reallocation of resources and government policies) by helping continuously to upgrade both rules affecting the protection of investors' property rights and competition standards.

---

moves above its long-term trend. Copper is the main commodity export of Chile and a major source of government revenue: copper exports constitute 40 to 45 per cent of total exports, and government revenue from copper is between 20 and 30 per cent of total government revenue.

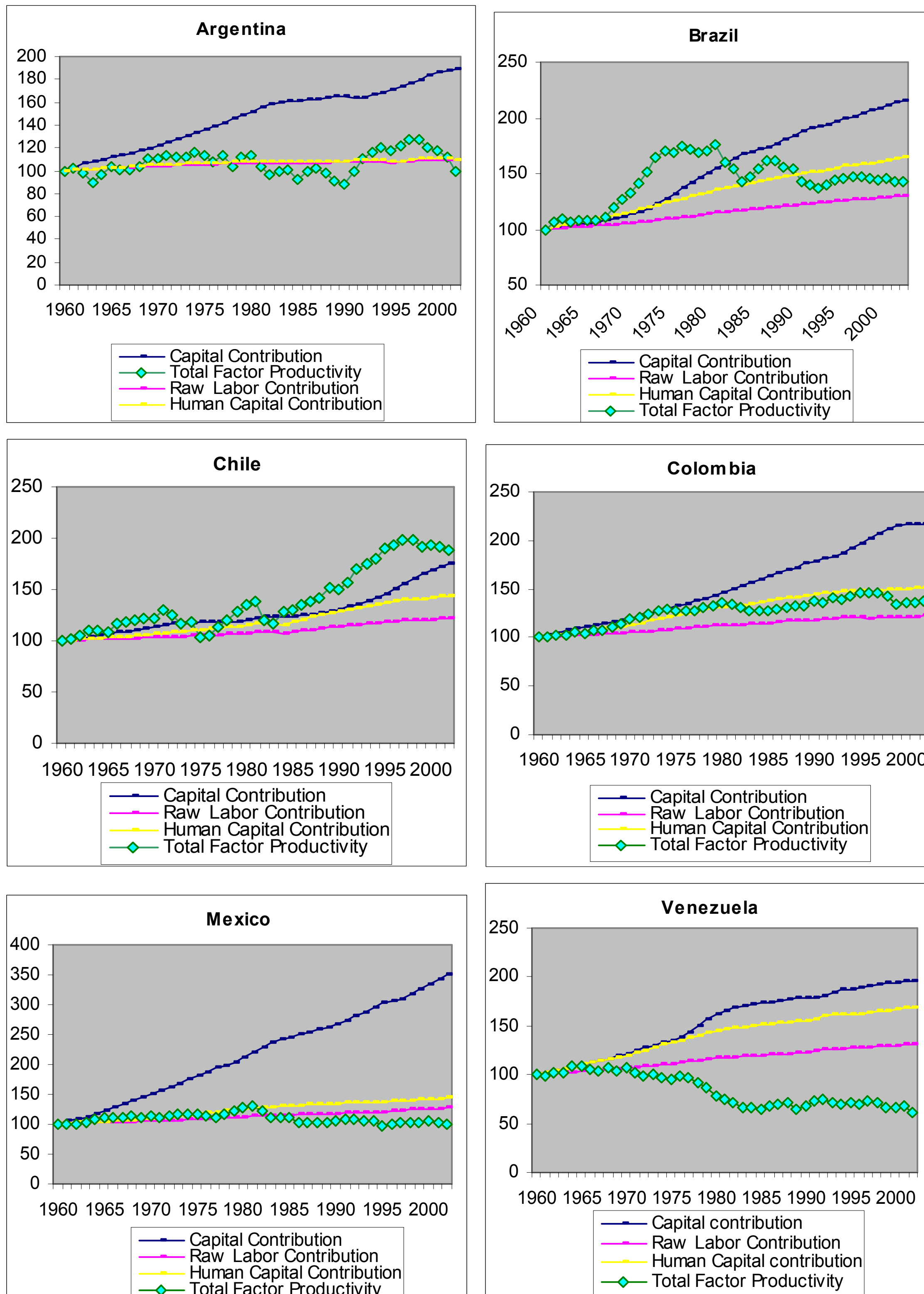
[7] The Tribunal replaced the Preventive and Anti Trust Commission created as part of the Competition Law in late 1973 after the military government took power.

Table 1
Chile: Selected Economic Indicators

	1970-73	1975-80	1981-85	1986-90	1991-95	1996-2000	2001-04
I. Growth and Inflation							
GDP per capita (constant 2000 US$)	2258	2152	2340	2798	3778	4815	5193
GDP growth (annual per cent)	1.4	4.2	2.0	6.8	8.7	4.4	3.6
per capita GDP growth (annual per cent)	-0.4	2.6	0.1	5.0	7.0	3.0	2.4
Inflation, consumer prices (annual per cent)	122.2	131.2	47.5	19.6	13.9	5.2	2.5
Fiscal Balance (per cent of GDP)	-7.8	1.8	-1.3	0.9	1.9	0.6	1.3
M2 (per cent of GDP)	17.0	15.5	35.1	35.6	36.4	41.9	37.8
II. Investment and Savings							
Gross Capital Formation (per cent of GDP)	15.4	18.9	18.7	22.8	24.6	25.1	22.6
Foreign Direct Investment (per cent of GDP)	-0.4	0.7	1.1	3.4	3.3	7.8	4.4
Gross National Savings (per cent of GDP)	13.0	15.2	7.7	19.5	21.9	21.1	21.7
III. External Balance							
Current account balance (per cent of GDP)	-5.5	-4.9	-10.8	-3.1	-2.7	-3.2	-0.6
Exports of goods and services (per cent of GDP)	12.3	23.0	27.0	32.9	30.2	28.0	35.4
Trade Balance (per cent of GDP)	26.0	47.6	56.0	61.6	59.2	57.5	67.1

Source: World Development Indicators (WDI) (World Bank) and International Financial Statistics (International Monetary Fund).

Figure 1: Sources of Growth: Chile and other Latin American Countries[8]



[8] Obtained from Gutiérrez (2004). Indexes based on the shares of contributions to GDP growth.

III. Influence of Private Pension Funds

Chile's private pension funds, managed by the AFPs, have had a major positive influence on the development of corporate governance in the country. Since the early 1980s, following the privatization of the social security system, the AFPs have played a leading role in the development of the capital market. The size of the funds' assets grew from about $1 billion in 1981 to about $75 billion in 2005, or about 65 per cent of GDP in the last year, and more than double the national savings rate (see Table 2). The AFPs have become the most important minority shareholders in Chile's capital market, currently holding about $11 billion in Chilean corporate equity diversified across a wide spectrum of stocks (corresponding to about 15 per cent of the pension funds' total assets).

Pension funds have been a major force behind the continuous modernization of Chile's corporate laws and regulations, contributing to developing the capital market and rules for protecting minority shareholders. The pension funds' influence on corporate governance has been strengthened when their investments were extended from being highly concentrated in government debt and bank deposits to a greater share in equity, as good governance standards need to be introduced to protect pension funds' interests from inadequate capital-market and corporate-governance behavior by corporate controllers (majority shareholders and other corporate insiders).

The AFPs have exercised a major influence on Chile's corporate governance through three main channels: (1) direct involvement in the board of directors of companies (direct monitoring); (2) participation in Chile's capital market (indirect monitoring); and (3) strong influence in the shaping of corporate governance institutions and regulations. Since their inception in the early 1980s, the AFPs have represented a permanent "unofficial" force for improving corporate standards and regulations. Pension funds are widely owned across Chilean society (see the number of "affiliates" shown in

Table 2) and are widely invested across economic sectors and companies (see Table 3), both of which have enhanced their influence in the shaping of corporate governance[9].

Although data on the specific portfolio investments of AFPs are not publicly available, the growing diversification of those investments is visible in the data shown in Table 3. From a strong concentration in Central Bank bonds and the banking sector in the early 1980s, they have gradually evolved to include more holdings of the securities of non-financial firms and of foreign financial assets.

Private pension funds have also been influential in the building of macro governance. The privatization of pension funds in the early 1980s was accompanied by tight fiscal discipline to limit the deterioration of public savings induced by the reform. The transition from the previous government-managed unfunded pay-as-you-go system of generous defined benefits, to the current privately managed funded system of individual capitalization accounts based on defined contributions, induced a political decision by the government to maintain a tight fiscal budget during the transition to help compensate for the loss of pension contributions to the AFPs. The fiscal balance (see Table 1) improved from an average *deficit* of over 1 per cent of GDP in 1981-85, to an average *surplus* of about 1 per cent by the second half of that decade.

The influence of private pension funds has become evident as a major source of growth of the Chilean capital market and the creation of economies of scale in the gathering and processing of business information. The production of financial information by different think tanks became profitable as the volume of financial savings and the sophistication in the capital markets rose.

Pension funds have also required the creation of a regulatory framework that has contributed to improve corporate governance across all economic sectors, improving the efficiency and competitiveness of Chile's capital market. The operation of a risk-rating

[9] Individual AFPs usually own less than 10 per cent of the total debt and equity securities issued by an individual firm, although in the case of utilities that share is often between 20 and 30 per cent, according to Iglesias (2003) and the Superintendency of AFPs.

industry was born as a required complement to the operation of a private funds industry. The pension funds regulations have been dynamically adapted to changing capital market conditions to provide AFPs with competitive risk-return opportunities (Iglesias, 2000; Uthoff, 2001; and OECD 2003 and 2004).

Direct Monitoring

Some direct but limited influence of AFPs in corporate governance is contemplated in Chile's regulations of pension funds. The Pension Funds Law states that the AFPs must participate and vote in all shareholders meetings of the companies they hold investments (including the election of boards). The regulator (Superintendency of AFPs) makes public all relevant information concerning AFPs' votes in the shareholder meetings in which they participate and vote, which benefit all investors[10]. Direct influence on corporate management is also contemplated through the AFPs' representation on companies' boards and the calling of special shareholders meetings. AFPs are forced by the regulator to initiate legal actions whenever they believe that the pension funds' interests have been damaged by a company's management decision.

Chile's regulations restrict the AFPs' direct involvement in corporate governance in order to protect investors from agency and conflict-of-interest problems. The AFPs cannot (1) vote for board candidates who are related to majority shareholders or who control the company; (2) influence companies' management decisions, except through their participation in shareholder meetings; (3) exercise any direct personal influence, or express any opinion publicly or to other shareholders (except when related to the analysis of public information) concerning the company's management (their performance or decisions); or (4) instruct board members of a company for whom they voted as to how they should act or vote in board meetings. These mechanisms have been effective in helping to improve Chile's corporate-governance standards. Non compliance with these regulations is subject to penalties levied by the Superintendency of AFPs.

[10] AFPs are exempted from the obligation to participate and vote in shareholders' meeting only when the AFPs' investments in the company do not exceed 1 per cent of the company's shares and 0.5 per cent of the pension fund. However, these holdings do not represent more than 5 per cent of AFPs holdings.

The AFPs have strong incentives to participate and vote in shareholder meetings because, despite restrictive regulations (see below), they own important shares of the equity of listed companies, especially in electricity and telecommunications. AFPs collectively own more than 5 per cent of the equity of about half of listed companies in Chile, and over 10 per cent of the equity of another third of listed companies. This level of ownership has given the AFPs the right to elect about 10 percent of board members of listed companies in Chile[11]. In electricity and telecommunications, the AFPs' share of ownership has been the highest, but the AFPs' status as minority shareholders established in Chile's regulations continues to hold, as well as for all AFPs equity investments (see pension funds regulation below) (data from Iglesias, 2000 and updates from this author).

The AFPs' participation in shareholder meetings and on boards of directors has become a very effective mechanism of direct monitoring of corporate governance, given Chile's highly concentrated ownership of corporations and limited liquidity of its capital market. Ownership of Chilean companies remains highly concentrated in families, economic groups, and foreign investors. The regulations of pension funds relegate AFPs to the role of minority shareholders but also provide mechanisms to protect them from vested interests and expropriation by corporate controller groups. These mechanisms include company listing requirements, and the risk-rating of instruments and issuers authorized for pension-fund investments. The AFPs' use of exit (selling their shareholdings) as a protection mechanism is not very effective, because of the thin liquidity of Chile's capital market (we return to this below).

Restrictions have been imposed on a more extended involvement of AFPs in corporate governance in order to limit potential vested-interest problems. For example, AFP's managers could try to influence corporate management decisions to obtain benefits for themselves or related parties. Despite the minority participation of AFPs in companies' boards, induced by the regulations, the AFPs have contributed to corporate

---

[11] Chile's stock market capitalization is about US$ 116 billion, or about 120 per cent of GDP (data for end-2005; Central Bank of Chile).

governance through various mechanisms: (1) by installing an independent group of professional board members in the companies they invest; (2) by restricting unproductive types of investment behavior by those who control corporations (majority shareholding families, economic groups, or foreign investors); (3) by contributing to the transparency of companies' investment decisions, transfer-pricing practices (between the parent company and its subsidiaries) and the determination of management benefits; (4) by limiting the use of inside information by controller groups (majority shareholders); and (5) by contributing to the creation of board-level audit committees, responsible for verifying all operations involving related parties, in most companies in which they hold important stakes (Iglesias, 2000).

Indirect Monitoring

The indirect role of pension funds in corporate governance began in 1985 when AFPs were authorized to invest in stocks. AFPs began investing in electricity and telecommunication companies that were being gradually transferred to the private sector during the second half of the 1980s, but later extended their investments to a wide spectrum of listed domestic and foreign companies (the later mainly through the purchase of ADRs[12]).

The AFPs have increased the liquidity (and volatility) of Chile's capital market as they invest about $45 billion (equivalent to about 40 per cent of GDP) in the domestic capital market (about 30 per cent of pension funds assets are invested in foreign securities). These investments induce domestic share prices to better reflect relevant information about the quality of corporate governance. There are no regulatory restrictions on the free indirect role played by the AFPs in the monitoring of corporate governance. AFPs are free to purchase stocks in companies they consider well managed and sell stocks in those they consider poorly managed. The only exceptions to the free indirect monitoring role played by AFPs are: (1) AFPs are obliged to purchase and sell

[12] American Depositary Receipts (ADRs) are securities issued by a US bank in place of the foreign shares held in trust by that bank, thereby facilitating the trading of foreign shares in US markets. .

stocks in formal secondary markets (registered stock exchanges); and (2) direct negotiations or tender offers are not allowed. Although these restrictions limit the AFPs' influence on corporate management, they contribute to increasing the transparency of corporate governance mechanisms. The risk-rating procedures that are part of Chile's pension funds' regulations (see below) help strengthen the AFPs' indirect role, as companies seeking to gain pension-fund investments are induced to upgrade their corporate-governance standards.

Institutional investors worldwide tend to be more concerned about the liquidity of their investments than to become directly involved in corporate decisions when capital markets are highly liquid, ownership concentration is low, and "free rider" problems are significant (the costs of monitoring are incurred by few while the benefits are spread over all shareholders) (Starks, 2000). Liquidity is important for institutional investors because it provides the opportunity to rapidly exit poorly performing companies and build positions in better performing companies. The high liquidity in the US market discourages institutional investors from becoming involved in corporate governance because it is less costly for them to avoid firms that need active monitoring and invest in firms with adequate corporate governance (Bhide, 1994).

The liquidity of Chile's capital remains thin, however, as a result of its relatively small size, which limits the liquidity for large transaction blocks of stocks and corporate debt. A measure of liquidity of Chile's capital market is given by the number of shares of a company held by the AFPs as a proportion of total monthly trade volumes in the stock exchange. According to this measure, in most cases AFP stock investments account for more than ten months of trading (see Iglesias, 2000). This restricts the pension funds' ability for using exit as an effective corporate governance mechanism, providing incentives for direct involvement in corporate management policies and decisions even in their capacity as minority shareholders and under the restrictions imposed by the regulations (see above).

Most of the influence of AFPs as investors has been through their participation in equity holdings rather than bonds. The AFPs have contributed to strengthen the efficiency of Chile's capital market. The emergence of scale economies in the collection, processing, and analysis of specialized financial information have allowed AFPs to build research departments that contribute to improve the quality of information available for all participants in Chile's capital market. The growing participation of research analysts working for mutual funds and foreign investors is evidence of the increased sophistication of Chile's capital market. The AFPs have also induced regulators to authorize the operation of private risk-rating agencies, inducing the production and publishing of specialized financial information and improvements of corporate governance standards across all economic sectors, as firms are forced to upgrade their governance standards in order to be accessible to pension fund investments.

Accountability of managers and controlling shareholders has also strengthened as a consequence of the building of specialized capital-market analysts that help manage pension funds' investment portfolios. A corporate merger involving *Enersis* (an electricity-centered conglomerate) was investigated and penalized by the Superintendency of Securities and Insurance in 2001. Increased professionalism and public scrutiny of pension fund investments have contributed to improve the regulations and institutions of Chile's corporate governance.

Pension Fund Regulations

Chile's regulations contemplate mechanisms that help protect pension funds' investments from expropriation or abuse by vested interests. AFPs' owners (as distinct from the "affiliates" who own the pension funds managed by the AFPs) may be tempted to use pension funds to finance firms in which they have investments or have private interests. Chilean regulations limit the scope of this problem through various mechanisms: (1) each individual contributing to a pension fund is allowed to select an authorized pension fund manager (AFP) of his preference and move his funds (twice a year as a maximum) to a different AFP at any time and without costs or penalties; (2)

ceilings are established for pension funds' investments in companies related through ownership or management to the AFP[13]; (3) Chilean pension funds are run by the private sector, which prevents the government from confiscating or using pension funds to influence private firms' actions; and (4) pension law reforms must be approved by a substantial majority of Congress, which prevents the government from using pension regulations to influence pension funds' investment decisions or for political reasons; (5) the AFPs and the pension funds that they manage are considered separate legal entities; (6) the AFPs' legal purpose is to manage the pension funds only; (7) the AFPs are forbidden from using pension funds as a financing source for themselves or companies not allowed by the pension funds regulations; (8) the AFPs must invest only in assets authorized by the regulations and diversified across a large number of instruments and companies; (9) the regulations establish formal valuation, transactions, and custody procedures; and (10) the regulations limit the conflicts of interest between the AFPs and their affiliates, and between the AFPs and the companies in which pension funds are invested[14].

The pension fund regulations place specific ceilings on investments by instruments and issuers: (1) an AFP cannot invest more than 50 per cent of its assets in government bonds, 37 per cent in equity; and 30 per cent in foreign securities; and (2) an AFP cannot hold more than 7 per cent of any company's stock, or invest more than 5 per cent of its assets in any particular stock. Regulations prohibit pension fund investments in companies not listed in an official stock exchange (national or foreign) approved by the Superintendency of AFPs. In addition, sub-ceilings are established that discriminate according to the type of instrument and issuer. The sub-ceilings vary depending on the size of the pension funds, type of company, net worth of the company, trading history and liquidity of the instrument, concentration of ownership, the proportion of the company's business that is under its direct control, and risk ratings. Regulations also provide for the

[13] A ceiling of 5 per cent of the pension fund is imposed for the whole group of investments in companies related to AFP's owners..

[14] "Affiliates" are all individuals associated to an AFP whether as active or passive contributors or as receivers of retirement pension payments. "Contributors" are individuals actually contributing to an AFP, which excludes the unemployed, self-employed and low-wage families that could be affiliated to an AFP but have a gap in their pension-contributions history.

risk-rating of instruments and issuers by two private risk companies and subject to further scrutiny of the official Risk Rating Commission.

It is especially relevant to highlight the strong contribution of pension funds to shape corporate governance laws for protecting minority shareholders. Ceilings on investments and on the concentration of ownership have left AFPs as minority shareholders in the companies in which they hold investments. Ownership concentration of corporate securities (equity and debt combined) is below 10 per cent in most cases and below 30 per cent for the holdings of the largest electricity and telecommunication companies. The AFPs collectively hold 26 per cent of Entel stock (telecom), 25 per cent of Telefónica-CTC (telecom) and 21 per cent of Endesa (electricity). Another illustration of their effective but *limited* role in direct monitoring is that these holdings have allowed the AFPs collectively to elect only two out of nine directors in Entel, one out of seven directors in Telefónica-CTC, and two out of nine directors in Endesa (data from the Superintendency of AFPs).

Pension fund regulations have also contributed to protect minority shareholders in general because they triggered the creation and operation of risk-rating mechanisms and the dissemination of specialized capital market information. They have also induced transparency and public information on corporate governance standards such as the requirements to publish timely detailed balance-sheet information, and publicly disclose all relevant information that may potentially affect shareholders' interests.

The operation of the private funds industry in Chile has shown two sources of perverse investment behavior, however: (1) wasteful spending on competition among AFPs; and (2) low density of contributors [15] (Table 2). Some scope for improvements could be explored to introduce more flexibility to the regulatory framework, in particular, in the setting of commissions and portfolio holdings.

[15] We refer to the ratio of contributors to affiliates as the "density" of contributors.

The pension fund law does not set any specific level for the commissions that AFPs may charge to affiliates, but establishes that the same contributions rate must be charged to all affiliates alike, regardless of a worker's income (e.g., if an AFP charges 1 per cent as commission fee, this percentage should be charged to all affiliates). The average commission fee charged by Chilean AFPs (about 2.5 per cent of taxable income and about 0.6 per cent— 0.8 per cent of managed assets) is similar to or even below those in some other Latin American countries such as Mexico and Peru, but is high when compared to low-cost providers in countries such as the United States, where the fees are below 0.5 per cent of managed assets (Jiménez and Cuadros, 2003; Uthoff, 2001; IMF 2005).

In addition, the regulations obliges AFPs to obtain a return on the pension funds they managed of at least 2 percentage points or 50 percent the industry's average real rate of return in the last 36 months. If the return falls below that threshold the AFP's owners must compensate its affiliates with their own resources. AFPs are thus restricted from adjusting the quantity and quality of services they offer to affiliates according to their income level, and have incentives to attract the accounts of high-income workers since the profit margins on those accounts are higher than for low-income workers. This rigidity forces AFPs to differentiate from each other by offering better customer services to high-income groups and incurring significant marketing costs. This makes marketing costs and sales representatives an integral part of AFPs' strategies and a high turnover of affiliates is encouraged (affiliates switch among different AFPs).

These restrictions on commission fees and returns also encourage herding behavior by AFPs, with the three largest (out of a total of six) being the leaders for the whole industry. As a result, AFPs make similar investments, obtaining similar returns, and base their competition on expensive marketing strategies rather than on different combinations of portfolios, services, and commissions. The existing regulations on commission fees and returns have induced distortions in the mix of prices and services that AFPs would offer their customers under a more liberalized regime. In the current system, the AFPs are forced to compete with each other on the basis of the quantity and

quality of services, rather than on prices. The current restrictions on price competition have induced excessive spending on services, equivalent to a type of wasteful or unproductive investment[16]. Although partial reforms in the legislation since 2002 allow the AFPs to offer a menu of five alternative risk-return portfolios, these are configured according to a unique structure (in terms of the maximum percentages of the various type of instruments allowed on each type of portfolio), which means the basic elements of the AFPs' herd behavior remains unchanged.

The oligopoly characteristics of the pension funds industry is another factor that limits the incentives for cutting commission fees. The number of AFPs has fallen from a peak high of 14 in 1994, to 6 in 2006; the three largest AFPs concentrate about 70 per cent of total pension funds and 80 per cent of affiliates. This concentration has opened spaces for oligopolistic behavior, stimulated by evidence of low elasticity of demand by affiliates in terms of the commission fees charges by an AFPs (cuts in commission fees by an AFP do not change much the number of its affiliates) (Uthoff, 2001). In this context, AFPs have incentives to protect the level of commission fees, which help finance large marketing budgets and also discourage new entrants to the industry. This spending constitutes a type of unproductive investment that may be avoided if regulations allow AFPs to discriminate across affiliates through a variety of price-services portfolio combinations, and allow the entry of other financial companies (such as banks, mutual funds, and insurance) to compete with AFPs. About half of the average 2 per cent commission fees is spent on marketing costs.

Chile's pension fund system suffers moreover from a growing problem of low density and coverage, which constitute a threat for future fiscal stability. The average ratio of contributors to affiliates is about 60 per cent and the coverage as measured by the ratio of affiliates to the population of fifteen years or older is also about 60 per cent. In the current private pension system the government is no longer required, as in the previous pay-as-you-go state-run system, to finance pensions, except that it is obliged

[16] Before deregulation, the airlines and banking industries in the United States competed mainly on services offered to customers as regulations prevented price competition.

(according to the pension law) to finance pensioners whose pensions fall below a certain minimum level of about $150. Employment gaps, individuals entering and exiting the labor force (mainly women and young individuals), low contributions by self-employed individuals, and low salaries are the main causes of the current trends. According to OECD (2005) about 60 per cent of pensioners obtained pensions below the minimum level by 2005, which could become an important source of social instability and weaken macro governance (see also IMF, 2005).

Table 2
Pension Funds Indicators (Chile)

	1981	1985	1990	1995	2000	2005
Pension Fund Assets (bill US$)	0.3	1.5	6.7	25..4	35.9	74.5
per cent of GDP	0.9	9.1	22.1	39.0	47.4	64.7
per cent of National Savings	0.06	121.8	95.3	163.9	230.1	274.2
per cent of M2	3.1	43.3	85.0	124.2	107.7	139.4
Number of affiliates (millions)	1.4	2.3	3.7	5.3	6.3	7.2
per cent of Pop. 15 yrs or older	14.0	16.5	39.8	52.0	57.3	60.5
per cent of labor force	36.8	53.5	75.5	94.6	108.6	114.3
Actual Contributors as per cent of Affiliates	78.6	69.6	70.2	56.6	50.8	50.7

Source: Supertintendency of AFPs; Central Bank of Chile; WDI (World Bank); IFS (International Monetary Fund; and National Institute of Statistics, INE.

Table 3
Pension Funds Investments by Sector
(end-December data; percentage of total investment)

	1981	1985	1990	1995	2000	2005
Government and Central Bank	28.1	42.4	44.1	39.4	35.7	16.5
Financial sector	71.3	56.0	33.4	23.1	35.6	29.7
Non financial private sector	0.6	1.1	22.4	37.2	17.6	23.6
Foreign sector	0.0	0.0	0.0	0.2	10.9	30.0

Source: Superintendency of AFPs

IV. Evolution of Governance in Electricity and Telecommunications

The institutions of governance have become a key element of Chilean economic development. The country has gradually faced the challenge of moving from governance institutions operating within a heavily relationship-based framework to institutions that

operate more on the basis of a rules-based framework. The Chilean experience shows the challenge of inducing competition and productive investment behavior in industries where economies of scale dominate, as in the case of public utilities. Although the electricity and telecommunication sectors have traditionally operated under uncompetitive market structures, Chile's regulatory framework includes an institutional framework to simulate efficient competitive and investment behavior, centered on the Competition Tribunals (TDLC) (see below).

Regulatory governance has been built to discourage unproductive investment behavior and the related negative impact of wasteful spending on productivity-growth. Expropriation problems in the context of the 1982 financial crisis led Chile's regulatory authorities to focus on strengthening transparency and disclosure of financial information, and strict standards were set as pre-requisites for companies' shares to be listed in the stock-market and authorized for purchase by AFPs. Regulators have nevertheless adopted a pro-competition posture: regulations not only set prices but encourage competition across different market segments.

The evolution of governance in Chile not only shows the evolution of regulatory institutions but the constraints and interactions placed by the economic framework and the political economy on public and corporate governance developments. The building of governance in electricity and telecommunications has evolved in patterns similar to those observed in the broader economic and political contest (see also Galétovic and de Melo, 2005; Galétovic and Sanhueza 2002; and OECD 2003 and 2005).

In the 1980s, the governance institutions faced three main challenges: (1) the building of a framework to regulate the operations of private monopolies; (2) the regulatory framework had to ensure that the profitability of public enterprises became attractive for privatization (tariffs had to be adjusted upward to reflect at least the marginal costs of providing electricity and telecom services, which implied the end of extensive government subsidies in the provision of these services); and (3) the government embarked on a large scale privatization process of public companies in the

framework of an economic model that stimulated a growing participation of the private sector, fiscal discipline, and competitive markets.

The privatization process transformed public natural monopolies into private ones– monopolies that were organized as vertically integrated holdings with monopoly powers over essential infrastructure. The self-regulation model, initially adopted in the 1980s, failed in the course of the decade because participant companies were unable to agree on inter-firm fees for access to essential infrastructure. The formation of private holdings in both sectors limited access by the regulator to transparent information, accentuating the problems of asymmetric information between the regulatory agency and the regulated companies. Investment behavior included rent-seeking activities through excess pricing and raising entry barriers. Tariffs were initially high in the 1980s and controls over essential infrastructure prevented entrance of new firms.

Electricity and telephone companies were restructured and privatized during the 1980s. Generation, transmission, and distribution of electricity were unbundled and marginal cost dispatching was introduced for generation (node prices). The privatization of the state-owned electricity companies began in 1983 and concluded later in the 1980s. The state owned telephone companies were privatized during 1987-88. The restructuring in both cases took place under the efficient-firm regulation model, used as a benchmark for setting electricity and telecommunication tariffs (see below).

In the 1990-1997 period, the challenges reflected the market and governance failures resulting from the operation of private monopolies in both sectors under a self-regulation approach: (1) increased inequalities in the distribution of investments in different segments of each sector (investment concentrated in electricity generation with little investment in transmission and distribution); (2) accumulation of litigations from affected parties arguing abuse of monopoly power by the leading companies; (3) growing conflicts among participant companies and between them and the regulator regarding the self-regulation process (determination of prices of generated electricity, lack of agreement among participant companies regarding the sequence of electricity delivery by

generator plants, and lack of agreements in the accession to fixed telephone lines). The regulations were ambiguous on the use, consumer prices and inter-firm fees affecting essential infrastructure (transmission and distribution of electricity, and fixed telephone lines). Problems of unproductive investment behavior accentuated in terms of excess rents extracted from consumers and profitability indicators of operating monopolies reached historically high levels in the mid-1990s (see data in Fisher and Serra, 2002; Moguillansky, 1997 and 1998; and Serra, 2002)

In 1994, long-distance multi-carriers were allowed in the telecommunications sector, which replaced a regulated monopoly. As a consequence, several firms entered the market, tariffs fell sharply, and traffic almost doubled during the rest of the decade. Tariffs in mobile and long-distance telephone calls fell, induced by regulations that pushed switching costs downward (Fisher and Serra, 2002). Electricity generation and tariffs also fell through the 1990s as consequence of technological improvements and new investments (see data in Serra, 2002).

The progressive dismantling of private monopolies created oligopolistic structures in both sectors with growing disputes about the prices and rules governing access to essential infrastructure. Conflicts grew between companies and the regulatory agencies regarding the rules and contracts affecting the generation and distribution of electricity, and access to fixed telephone lines. Asymmetric information problems increased as the holding companies created a series of ancillary and complementary activities and companies, inducing cost transfers and less transparent costs information. The regulatory framework required improvements to enforce transparency and adequate disclosure of relevant information to investors and the regulatory agency by participant companies.

In the 1998-2005 period, the regulatory frameworks in the electricity and telecommunication sectors required further accommodations to help resolve problems related to: (1) under-investment in the generation of electricity and over-investment in optic fiber telephone lines. Growth of investments slowed down and risks of black-outs and interruption of services in electricity grew; (2) growth of litigation among participant

companies and between them and the regulatory agencies; (3) use of essential infrastructures in transmission and distribution of electricity as entry barriers; (4) failures of the original incentives-based self-regulation policy framework.

During this last period there was full recognition of failures in the self-regulation model. The need to adopt a new regulatory approach based on the unbundling of markets, which included the opening of the segments to competition, became clear. Whereas the original model focused on the unrestricted recognition of the existence of natural monopolies and a self-regulation view of the economy, the new pro-competitive regulation model accepted the co-existence of different market structures in the various segments of the markets for electricity and telecommunication services, with governance institutions stimulating competition among these segments with different regulatory mechanisms.

The original monopoly structure in electricity and telecommunications was gradually transformed from the late 1990s into a structure that permitted the co-existence of oligopolistic and more atomized competitive market segments. The regulatory pro-competitive framework faced the new challenge of creating the appropriate competition and investment incentives for the co-existence of different market structures in a context of increased globalization of the world economy. Accordingly, the regulators were gradually empowered with new regulations to enforce and prevent unproductive investment behavior in different segments of each industry, such as predatory pricing practices and cross-subsidies used to extend monopoly powers. The Competition Tribunals (TDLC) play a key complementary role to enforce high competition standards across all economic activities.

The regulatory framework currently in place recognizes that different industrial structures may co-exist in different segments of the market (monopolies and competitive segments), enhancing the potential for investment, innovations, and productivity growth, and that governance institutions need to be flexible to facilitate the operation and

interconnection of these different market structures operating under different degrees of competition.

In the electricity and telecommunication sectors the regulators are facing the challenge of promoting pro-competitive regulations while simultaneously setting efficient tariffs for the dominant firms. The presence of strong economies of scale means that services will be provided by a small number of suppliers and a dominant firm will lead in the setting of tariffs (Endesa in the electricity sector and CTC-Telefonica in the telecommunications sector). Restrictions to monopoly powers have been introduced by regulating interconnections-access charged, for example, by a long-distance telephone service provider for connecting a local telephone company, or charges for using the distribution of electricity infrastructure. Competition is promoted in the provision of services unless the Competition Tribunal considers that a dominant firm leads in the setting of tariffs, in which case they must be regulated[17].

The facilitation of entry and competition has implied the setting of fixed interconnection access charges at low levels for basic electricity and communication services subjected to universal service obligation, while allowing free competition in the setting of variable charges. The new regulations are facing the challenge that while new entrants into selective high-income-traffic areas are encouraged, existing companies have been subjected to cream-skimming problems (new entrants setting low variable charges while at the same time having guaranteed access to regulated low fixed interconnection charges to infrastructures of existing companies that have been forced to universal servicing). This practice constitutes a source of wasteful spending or unproductive investment from a country's view because it may be cheaper to cap variable costs and keep only incumbent operators.

The new pro-competitive regulations model has also faced the challenge of insufficient investment in generation, which almost stalled after supply cuts of natural gas

[17] The regulator in the electricity sector is the National Energy Commission. The regulator in the telecommunication sector is the Ministry of Public Works, Transport, and Telecommunications in conjunction with the Ministry of Economy.

from Argentina began in early 2004. The need to foster investment in generation prompted the approval by Congress in 2005 of reforms to the regulations that removed obstacles to investment in electricity generation associated with the insecurity of supply. According to the new law (*Ley Corta*) the tariff system was made more flexible to deal with supply shocks, allowing generators to offer incentives to regulated consumers to adjust consumption in response to supply changes, thus efficiently rationing electricity at times of shortages. The law also allows generators to sign long-term contacts (of up to 15 years) with distributors, providing stability to generators and widens the band set for the node price, allowing tariffs to change faster in response to supply shocks[18] (see also OECD, 2005; and Sánchez, 2002)

Table 4
Electricity and Telecommunication Indicators (Chile)

	1975	1980	1985	1990	1995	2000	2004
I. Electricity							
Electricity production (bill. kwh)	8.7	11.8	14.0	18.4	28.0	41.3	45.5
Electricity consumption (Kw per capita)	709	876	958	1178	1694	2406	2650
II. Telecommunications							
Mobile phones (per 1,000 people)	0.0	0.0	0.0	1.1	13.8	223.6	428.3
Telephone mainlines (per 1,000 people)	28.7	32.6	44.5	66.0	127.4	217.1	230.4
Telephone mainlines waiting list	143,000	150,000	180,863	310,267	52,198	10,252	8,300

Source: WDI; Galétovic and de Melo (2005); and Fisher and Galétovic (2003).

V. Institutional Features: Chile's Efficient-Firm Model, Regulatory Governance and Accountability, Competition Policy

The evolution of Chile's public and corporate governance has been guided by rules-based pro-competition regulations. This has prompted the development of mechanisms and institutions that promote efficiency and accountability. Two salient

[18] The price of generated electricity is regulated and called "node price", which is calculated every six months by the regulator (National Energy Commission) as the average of spot prices (marginal costs) over the following 48 months (or 24 months in the case of generation in the northern area of the country). The node price should also fall within a band centered in average free prices. Free prices apply for "free" customers with installed capacity of more than 500KW, which negotiate directly with generators. The *Ley Corta* widened the band used for setting the node price.

features of Chile's regulatory governance are the use of the "efficient-firm" model for the setting of tariffs in the utilities sector and the development of a structure of regulatory institutions (or agencies) that help ensure not only compliance with regulations but also accountability of the regulators. Accountability is strictly linked to the building of a regulatory structure.

The Efficient-Firm Model: Benchmark for Utilities Regulation

Chile's regulations in the utilities sector operate on the basis of an efficient-firm standard intended to simulate the operation of firms with prices reflecting long-run marginal costs if competition prevails, or long-run average costs under a market structure dominated by economies of scale and natural monopoly, which is the case in the electricity, telecommunication, and water and sanitary services. The efficient-firm model has served as a benchmark to introduce efficiency and regulate these sectors. It was first adopted in the early 1980s in response to the needs to improve the efficiency of public utilities run by the government. These utilities operated as unregulated natural monopolies, plagued by problems of over-investments and excessive budgets combined with multiple inefficiencies. In this context, the wastage of resources or unproductive investments were not only reflected in poor delivery of the services provided (quantity and quality) but also constituted an important threat to macro governance in terms of fiscal discipline and price stability. The efficient-firm model emulates an efficient enterprise to which actual enterprises are compared, in terms of costs and investments, and is used as a benchmark to set tariffs (see also Butelmann and Drexler, 2002; Bustos and Galétovic, 2002; Sánchez, 2003; and OECD 2005).

The model in practice is adjusted to ensure that tariffs cover the costs of firms operating as natural monopolies. Alternative regulation procedures to the efficient-firm model are regulation models based on the "rate of return" (used in the United States) and "price caps" (used in England). The "rate of return" model bases regulations on data obtained from existing operating firms, and not from a fictitious firm as the "efficient firm" model does. The approach has the disadvantage of encouraging over-spending and

inefficiencies are inappropriately rewarded because the rates of return used as the benchmark for setting the tariffs are calculated over current costs and investments (Averch and Johnson, 1998). Tariffs adjust to rising costs to meet the targeted rate of return agreed by the regulator even though some of the costs may be unproductive (and used for example as entry barriers to new entrants). Asymmetric information problems between the regulator and the firms involved can be reduced but they are always a major constraint for regulators.

In the “price cap” model, tariffs are set by the regulator at a certain level and calculated also on the basis of existing firms. The efficient firm and price cap systems encourage efficiency as long as technological improvements can be appropriated by the firm in between the tariff revisions scheduled by the regulator. In Chile, public utility tariffs are revised every five years, giving operating firms the opportunity to appropriate cost savings resulting from efficiency and innovation between tariff revisions. The price cap model may be exposed, as the rate of return model, to unproductive investments, however. Asymmetric information problems may cause tariffs to be capped at a level that may be remunerating wasteful spending for raising entry barriers or providing generous benefits to managers. The price cap model offers the advantage over the efficient firm model of avoiding the need to simulate an efficient firm and estimate a set of related fictitious data, reducing the scope of conflicts between the regulator and the firms involved regarding the data used for determining tariffs (see Bustos and Galétovic, 2002).

The efficient firm model, used only in Chile, has the potential benefit of providing a tool to ensure that tariffs would not end up remunerating unproductive investments as the regulator simulates the costs and investments associated with the fictitious firm to set tariffs. Asymmetric information problems are also avoided in theory. In practice, however, the regulator is forced to use as a basis the actual data provided by operating firms. Also, multiple conflicts arise between the regulator and the firms involved as the firms know much better than the regulator the technologies, operations, and the market.

The efficient-firm model may also induce unproductive investment behavior when the regulator ends up being captured by regulated firms. The Chilean model has been also shown to remunerate unproductive investment as the "efficient firm" is considered a firm that starts from scratch each time that tariffs are reviewed every five years. Start-up costs are therefore included as part of the efficient firm's costs, such as the building of electricity infrastructure in the case of the electricity sector (e.g. costs for breaking of the pavement to install new lines and the appreciation of land values), which are not part of true operating costs of existing firms. Moreover, the regulator has been constrained from building an efficient firm based on the latest technology as this it may imply setting tariffs that would force bankruptcy of existing firms. The efficient-firm model has been under scrutiny by Chile's authorities, and its replacement for a price cap model has been discussed (Butelmann and Drexler, 2005).

Regulatory Governance & Accountability

The privatization of public utilities and creation of the private pension funds industry in the 1980s were major driving forces in the building of Chile's regulatory institutional framework. Strengthened governance standards were required to help raise the efficiency and profitability of the state-run electricity and telecommunication monopolies that were targeted for privatization. After privatization, a rules-based regulatory framework was further developed to induce efficiency and competition to the operations of privatized natural monopolies. The operation of the private pension funds industry triggered the building of a rules-based regulatory framework for AFPs' investments and the capital market in order to protect investors from vested interests and expropriation problems (by AFPs' owners, corporate controller groups, and the government).

The 1982-83 external debt and financial crisis added momentum to the building of regulatory institutions, triggering modernization of the banking and capital-market laws and of regulatory institutions. The resumption of democracy and maintenance of an open market-oriented economy in the 1990s, and an advancing globalization process during the

1990s and 2000s have maintained the momentum for further refining the regulatory framework.

Although most regulatory institutions were built in the 1980s, they have been gradually empowered through the 1990s and 2000s and subjected to stricter accountability and democratic procedures. Discretionary regulatory decisions under the military government in the 1980s have been replaced by rules-based decisions subjected to strengthened checks and balances. Regulatory reforms must be approved by Congress, and to the courts when cases are brought there under appeal by affected firms and consumers, which has further strengthened the accountability of regulatory decisions.

Even though all sectoral regulatory agencies share the same pro-competition regulatory principles, their attributions and regulatory structure is not homogeneous. Regulatory functions in the electricity sector are divided between two different agencies: the National Energy Commission (CNE) and the Superintendency of Electricity and Fuels. The CNE is governed by a council of ministers under the presidency of the Minister of Economy and is responsible for the elaboration and coordination of policies and plans related to the generation, transmission, and distribution of electricity. The CNE is in charge of setting the regulated “node prices” and regulated distribution tariffs. However, all modifications to the formula, frequency, and scope of regulations must be approved by Congress. The Superintendency of Electricity and Fuels (SEC) is responsible for supervising compliance with the regulatory framework and is empowered with the faculty to penalize firms failing to comply with established regulations.

Regulatory functions in the telecommunication sector are assigned to one agency, the Undersecretary of Telecommunications (Subtel), within the administrative structure of the Ministry of Transportation and Telecommunications. Subtel is responsible for the elaboration of policies, plans, actions related to the telecommunications sector and also for setting telecom all regulated tariffs, including inter-connection charges among operators. Subtel is also responsible for supervising compliance with regulations, including the application of penalties.

Preventive actions are also contemplated in Chile's regulatory framework. The TLDC are empowered to recommend and demand actions before formal legal actions are imposed. The TLDC have played an important role in raising competition standards across sectors and in the unbundling of regulations in the various segments of the utilities sector according to their different market structures.

In the case of the pension funds industry, the Superintendency of AFPs (SAFP) is the agency responsible for regulatory functions, and the Risk Classification Commission (CCR) is responsible for authorizing the capital market instruments, issuers, and risk rating procedures and limits applying to AFPs' investments. The CCR provides technical independence, objectivity, and accountability to pension fund regulations as it officially comprises people from the government and the AFPs. Accountability is strengthened by the operation of private risk-rating firms in charge of rating instruments and issuers, according to the procedures established by the CCR.

Chile's regulatory structure also embraces the financial sector and the capital market, adding a horizontal set of rules-based regulations that promote standards of good corporate governance across sectors. The Superintendency of Banks and Financial Institutions oversees compliance with the banking law and other financial regulations. It is also in charge of monitoring the banking sector and the adoption of preventive and corrective actions. The Superintendency of Securities and Insurance is in charge of overseeing compliance with the capital market laws. It is also responsible for overseeing the stock-market and related transparency standards and protection of minority shareholders.

While Chile's regulatory structure is not homogeneous across sectors, its regulatory system is perhaps unique in Latin America, and among developing countries, as regards the high standards of accountability to which the regulators are themselves held accountable. Sector-specific regulators are under the direct jurisdiction of one or more ministries – hence less politically "independent" and perhaps more exposed in

theory to problems of regulatory "capture" than in some countries – yet problems of capture are in practice effectively limited by the extent to which Congressional committees, and Congress itself, exercise oversight responsibilities and are actively involved in the design, and reforms, of sector-specific regulatory frameworks.[19] Since 2003, the Competition Tribunals (including their use of expert panels) add further technical competence, and together with a National Economic Prosecutor, ensure representation by the community, consumers and affected enterprises. The court system is also empowered to admit suits related to the application of regulations. The combined result is a high level of transparency and highly adaptable application of pro-competitive standards across all sectors, providing companies and regulatory bodies alike with strong incentives to maintain high standards of accountability and good governance.

Competition Policy

Chile's competition standards were set at the outset of the military government. The military government enacted a competition law that set the principles of Chile's competition law (Decree Law 211 enacted in December 1973). The Law prohibits all types of conduct hindering free competition: fixing or manipulation of prices, quotas or output cuts, and the granting of monopolies, except those authorized by laws such as the case of public utilities. The law also prohibited any mechanism limiting the freedom to of work, forbidding the operation of centralized labor unions. Competition standards were strengthened afterward through a series of economic transformations that raised Chile's competitive standards – in particular, the unilateral reduction of trade barriers and adoption of a uniform tariff level.

Competition Law Decree 211 also created the institutional structure for enforcing the competition standards specified by the law. A tripartite competition system was set: (1) The Preventive Commissions were technical entities whose purpose was to facilitate the transition from the centralized planned economy built during 1971-73 under the

[19] See also Santiso and Whitehead (2006) for a discussion of the crucial role played by the *Superintendencia* in Chile's remarkable economic success in recent decades.

socialist government; (2) The Antitrust Commission was empowered to resolve competition conflicts, enforce competition standards and apply sanctions; and (3) the National Economic Prosecutor's office was created as the competition agency was empowered to investigate and prosecute anticompetitive conduct. The law ruled that the Prosecutor's office should provide technical support to both commissions. The members of the Preventive and Antitrust commissions served part-time and ad-honorem and they were designated by the ministers and universities.

With the change of government in 1999, the National Economic Prosecutor's office was further empowered by acquiring its own independent budget and the status of a decentralized public service (separate from any ministry). The Prosecutor is appointed by the President and relates to the executive through the Ministry of Economy. Its role is to represent the interest of the whole community in all economic matters, including competition standards.

The Competition Law was reformed in 2003 leading to the creation of the Competition Tribunals (TDLC), which replaced the Preventive and Antitrust Commissions. The TDLC resolve conflicts and enforce (or propose) regulations on all matters related to the effective functioning of competition across all economic activities. The members of the TDLCs serve full-time, are selected by their expertise in the field, and are independent (in terms of authority and budget) from sectoral ministries.

The Prosecutor and the TDLC now constitute the two pillars of Chile's competition framework. They are responsible for driving competition standards across all sectors and provide technical support for regulatory decisions and reforms. The Prosecutor is designated by the President and is empowered to investigate and initiate litigations concerning anticompetitive practices affecting the community. The TLDC comprise five members with the status of ministers who are designated with the participation of the President, Congress, the Central Bank, and the Supreme Court. A 2004 law also created Expert Panels to support the TLDC in resolving conflicts between

the regulators and regulated firms concerning the determination of regulated electricity tariffs.

Conclusions

The shaping of public and corporate governance in Chile has been highly dependent on economic and political events. Chile's experience reveals several interesting issues about the evolution of public and corporate governance in a developing country that has experienced a deep transformation of its economic and political institutions. After the military coup in late 1973 the economic and political systems changed from a state-run socialist-oriented economy to a military government that embraced the free-market economic approach as central to needed economic transformation and policies. Public governance (political and economic) was re-established during the second half of the 1970s, markets were liberalized, and the economy was gradually exposed to foreign trade and capital flows.

During 1980-2005, Chile evolved from an economic system based on a mostly uncontrolled operation of markets, amid an extended process of privatization of state enterprises and a military government (which provided unrestricted support to the operation of the private sector in most economic activities including public services), to a more mature economic democratic system based on a pro-competition approach to the regulation of markets, and a more balanced representation of social demands. Chile's economic growth accelerated since in the second half of the 1980s. Good economic policies, supported by the building of a stable political context, have contributed to this outcome.

The Chilean experience also shows that corporate governance can be significantly influenced by the participation of institutional investors such as private pension funds. The interactions between governance standards and economic and political factors, and private pension funds observed in Chile's case helps to explain the various degrees of progress achieved in other experiences. Chile's experience shows that governance

standards are shaped by economic, political, and capital market stimulus. Without appropriate shocks that lead to improve governance standards investment and productivity growth would remain sluggish.

Private pensions have been a major positive influence in the development of Chile's governance. The most important contribution of private pension funds in Chile's public governance has been to induce fiscal discipline and the associated building and maintenance of public savings and growth of financial savings. Pension funds have also been a major force behind the continuous modernization of Chile's corporate laws and regulations, contributing to developing the capital market and rule protecting minority shareholders. Chile's experience shows that the influence of pension funds on corporate governance is strengthened when pension funds' investments are extended from investment mostly concentrated in government debt and banking deposits to equity, as good governance standards need to be introduced to protect pension funds' interests from inadequate capital market and corporate governance behavior by corporate controllers.

The challenges experienced by the regulatory governance in this process of economic and political transformations in Chile have been most notorious in two key economic sectors: electricity and telecommunications. The output from these two sectors are consumed by almost all economic activities and, therefore, provide key channels for transmitting efficiency gains and technological improvements throughout the economy. Electricity and telecom services maybe considered as key sources for long-term productivity growth.

The Chilean experience shows that inefficiencies and unproductive investment behavior can emerge under governance institutions based on unrestricted self-regulation of markets. When combined with a lack of democratic institutions during the military government, many problems of outside investor expropriation and vested-interest behavior by corporate insiders emerged. Unproductive investment behavior grows when uncontrolled uncompetitive structures, typical of these two key utility sectors, open spaces for rent-seeking activities. The existence of a non democratic political system

established on a relationship-based style of governance provided a fertile ground for unproductive investment behavior.

The failures of self-regulation became critical in Chile as the economy was being exposed to the challenges of competition, driven by the globalization of the world economy, and the forces of innovation and political scrutiny. Governance institutions in the electricity and telecommunication sectors in Chile have gradually evolved from an almost pure self-regulation model of the 1980s to the present rules-based model that is being gradually structured to induce efficiency in industrial structures subjected to various degrees of competition across their chains of productions and complementary activities. The Chilean experience in these two key sectors shows that the strengthening of public and corporate governance is a key requirement for the functioning of an efficient market economy, but that governance institutions need to accommodate various degrees of competition across the spectrum of industrial and market structures (such as electricity and telecommunications) in order to induce productivity growth and discourage unproductive investment behavior.

Chile's experience shows that the building of sound governance standards requires a supporting accountability structure that provides the necessary instances of checks and balances to ensure an efficient operation of regulatory institutions.

References

Agosín, M., and Pastén, E. (2003): "Chile: Enter the Pension Funds" in Oman, ed., *Corporate Governance in Development: The Experiences of Brazil, Chile, Indian, and South Africa,* OECD Development Centre and the Center for International Private Enterprise (CIPE), Washington D.C. and Paris.

Averch, H. and Johnson, L. (1962): "Behavior of the firm under regulatory constraint." *American Economic Review* 52: 1053-69.

Bhide, A. (1995): "Efficient Markets, Deficient Governance: U.S, Securities Regulations Protect Investors and Enhance Market Liquidity. Buy Do They Alienate Managers and Shareholders?" in *Harvard Business Review* 72: 605-635.

Bustos, A. and Galétovic, A. (2002): ¨Regulación por empresa eficiente: ¿Quién es realmente usted? Estudio Públicos 86. CEP (Santiago).

Butelmann. A, and Drexler, A. (2005): "Regulación de Tarifas en la Economía Chilena: Elementos para la agenda de discusión." Mimeo. Research Department, Ministry of Economy.

Fisher, R. and Serra, P. (2002): "Evaluación de la Regulación de las Telecomunicaciones en Chile." Revista Perspectivas, Vol. 6 No. 1: 45-77. Departamento de Ingeniería Industrial, Universidad de Chile.

Galétivic, A. and De Melo, L. (2005): "Strengthening Regulations in Chile: The Case of Network Industries." OECD, Economics Department Working Paper No. 455 (October).

Galétovic, A., and Sanhueza, R. (2002): "Regulación de Servicios Públicos: ¿Hacia donde debemos ir? Estudios Públicos 85. Santiago.

Gutiérrez, M. (2005): "Economic Growth in Latin America: The Role of Investment and other Growth Sources." Macroeconomics and Development Series (36), Eclac-Cepal/United Nations (June).

Hachette, D. and Luders, R. (1990): "La Privatización en Chile. International Center for Economic Development CINDE. Santiago.

Iglesias, A. (2000): "Pension Reform and Corporate Governance: Impact in Chile." Revista ABANTE (Economic Review-Catholic University of Chile) Vol. 3. No. 1: 109-141.

International Monetary Fund (IMF) (2005): "Chile: Selected Issues." IMF Country Reports No. 05/316.

Jiménez, L., and Cuadros, J. (2003): "Evaluación de las reformas a los sistemas de pensiones: cuatro aspectos críticos y sugerencias de políticas.¨ Serie Financiamiento del Desarrollo No. 131. CEPAL (Eclac/UN).

Lefort, F. and Walter, E. (200): "The Effects of Economic and Political Shocks in Corporate Governance Systems in Chile." Revista ABANTE (Economic Review-Catholic University of Chile) Vol. 2. No. 2: 183-206.

Loayza, N., E. Fajnzylber and C. Calderon (2004), "Economic growth in Latin American and the Caribbean: stylized facts, explanations, and forecasts." World Bank (June).

OECD (2005): Economic Survey of Chile (November).

OECD (2003): OECD Economic Survey of Chile (November).

Oman, C., Fries, S, and Buiter, W. (2003): "Corporate Governance in Developing Transition and Emerging-Market Economies." OECD Development Center. Policy Brief No. 23.

Oman, C., and Blume, D. (2005): "Corporate Governance: A Development Challenge.". Policy Insights, No. 3. OECD Development Center (January).

Meller, P. (2002): "Regulación y Competencia en los Servicios de Utilidad Publica." Revista Perspectivas, Vol. 6 No. 1: 3-10. Departamento de Ingeniería Industrial, Universidad de Chile.

Moguillansky, G. (1998): "Las Reformas del Sector de Telecomunicaciones en Chile y el Comportamiento de la Inversión." Eclac-Cepal/ United Nations.

Moguillansky, G. (1997): "La Gestión Privada y la Inversión en el Sector Eléctrico Chileno." Eclac-Cepal/ United Nations.

Sánchez, J.M.and Coria, J. (2003): "Definición de la Empresa Modelo en regulación de Monopolios en Chile." Mimeo submitted to the Ministry of Economy. Catholic University of Chile.

Sánchez, J.M. (2002): "Algunas Modificaciones a los Marcos Regulatorios del Sector Eléctrico y de las Telecomunicaciones." Chapter 7 in ¿Que Hacer Ahora?, edited by Bayer, H and Vergara, R. CEP, Santiago.

Santiso, J and Whitehead, L. (2006), "Ulysses, the Sirens and the Art of Navigation: Political and Technical Rationality in Latin America." OECD Development Centre Working Paper, Paris (forthcoming).

Serra, P. (2002): “Regulación del Sector Eléctrico”. Revista Perspectivas, Vol. 6 No. 1: 11-43. Departamento de Ingeniería Industrial, Universidad de Chile. Revista Perspectivas, Vol. 6 No. 1: 11-43.

Starks, L. (2000): Corporate Governance and Institutional Investors: Implications for Latin America.” Revista ABANTE Vol. 3. No.1 pp. 161-181.

Uthoff, A. (2001): ¨La reforma del sistema de pensiones en Chile: desafíos pendientes.¨ Serie Financiamiento del Desarrollo No. 112. CEPAL (Eclac/UN).