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Three Decades of Neoliberal Economics in Chile

Achievements, Failures and Dilemmas

Andrés Solimano*

June 2009

Abstract

The Chilean development story of the last two to three decades is a mix of successes in the macro, growth, poverty and trade fronts but also of failure in reducing chronic inequality of income and wealth. In addition, the current growth patterns have serious impacts on the environment, natural resources and energy demand. Adverse features of the Chilean development model include urban insecurity and rising crime, pollution, pressure on natural resources, congestion and social stratification in access to education, health and pensions. A reduction in social inequality would require changes in several fronts: more public-sector resources devoted to education; curtailing current concentration of wealth and market shares in banking, retail trade, and private pensions systems, private health provision, and other sectors; more effective regulation of big business; rebalancing of labour unions' bargaining power capacities and .../.

Keywords: Chile, development, inequality, growth, natural resources, social policy, middle class

JEL classification: O54

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effective support to the sector of small and medium size enterprises. Chilean democracy would benefit from a redefinition in development priorities towards less power for the dominant elites (economic and political) and broader social participation for the middle class and the working people to support dynamic and more equitable development.

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1 Introduction

The Chilean economy is often praised for its achievements in growth, macroeconomic sustainability, low inflation, external openness and reduced poverty. The fact that Chile started early with the type of reforms later known under the term ‘Washington consensus’ made it the ‘privileged student’ of international financial institutions. Today, in the wake of an international financial crisis, the Chilean economy has the capacity to ameliorate the effect of adverse external shocks, given the high level of foreign assets accumulated by the treasury as a result of the record copper prices until mid 2008. This paper assesses the strengths and weaknesses of the Chilean model based on neoliberal economic policies, combined with the more active social policies but in the context of persistent inequality of income and wealth.

The Chilean development story of the last two-three decades is a mix of reasonable successes in the macro, growth and trade fronts but also of the failure to reduce chronic inequality of income and wealth. In addition, the current growth patterns can have considerable impacts on the environment, natural resources and energy demand. The Chilean development path of the last two decades combines rising GDP per person and increases in material welfare with productive modernization and integration to the world economy. At the same time, however, there are some unpleasant features of the development model: urban insecurity, rising crime, pollution, pressures on natural resources, congestion and social stratification in the access to education, health and pensions.

There are similarities and differences between the economic policies applied by the military regime of General Pinochet and those of the democratic administrations in power since 1990. The free market revolution of the mid-1970s in Chile was a sharp departure from the historical pattern of economic and social policies in the country and in most of the developing world. It is apparent that this economic revolution was largely possible in the controlled political conditions that constituted an absence of both congress and free press, banned left-wing political parties, highly controlled labour unions and the strong military rule that had characterized Chilean politics since the oust of Salvador Allende in September 1973 until the late 1980s. The democratic government that came to power in March 1990 (after free elections in 1989) chose to maintain the bulk of the economic policies of the military (open trade, the primacy of markets and the private sector, privatization), complementing these with more active social policies oriented towards poverty reduction and protection of vulnerable social groups. The new governments also started to invest more in public education, public health and in the physical infrastructure, sectors neglected during the military period. The democratic governments have also been macroeconomically prudent, maintaining low inflation and fiscal and balance of payments sustainability. In addition, they have followed a general policy of increasing public savings during the good times and this has allowed a degree of countercyclical fiscal policies after the onset of the global slump of 2008-09. Still, the high public savings may not fully insulate the Chilean economy from external shocks and other internal vulnerabilities. Moreover, the fact that the state was sitting on a large volume of public savings while critical problems in public education, public health, the environment were not addressed is controversial.

Despite the measures undertaken by the democratic governments in the post-Pinochet regime to reduce poverty and improve social protection, reducing wealth and income inequality has *not* been an explicit and active target of policy. In fact, social inequality,

wealth and market concentration and social stratification have not diminished at all (they may have even increased) in the post-Pinochet period.

The main purpose of this paper is to look at the achievements, failures and dilemmas of the current development model in Chile with a view of drawing useful lessons for other developing countries and for renewing development policies that correct the shortcomings of the current Chilean economic model.

Since the mid-1980s, Chile has accelerated its *annual* average GDP growth rate by nearly 2.5 percentage points above the average growth rate of the 1940-85 period (in turn, growth was much faster in the 1986-98 period than in the 1998-2007). The increase in the average growth of the last two decades has taken place while the country was able to maintain low inflation, fiscal solvency, balance-of-payments sustainability and to reduce public external debt. Currently, macroeconomic policies are guided by a combination of inflation targeting by the central bank, a fiscal rule of structural fiscal surpluses and a flexible exchange rate regime. This regime has facilitated the low inflation rate and policy predictability. However, growth cycles, although of a milder magnitude than in the past, prevail as do significant fluctuations in the nominal and real exchange rate. This is worrisome for an economy, such as in Chile that is very open to international trade and capital mobility. The exchange rate (peso/US\$) in 2008 suffered wild fluctuations: appreciating in the first quarter of 2008 by more than 10 per cent against the US dollar, but then the central bank announced a policy of buying dollars to halt the peso appreciation. With the onset of the financial crisis, the exchange rate depreciated by almost 35 per cent in nominal terms between September and October.

Following a cycle of strong copper prices that lasted until mid 2008, Chile had accumulated nearly US\$26 billion in external public-sector assets. Before the crisis, the policy of running high fiscal savings, of the magnitude of 7-8 per cent of GDP, was controversial. As said, observers argued that the country needed to devote public resources to improve the quality of public education, public health, provide environmental protection and to tackle the sharp rise in crime and urban insecurity. These issues are still very relevant but in retrospect, the policy of high fiscal savings also provides a good cushion against the worsening external environment.

The workings of the labour market and labour relations policies in Chile have been also controversial topics. The fragile nature of many jobs and the reduced bargaining power of labour versus capital have biased the distribution of productivity gains towards company owners. In this context, large private sector associations along with orthodox economists (a very influential group in Chile) call for more labour market flexibility, understood as easier rules for firing workers. In contrast, labour unions are making demands for greater job protection and a rebalancing of labour-capital relations. Emerging labour conflicts in copper, salmon, fishery and other areas reflect the demands of a labour movement that over the years has been largely marginalized in a country becoming steadily more prosperous and open to globalization. New, modern, and more equitable labour relations are badly needed in Chile.

In the last two-three decades, economic growth in Chile has been mainly driven by external markets. However, the trade structure of the Chilean economy has the capacity to generate merely moderate employment. In fact, export and import-competing activities generate only 30 per cent of total employment while the 'non-traded' goods sector accounts for the remaining 70 per cent. The relation between aggregate growth

and social welfare of the poor is mediated by the labour market and the socio-demographic characteristics of low-income families. Empirical evidence from household surveys shows that aggregate economic growth reaches comparatively fewer poor households than non-poor households for at least three reasons:

- First, poor families have higher dependency ratios so the income of each worker has to be divided among more family members than in non-poor families.
- Second, the earning capacity of a poor household worker is expected to be lower than of a worker, professional or executive from a non-poor household, as education levels are systematically lower for low-income families.
- Third, unemployment rates are much higher in poor families than in non-poor families. Moreover, the poor tend to work more in the informal sector, a sector with lower productivity that pays smaller salaries and where jobs are unstable.

Inequality is a persistent feature of the Chilean society. In the last 20 years Gini coefficients for income have hovered around 0.55, certainly a high figure by international standards. Recently, some mild reduction has taken place in the coefficient but the broad trend is that income is highly concentrated in the top 5-10 per cent of the distribution. Gini coefficients for the first to the ninth deciles are around 0.38, not too far from the Gini coefficients of the *overall* income distribution in OECD countries, but inequality in Chile is mainly explained by the income concentration at the top.

The environmental and natural resource implications of the acceleration in economic growth and the rise in consumption levels of the last two decades deserve more attention and analysis. Two-thirds of Chilean exports, the main engine for growth, are composed of both non-renewable and renewable natural resources. In addition, the rapid expansion of consumption increases the stock of cars and transport vehicles, adding to emissions. Worrying trends as identified in a recent OECD-ECLAC report on the state of the environment in Chile are the high intensity of energy output and consumption, the heavy use of water resources and soil, high exploitation of forestry, rapid extraction of sea products and aggressive mining extraction.

The paper is organized in five sections in addition to this introduction. Section 2 provides an overview of the Chilean economy from a medium- to long-run perspective and section 3 analyses the main features of the macroeconomic policies and the economic growth in Chile in the 1990-2007, for a comparison of the economic performance of the Aylwin, Frei, Lagos and Bachelet administrations. Section 4 looks at the joint behaviour of growth, poverty and inequality in the last 20 years (a story of reasonably rapid growth, decline in poverty but persistent inequality) and provides data on income and wealth distribution. This section also looks at the causes of the persistence of inequality and role that the policies of the last two decades may have played in this. The section also documents the rise in crime and urban insecurity. Section 5 reviews the factors that impinge on the development potential of the Chilean economy such as education, spending on science and technology, cost of doing business, institutional capacities and other factors. Section 6 concludes.

2 The Chilean economy in a long-run perspective: a brief overview¹

Between 1940 and 1985, Chile grew at a moderate GDP growth rate of 3.5 per cent per year. In turn, GDP per capita in the same period grew by 1.4 per cent per year (see Table 1), indicating that at this pace it would take nearly four decades for GDP per capita to double. This growth often took place in a context of chronic inflation, recurrent balance-of-payment and fiscal imbalances and distributive conflict in an unequal society. Attempts at economic modernization and management of social conflict were generally mediated by democratic institutions. However, from the mid-1960s to 1973, the accelerated pace of democratization, popular participation and economic redistribution generated acute tension and resistance among upper-income groups within the society. The attempt by President Allende to build Chilean-style socialism within democracy was actively supported by the working class and sectors of the middle class but also strongly opposed by the national economic elites and the Republican government in the US, forming a coalition that was able to create a level of social tension and economic disruption that ultimately led to a breakdown of democracy in 1973. After the collapse of democracy, the instauration of a military regime in September 1973 turned rapidly into a radical revolution to reshape Chile along free market lines within a de-politicized and demobilized society. The centrepiece of the economic policies of the military regime revolved around macro-adjustment, economic liberalization and privatization of both state-owned enterprises and social services. The average record of economic growth during the military regime was moderate, but punctuated with severe economic crises. In 1990 the Pinochet regime was replaced by a democratically elected coalition of the *Concertación por la Democracia* which has been in power for the last 20 years. As mentioned before, the democratic regime after Pinochet tried initially to find a balance between continuity and change in economic policies that would combine free markets with increased social protection without attempting to alter existing income and wealth distribution. Growth, the first of the democratic administrations' aims as outlined in the mantra—*growth with equity*—was better achieved than the second. Equity was to wait, except if equity is perceived of as the reduction of poverty, which is largely a by-product of rapid economic growth.

Let us return to Chile's recent economic history. In the 1960s the prevailing economic model of import substitution was showing signs of exhaustion, reflected in moderate growth, fiscal and external imbalances, chronic inflation and persistent inequality. The conservative Alessandri administration (1958-64) focused largely on managing several macroeconomic crises of varying intensity but without articulating a clear agenda of structural change of the prevailing development model. The Christian Democratic administration of President Frei Montalva (1964-70) started a programme of economic reforms (trade reform, agrarian reform, more inclusive credit policies), along with a progressive social agenda, accompanied by an expanding social organization of urban dwellers and peasants. The average rate of economic growth in 1960-69 was 4.4 per cent per year (2 per cent in per capita terms). Inflation stubbornly remained at around 26 per cent per annum and the country lived with chronic external and fiscal imbalances.² In 1970 the left-wing coalition of President Salvador Allende, United Popular (Popular

¹ This section draws partly on Solimano and Pollack (2006).

² Complete reference of economic policies in the 1950-70 period is given in Ffrench-Davis (1973). A long-run view of the Chilean economy is represented in Meller (1997), and analyses of the Allende experience include studies by Bitar (1979), Larraín and Meller (1990), Maldonado (1993), and others.

Unity), won the national elections around an economic and social programme of transition to socialism (entailing nationalization of the copper mines, expropriation of large industrial firms, banks and other financial institutions and acceleration of agrarian reform). The Allende government undertook expansionary fiscal and wage policies coupled with price controls. This generated a growing fiscal deficit that was financed by money creation. In 1972, repressed inflation and shortages became pervasive, starting to alienate the middle class against the government. Inflation became very high and open in 1973. Eventually acute internal political conflict, external covert intervention and the economic crisis led to a military coup in September 1973 that ousted the Allende government and inaugurated 17 years of military rule, personalized by General Augusto Pinochet. In the economic arena, the military regime devoted efforts to stabilize the inflation (see Figure 5), restitution of property to former owners and securing external credits. Money-based stabilization was complemented by a drastic fiscal adjustment programme in which nearly 100,000 public employees were separated from the state sector in one year, leading to a jump in the unemployment rate that remained high for several years. Trade liberalization, privatization, fiscal adjustment and market liberalization policies dominated the second half of the 1970s. Between 1978 and 1982, an exchange rate based stabilization programme was used to reduce inflation, but the experiment ended in a severe economic and financial crisis in 1982.³ The economy suffered a sharp decline in GDP, a jump in unemployment and bankruptcies, accompanied by a crisis in the banking sector, recurrent currency devaluation and serious external debt servicing problems. Crisis management at that time involved the bailout of firms and banks, a real depreciation of the currency that restored profitability in tradable goods activities and a cut in domestic absorption. These policies were supported by loans from the IMF, World Bank and IDB. The social consequences were dire.⁴ Unemployment climbed to nearly 30 per cent in 1983, real wages fell and many small- and medium-scale firms drowned in debt or went bankrupt, with the ensuing destruction of organizational capital and jobs.

In the second half of the 1980s the Chilean economy recovered, with the support of measures such as a more competitive real exchange rate, the financial rehabilitation of firms, tax cuts, easier credit and higher internal demand. However, by the end of the 1980s inflationary pressures as well as external imbalances mounted, leading subsequently to the new Aylwin administration—the first democratic government elected after 17 years of Pinochet rule—to address these issues. In addition, the Aylwin government raised taxes to fund social programmes oriented to reverting the social deterioration of the previous years in terms of minimum wages, reduced monetary subsidies to the poor and the chronic under-funding of the public health and education systems. Fiscal resources were also needed to start revamping the public infrastructure such as ports, roads and highways that had deteriorated after years of little public investment. Macroeconomic policies in the 1990s (see the next section) accommodated higher social spending while reducing inflation, taxed short-term capital inflows, and reduced public external debt. The Lagos administration furthered conservative fiscal policies by adopting the explicit rule of fiscal surplus, achieved a further reduction in

³ References for that period include Ffrench-Davis (2002), Edwards and Edwards (1987), Solimano (1993, 1999), Foxley (1983), Corbo and Solimano (1991), Meller (1997), Solimano and Pollack (2006) and others.

⁴ See Solimano, Aninat and Birdsall (2000).

inflation but suspended the tax on short-term capital inflows and supported a floating exchange rate regime with minimal central bank intervention. The Bachelet administration, which assumed power in March 2006, is the fourth government of the coalition that has governed Chile since 1990. In recent years, as mentioned, Chile has enjoyed a spectacular surge in copper prices that generated current account surpluses and a very strong fiscal surplus of the order of 7-8 per cent of GDP. However, average economic growth in 1996-97 did not accelerate much (4.7 per cent), creating the conundrum of a sharp terms-of-trade boom with relatively modest growth. By late 2008 the government is reacting to the effects of the external crisis with the support of a relatively large accumulation of fiscal savings.

3 Growth performance and macroeconomic policies under the democratic administrations

3.1 Growth performance

In the last 22 years the rate of economic growth accelerated in Chile in comparison to its historical record. In fact, as Table 1 shows, the average GDP growth rate over the period 1986-2007 was close to 6 per cent per year. In contrast, the historical rate of growth of the period 1940-85 was only 3.4 per cent.

Table 1
Chile: Economic and social indicators, 1940-2007

	1998-2007	1986-97	1986-2007	1940-85
	(1)	(2)	(3)	(4)
Macroeconomic indicators				
Real GDP, rate of growth (% annual) ¹	3.85	7.61	5.9	3.35
Real GDP per capita, rate of growth (% annual) ¹	2.68	5.81	4.39	1.38
Gross fixed capital formation (% of GDP) ²	21.46	22.62	22.09	14.33
Gross national savings (% of GDP) ³	26.58	26.60	26.59	16.37
Total factor productivity (index 1960=100) ⁴	129.16	104.50	114.36	102.78
Fiscal balance (% of GDP) ⁵	1.14	1.68	1.45	-1.28
Inflation rate (annual change%) ⁶	3.32	15.06	9.72	38.31
External sector				
Exports of goods and services (% of GDP) ²	35.86	26.90	30.70	16.50
Current account balance (% of GDP) ³	-0.48	-3.25	-2.1	-4.6
Terms of trade (Jan 1997=100) ⁷	116.8	97.28	105.6	125.1
Real exchange rate (index 2000=100) ⁷	93.2	89.79	91.2	147.1
Employment				
Unemployment rate (% annual) ⁶	8.95	8.02	8.4	13.3
Real wages (index 2000=100) ⁸	103.4	76.2	87.9	66.8
Income distribution				
Gini index ⁹	54.51	54.96	54.8	50.4
Ratio between 1st & 10th decile (autonomous income) ¹⁰	34.35	34.79	34.6	

Sources and notes:

Own elaborations based on data from:

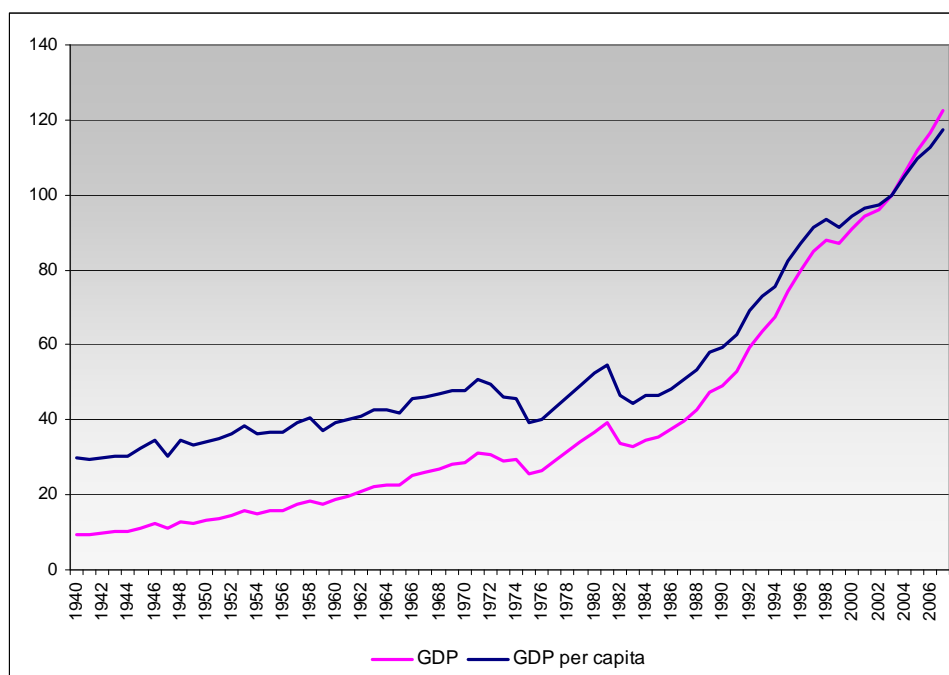
- 1 For the years 1940-60, Díaz, Lüders and Wagner (2007); for the years 1940-60, World Bank (2007), and for the years 1990-2006, ECLAC (2006);
- 2 Braun et al. (2000: 65-6); elaborated from Central Bank of Chile, based on a series in current values; data only until the year 2006 for columns (1) and (3) for exports.

Sources and notes to Table 1 (cont'd)

- 3 Central Bank of Chile (in constant LCU 2003). Data for columns (1) and (3) for the period 1960-2006;
- 4 Fuentes, Larraín and Schmidt-Hebbel (2006). The results reported correspond to a simple average from period to period of the TFP measures 4 and 8 from the Appendix 2 of Fuentes, Larraín and Schmidt-Hebbel. Data for columns (1) and (3) for the years 1960-2005;
- 5 For the years 1940-69, ILPES-ECLAC (n.d.) based on official information; for the years 1986-89, Bennett and Valdés (2001); for the period 1990-2006, the Ministry of Finance (2007); data available only until the 2006 for columns (1) and (3);
- 6 INE (n.d.)
- 7 World Bank (2007); data for columns (1) and (3) available up to the year 2006 only.
- 8 Merged series: for 1986-94 (base = 1980) from the Central Bank of Chile; for the years 1994-2006 (base = 2006) from INE (n.d.). Data available up to the year 2006.
- 9 Ministry of Planning (*CASEN 2006 Report*); for the years 1960-86 and 1988, 1990-91, 1993, 1995, 1997, 1999, 2001-02, 2004-06 from Larrañaga (2001) and updates. Column (4) is the average of the 1958-85 period.
- 10 Ministry of Planning (*CASEN 2006 Report*). Data available only for the years 1987, 1989, 1992, 1994, 1996, 2000, 2003 and 2006.

In per capita terms, the rate of growth of GDP was 4.4 per cent in the period 1986-2007 compared to an annual GDP growth of 1.4 per cent per head in 1940-85. This increase in per capita growth is expected to have made a big difference in the standard of living of the 'average citizen' although in a country with an uneven income distribution, the concept remains fuzzy. As we document in this paper, income distribution has been—and continues to be—very concentrated in Chile. In turn, wealth distribution is even more concentrated than income distribution as ownership of financial assets, productive wealth and land is often very concentrated (see Davies et al. 2006 for international evidence on this). On the other hand, as a consequence of reasonably rapid growth in conjunction with the targeted social transfers, measured poverty declined sharply in the

Figure 1
Chile: Economic growth, 1940-2007
(GDP and GDP per capita, index 100=2003)



Source: Own elaboration based on data from Díaz, Lüders and Wagner (2007).

last 20 years or so, dropping from over 42 per cent in the late 1980s to approximately 14 per cent in 2006. As Figure 1 shows, according to the data, a turning point in the growth dynamics of the 1940-2007 period took place in the mid to later 1980s.

The acceleration in economic growth in the last two decades deserves more analysis.⁵ The Chilean growth story of this period reflects the favourable effect of macroeconomic, social and political stability, a strong reliance on the markets—the ‘neoliberal component’—along with a more consolidated private sector with an increased capacity to mobilize savings and undertake large-scale projects. The external environment (terms of trade, foreign demand) experienced various cycles during this period, so no discernable net positive or negative effect can be easily established. Analyses of the sources of growth, based on the supply-side, often decompose output growth into factor accumulation (capital, labour, human capital) and total factor productivity growth (improvement in the degree of efficiency at which productive resources are used). In turn, we can undertake a more eclectic growth-analysis by looking at both supply and demand factors such as savings, investment, productivity, exports, private and public consumption. In summary, the following factors are likely to be at work in the acceleration of economic growth in Chile since the mid to late 1980s:

- i) An increase of over 7 percentage points of GDP in investments in 1986-2007 compared to the historical period, 1940-85.
- ii) An increase of around 10 percentage points of GDP in national savings in both periods.
- iii) An acceleration of total factor productivity growth.⁶
- iv) A sharp rise in the export share in GDP, which almost doubled in 1986-2007 compared to the historical reference period.
- v) A steady overall decline in inflation.
- vi) A shift from fiscal deficits to fiscal balance and surpluses.
- vii) A lower reliance on external savings and a cut in current account deficits in the balance of payments.
- viii) After the restoration of democracy in 1990, a climate of political and social stability, in spite of persistent inequality.

The shift from import substitution to external opening was intended to accelerate growth, and this was largely accomplished. In an economy with fewer distortions, market prices play a more effective role in signalling scarcities and thus resources will go to activities with higher profitability. This process leads to a more efficient resource allocation. However, going from better resource allocation to *sustained growth* also requires a higher rate of accumulation of human and physical capital and faster productivity growth. In Chile, part of that process effectively took place in the last two decades as the list of factors above shows.

However, the causality from the implementation of market reforms to growth outcomes is complex: it involves lags and is affected by other important variables. In fact, Chile

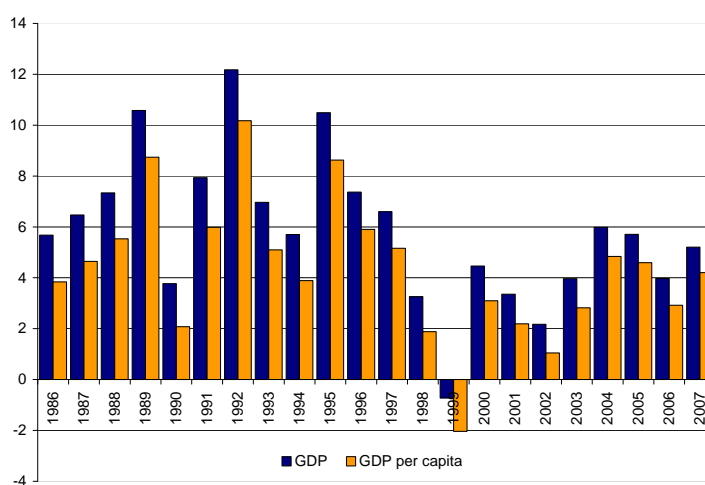
⁵ For studies on growth in Chile, see Fuentes et al. (2006), De Gregorio (2004), and Solimano (2006).

⁶ See Fuentes, Larraín and Schmidt-Hebbel (2006).

liberalized markets, opened the economy to international competition and privatized public enterprises in the second half of the 1970s but economic growth started to pick-up in a more steady manner in the second half of the 1980s and then finally in the 1990s, in other words, more than a decade after the policies of macro stabilization, external opening, privatization and liberalization of financial markets were launched. In the first phase of the implementation of these policies, growth was highly cyclical: recovery and growth took place in 1976-81 but was followed by a big contraction in economic activity and financial crisis in 1982-83 as documented in the previous section. It is interesting to note that the harvesting of growth really took place in the democratic period. This induces to suggest that democracy gave the domestic and international legitimacy to the Chilean economic model and provided considerable social and political stability for investment and growth to increase and promote more rapid growth. In turn, rapid growth also helped to legitimize the democracy and the economic model although persistent inequality (not only growth) may at the same time reduce the overall degree of legitimacy of the economic model.

The growth dynamics of the last twenty years were not uniform across the subperiods (for a graphical picture of the evolution of the main macro and growth variables see Figures 2, 3 and 4). The differences within the period were considerable as the average GDP growth rate in the 1986-97 subperiod was almost double that of 1998-2007 (7.6 per cent per year in the first period and only 3.9 percent per year in the second period). Cyclical factors certainly affected this differential growth performance. In the second half of the 1980s the Chilean economy still had unused capacities as it was recovering from a major economic contraction earlier in the decade. In turn, the economy was affected after 1998 by the Asian and Russian crises of 1997-87 and growth remained sluggish for nearly five years after the onset of the crises. Economic growth has accelerated since 2004 but not in proportion to the sharp rise in copper prices. Chile seems to be a special case in which the strong term-of-trade boom has *not* translated into faster economic growth. This may be explained in part by a fiscal policy oriented to saving most of the terms-of-trade bonanza. In 2008, Chile had nearly 26 billion dollars, deposited abroad mostly in US banks as part of its economic and social stabilization fund. This is in addition to nearly 17 billion held by the central bank in international reserves.

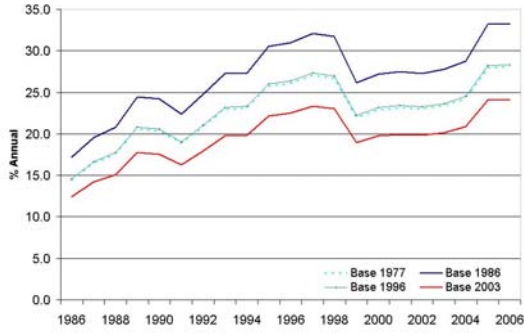
Figure 2
Chile: Gross domestic product, 1986-2007
(Total and per capita GDP, annual growth rate, in percentage)



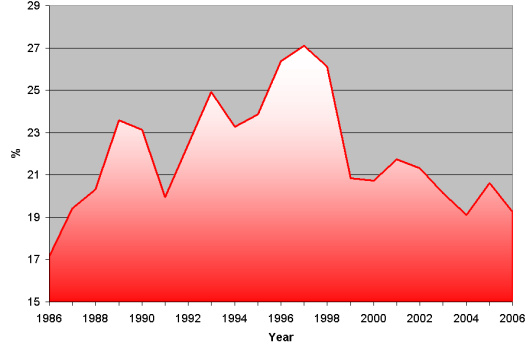
Source: Own elaboration based on data from Díaz, Lüders and Wagner (2007).

Figure 3
Chile: Investment, savings, and productivity, 1986-2006

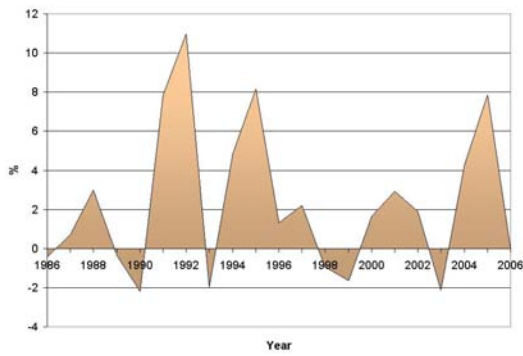
Panel A: Investment
(% of GDP, series at constant prices)



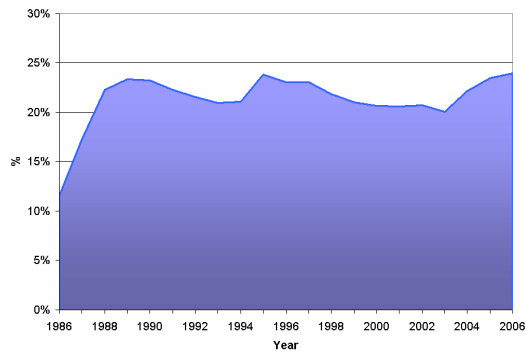
Panel B: Investment
(% of GDP, series at current prices)



Panel C: Total factor productivity
(TFP, annual rate of change %)



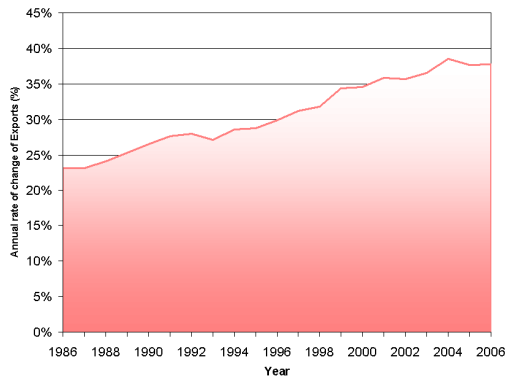
Panel D: Gross national savings
(% of GDP, current values)



Sources: Central Bank of Chile; TFP: Fuentes, Larraín and Schmidt-Hebbel (2006).

Figure 4
Chile: Exports, consumption, and terms of trade, 1986-2006

Panel A: Exports
(as % of GDP)



Panel B: Government consumption
(annual rate of change)

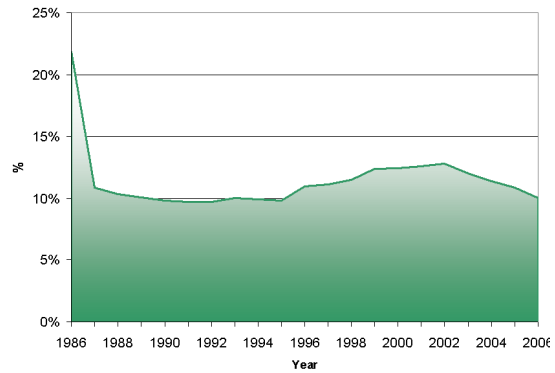
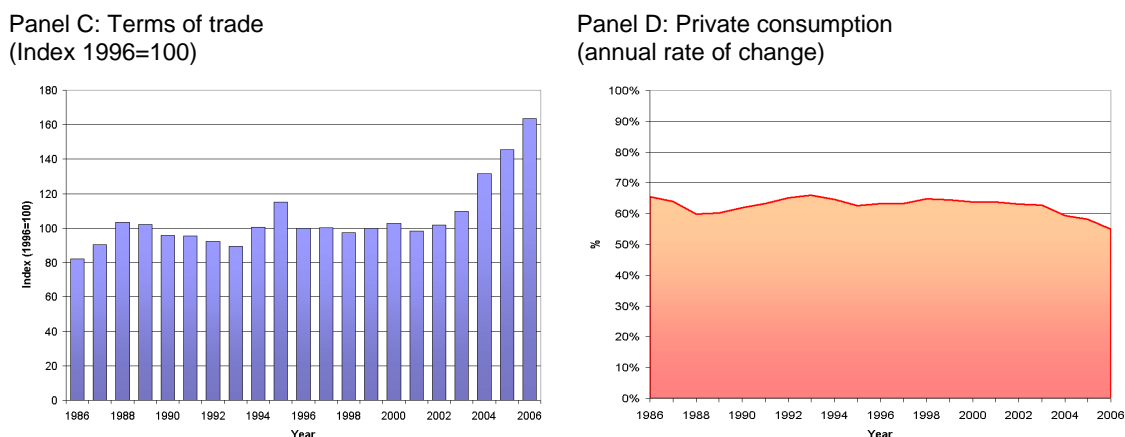


Figure 4 continues

Figure 4 (cont'd)
Chile: Exports, consumption, and terms of trade, 1986-2006



Source: Own elaboration based on data from the Central Bank of Chile.

3.3 Unsettling features of the Chilean growth pattern

Sir John Hicks, the famous British economist, maintains that *sustainable real income* is one in which future generations are not impaired by current savings and investment decisions. This is a relevant concept for evaluating the sustainability of Chilean growth, particularly due to its excessive reliance on natural resources (renewable and non-renewable), high intensity in energy use, productive concentration and environmental implications. Critical issues in this regard are the following:

- i) *Natural resource sustainability.* It is estimated that around 70 per cent of Chilean exports (more than 35 per cent of GDP) rely on raw materials and processed renewable and non-renewable natural resources: copper, fruits, fishmeal, timber and others. For a country that has managed to grow at an average rate of around 6 per cent per year for more than two decades under this strategy, the pressures of this growth pattern can be significant on natural resources and the environment.
- ii) *Energy intensity of growth.* A recent evaluation by the OECD jointly with ECLAC on the environmental and energy consequences of rapid growth in Chile warns that this process is having significant impacts on the energy intensity of Chilean consumption, and growth is above unity. It is indicative that the country is currently facing electricity shortages due to an excessive reliance on imported natural gas and a lack of diversification towards other sources of domestic energy, including clean sources of energy.⁷
- iii) *Environmental impacts of rapid growth.* There are potentially serious consequences of the rapid growth process on the environment as highlighted in the OECD/ECLAC report. The effects are varied in nature and resources

⁷ An early analysis of the pressure of rapid growth on water resources, energy, forestry and the environment in Chile is given in Sunkel (1994).

devoted to prevention and mitigation are still limited.⁸ Rapid growth in GDP and consumption has a direct effect on the environment because of substantial emissions, the high-intensity of energy output and consumption, use of water resources and soil, high exploitation of forestry, rapid extraction of sea products and aggressive mining extraction, as well as a sharp increase in the stock of cars and transport vehicles.

- iv) *Firm concentration.* Exports, the main engine of growth, are largely concentrated in large firms. The *direct* share of exports by small- and medium-sized enterprises (SMEs) is very small (less than 3 per cent of total exports). This emphasis on the productive structure mirrors the concentration of incomes that characterizes the Chilean economy (see Table 2 and Solimano 2007).
- v) *Employment intensity of growth.* Growth is envisaged as the main source of employment generation in Chile. However, given the importance of capital-intensive tradable sectors such as copper and other activities, the employment intensity of growth is not very high, with a medium term employment-growth elasticity of around 0.5.

Table 2
Chile: Exports shares by firm size, 1999-2003

Year	Micro & small	Medium	Large	Total
1999	1.8	3.5	94.7	100.0
2000	1.7	3.1	95.2	100.0
2001	1.5	3.4	95.1	100.0
2002	1.4	3.2	95.4	100.0
2003	1.3	2.6	96.1	100.0

Source: Own elaboration based on data from Customs Office and SII (2003).

3.3 Macroeconomic policies

During the last two-three decades, a strong policy consensus developed in Chile on the need to ensure macroeconomic stability for development. The country suffered the traumas of fiscal and inflationary crises in the 1970s and currency and financial collapse in the early 1980s that interrupted economic growth and created big surges in unemployment, declines in real wages and human welfare. The macro policies of the 1990s were gradualist on the anti-inflationary front, the exchange rate regime was ‘managed’ until 1999, fiscal policy was generally prudent but without an explicit fiscal rule (until 2000) and taxes to deter short-term capital inflows were used until 2000 when they were removed (a summary of these policies and their evolution in Table 4). In the 2000s macroeconomic policies included some innovation. A fiscal rule was introduced and the central bank established a more explicit a policy of ‘inflation targeting’ regime. Apparently the search for rules replaced discretion as the new conventional wisdom. Let us look at these policies in some more detail.

⁸ OCDE and CEPAL (2005).

Fiscal policy

In 2000 the Lagos administration formalized a fiscal rule to make fiscal policy more predictable and also to deter possible pressures on fiscal spending coming from political parties, parliamentarians, interest groups and others, reducing the degree of discretion in fiscal spending, forcing increases to align with what were considered as permanent rises in copper prices, potential GDP and other sources of revenues. Thus, cyclical improvement in terms of trade or transitory increases in tax revenues due to faster economic growth are not to trigger proportional or more than proportional increases in public spending, often the source of macro imbalances and unsustainable cycles in Latin America. The new rule in 2000 stipulated that the government was to run a *structural* fiscal surplus of 1 per cent of GDP (the *structural budget* is calculated using medium-run projections of the main sources of fiscal revenues such as copper prices and the GDP growth rate). Later, the Bachelet administration reduced the specific value of the structural surplus to 0.5 per cent of GDP. The rule is also consistent with some degree of counter-cyclical fiscal policy as it allows the government to run deficits in years when GDP is below full capacity level, financed by the surpluses accumulated in good years. The degree of countercyclical policies is open to debate. For example, aggregate demand policies in 2000-03 were mildly countercyclical in spite of favourable conditions for accelerating a recovery of growth and employment at a time of low inflation, existing unused capacity and access to external borrowing at low cost. Also the dramatic surge in copper prices since 2006 has not been followed by an acceleration in growth. Most of the bonanza has been saved by the government: the fiscal surplus was 7.7 per cent of GDP in 2006 and 8.8 per cent in 2007. The surpluses are deposited in an economic and social stabilization fund held abroad, (hopefully) earning safe but modest returns. As a consequence of a very favourable fiscal position, particularly in US dollars, the Chilean public sector is a net creditor in dollars terms and maintains a small internal public debt (public debt has declined from 39 per cent of GDP in 1990 to 4.9 per cent in 2007).

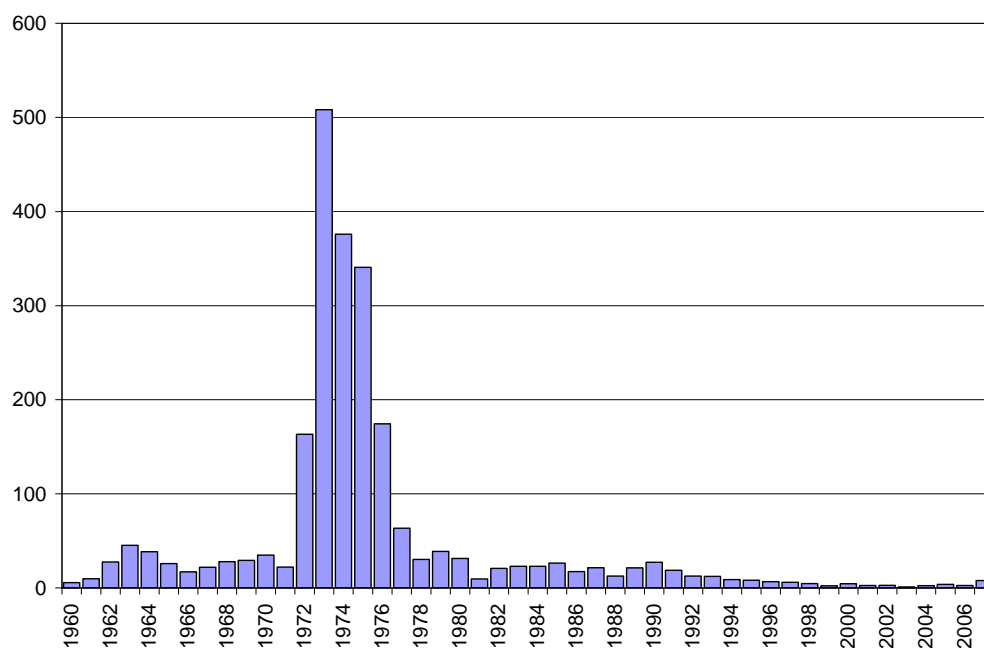
Exchange rate policy

Since September 1999, Chile has operated under a system of flexible exchange rates that replaced the 'adjustable band (managed)' system of the 1990s (see Figure 6). The management of the adjustable band regime was not simple, as persistent capital inflows during most of the 1990s, mainly until 1997, exerted a 'downward' pressure on the exchange rate (to appreciate), moving the market exchange rate to the floor of the band (see Figure 7). The central bank engaged in expensive sterilization operations to counteract the monetary effect of massive purchases of foreign exchange. In 1998-99, a tight monetary policy was complemented with a policy of *reduced* exchange rate flexibility (this move *narrowed* the band, reducing the distance between the floor and the ceiling of the band) in face of adverse terms-of-trade shocks and a reduction in capital inflows. The policy was surprising, as adjustments to adverse external shocks that can not be fully financed in general require *more* (not less) exchange rate flexibility. The experience of current flexible exchange rates without intervention in the 2000-08 period has been of large fluctuations in the nominal exchange rate, as is shown in Figure 6.⁹ This is an issue that deserves attention as price (exchange rate) signals

⁹ The central bank has intervened in the foreign exchange market in very few occasions and only under pressure for *depreciation* of the exchange rate: once in 2001 associated with a certain instability created by the September 11th incident and the crisis of the Argentinean currency board. The other main intervention was in 2002 after turbulence linked to the Brazilian elections.

containing a lot of volatility introduce noise for exporters and import competing firms. Again, the dominating belief by the authorities in Chile for a while was that the exchange rate market is to be left undisturbed, and that any central bank intervention is ultimately futile. The problem is that this undisturbed market equilibrium may yield an exchange rate level (i.e., too overvalued) and also volatility that may have adverse real effects on economic activity and the profitability of the tradable goods sector, Chile's engine of growth. Since 2005, a strong tendency towards an *appreciation* of the exchange rate has developed, but the central bank has refrained from intervening. In early 2008 the nominal exchange rate, peso/dollar appreciated more than 10 per cent in nominal terms in an atmosphere of high copper prices, weak dollar on international currency markets and the government's strong dollar-surplus.¹⁰ However, since September 2008, there has been a sharp reversal of the exchange rate; late October 2008 the exchange rate was nearly CLP670 per US dollar, in contrast to March 2008 when the exchange rate was CLP440 to the US\$.

Figure 5
Chile: Inflation rate, 1960-2007
(in percentage per year)

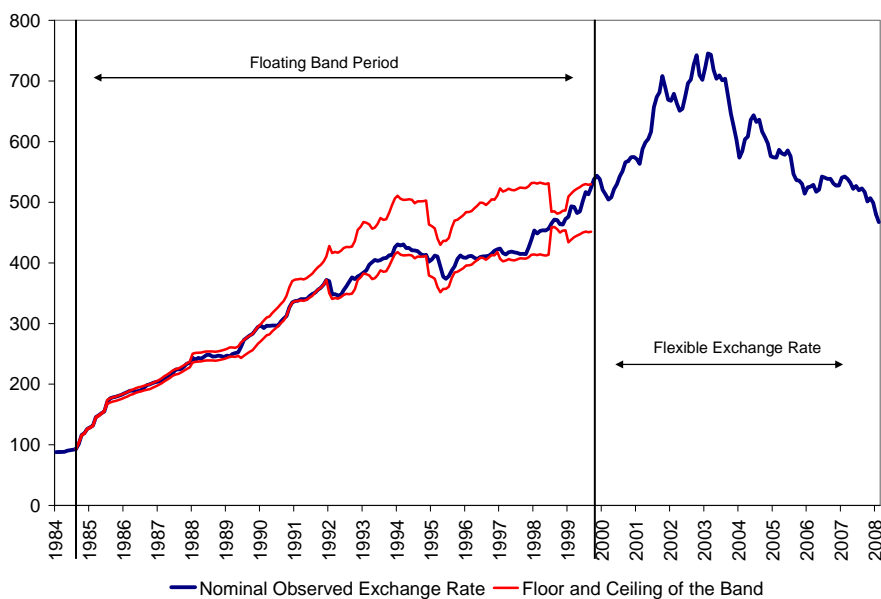


Source: Own elaboration based on data from the Central Bank of Chile.

¹⁰ The free floating regime has produced:

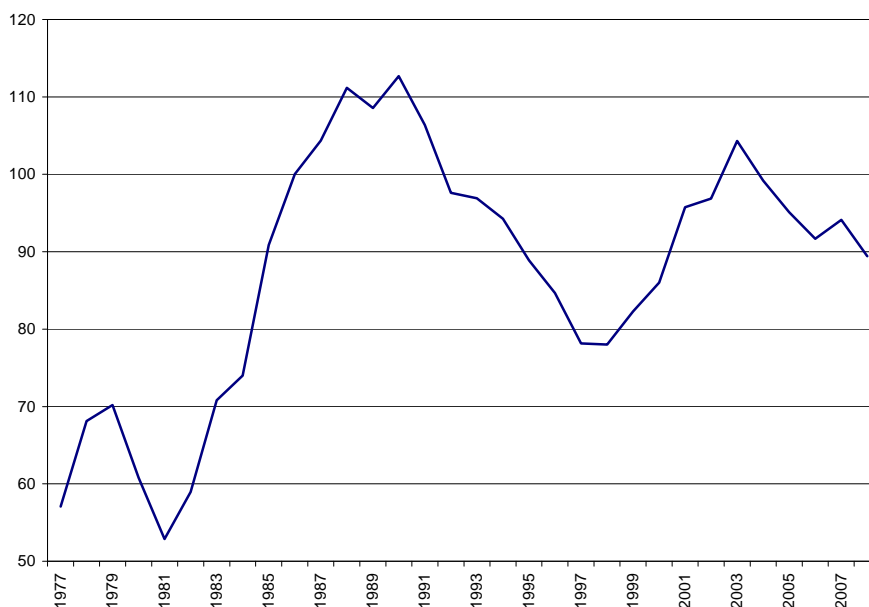
- (i) a decline in 'pass-through' coefficients between exchange rate and prices that reduce the inflationary effect of currency depreciations;
- (ii) small liability-dollarization in the banking system although the increased external indebtedness of the corporate sector reduces this effect; and
- (iii) the development of more sophisticated financial instruments to deal with exchange fluctuations, see De Gregorio and Tokman (2004).

Figure 6
Chile: Nominal exchange rate, 1984-2008
(in CLP per US\$)



Source: Own elaboration based on data from Central Bank of Chile.

Figure 7
Chile: Real exchange rate, 1977-2008
(Index 100 = 1986)



Note: Data points correspond to annual average real exchange rate, except for the year 2008 which applies to January only. An increase in the index indicates depreciation and a decline is an appreciation.

Source: Own elaboration based on data from Central Bank of Chile.

Disinflation and monetary policy

In 1990, inflation was 27.3 per cent, converging to less than 3 per cent by 2006 (but by 2007 inflation had accelerated to over 7 per cent due to several food and energy price increases). The decline in inflation (see Figure 5) is also a part of a general shift to a low inflation regime in the world economy. Chile established an independent central bank at the end of the Pinochet regime in the late 1980s with the mandate of ensuring low and stable inflation and normalcy in internal and external payments. Thus, its only policy objective is to ensure low inflation. Growth and full employment are *not included* as policy objectives according to the constitutional chart of the Chilean Central Bank. This is certainly different from the central banks of several developed economies, starting with the US Federal Reserve.¹¹ It is argued that the strong anti-inflationary mandate of the Chilean independent central bank has contributed to the attainment of lower inflation.

At the same time, it is apparent that the policy actions of a central bank also affect output and employment and that the central banks can cause cycles and even deepen recessionary shocks (as it seems was the case in the late 1990s). In fact, the central bank induced a credit crunch in 1998-99 which, along with the reduced exchange rate flexibility, probably amplified on the domestic output and employment the real effects of the external shocks associated with the global turbulence of 1997-99. Monetary policy in recent years has operated using an inflation target of 2-4 per cent, but in 2007 inflation jumped over 7 per cent due to higher oil prices, higher food prices and relatively easy monetary policy of the preceding years.

Macroeconomic performance of the four democratic administrations since 1990

Comparing the macroeconomic and growth performance across the last four government administrations since 1990 (at the time of writing this paper, Bachelet is in her third year of the four-year administration), we find some differences in outcomes and in underlying macro policies (see Tables 3 and 4). Economic growth was the highest during the Aylwin administration (an average of 7.8 per cent per year in 1990-94) and the lowest during the Lagos administration, with an average GDP growth of 4.4 per cent per year over the period 2000-05.¹² The growth record of the Bachelet administration in 2006-08 is only marginally better (4.8 per cent per year) but only up to mid 2008, in a context of record-high copper prices. Also the average rate of unemployment was the highest during the Lagos administration (see Table 3).

In turn, inflation was the highest under Aylwin (annual average 17.7 per cent) and the lowest under Lagos (2.9 per cent per annum). The macro performance of the Frei Ruiz-Tagle administration ranks between the Aylwin and Lagos regimes in terms of growth (lower than under Aylwin but faster than during Lagos) and inflation (higher than under Lagos but lower than during Aylwin). Obviously, initial economic conditions and the international economy shape the growth record of any administration. For example, the

¹¹ Of course monetary authorities cannot be completely oblivious to the real cycles of the economy and the effects of its own policies on the intensity and timing of these cycles. Also as part of the accountability mechanisms, central bank authorities report every year to the congress on the march of the economy. A recent analysis of the topic is contained in Williamson (2008).

¹² This will probably go up when the year 2005 is included if the forecast of nearly 6 per cent growth realizes.

complex international scenario associated with the Asian and Russian crises impacted on the Frei government in 1997-98 and, to some extent, also affected the Lagos government (until 2003). In turn, the Bachelet administration has benefited from two and half years from unprecedented high copper prices, the government's main source of fiscal revenues. On the whole, fiscal policy has been austere during the four *Concertación* governments. Under the fiscal rule adopted by the Lagos administration, fiscal deficit declined, and then turned into very large surpluses under the Bachelet administration. In general all the *Concertación* governments maintained moderate to low current account deficits, which by 2006-07 had turned to an average surplus of 3.6 per cent of GDP.

Table 3
Chile: Economic performance by administrations, 1990-2008

	Administration of:			
	Aylwin (1990-93) ¹	Frei (1994-99) ²	Lagos (2000-05) ³	Bachelet (2006-08) ⁴
GDP growth rate, % ⁵				
Total	7.80	5.50	4.40	4.80
Per capita	5.90	4.10	3.20	3.80
Inflation rate, % ⁵	17.70	6.10	2.90	5.20
Real wage (index 2000 = 100) ⁶	74.21	92.03	104.17	111.20
Real wages (rate of variation), % ⁶	3.74	3.82	1.61	2.39
Unemployment, % ⁷	7.30	7.30	9.70	7.60
Fiscal balance (% of GDP) ⁵	1.60	1.10	0.70	9.00
Terms of trade (index 1996 = 100) ⁵	93.25	102.22	114.98	163.70
Current account (% of GDP) ⁵	-2.50	-3.50	-0.24	3.61

Sources and notes:

- 1 Presidential term = March 1990 to March 1994. Data period covers the years 1990-93;
- 2 Presidential term = March 1994 to March 2000. Data period covers the years 1994-99;
- 3 Presidential term = March 2000 to March 2006. Data period covers the years 2000-05;
- 4 Presidential term = March 2006 to March 2010: Data period covers the years 2006-08 (Jan.)
- 5 Central Bank of Chile;
- 6 Merged series: for the years 1990-93, ECLAC (base 1980 = 100); for the years 1994-2006, INE (n.d.);
- 7 INE (n.d.).

Table 4
Chile: Economic performance by administrations, 1990-2008

	Administration of:			
	Aylwin (1990-94)	Frei (1994-99)	Lagos (2000-05)	Bachelet (2006-08)
Exchange rate policy	Exchange rate band	Exchange rate band	Floating	Floating
Monetary policy	Eclectic	Eclectic	Inflation targeting	Inflation targeting
Fiscal policy	Austere (without fiscal rule)	Moderately austere (without fiscal rule)	Rule of structural fiscal surplus: 1% of GDP	Rule of structural fiscal surplus: 0.5% of GDP (from 2007)
Taxes on short-term capital flows	Yes	Yes	No	No

Source: Own elaboration; Solimano and Pollack (2006).

4 The social record of the post-Pinochet administrations

This section focuses on the social dimension of the Chilean model during the post-Pinochet period. In a nutshell, the main achievement was the rapid decline in poverty, and the main failure the inability to reduce the inequality of income and wealth. Poverty (measured as the per cent of the population living below a certain poverty line) declined from levels exceeding 40 per cent in the late 1980s to around 14 per cent in 2006 (see Table 5). The decline in poverty is largely a by-product of the acceleration of growth taking place. As depicted in Figure 8 there is a clear inverse relation between GDP growth and poverty. In spite of the acceleration in growth and the decline in poverty over the last 20 years, the Gini coefficient, above 0.55 for most of the time, remains virtually flat for this period (with a slight decline in 2006).¹³ In this section, we focus on the issue of the persistence of inequality.¹⁴

Table 5
Chile: Poverty and inequality, 1987-2006

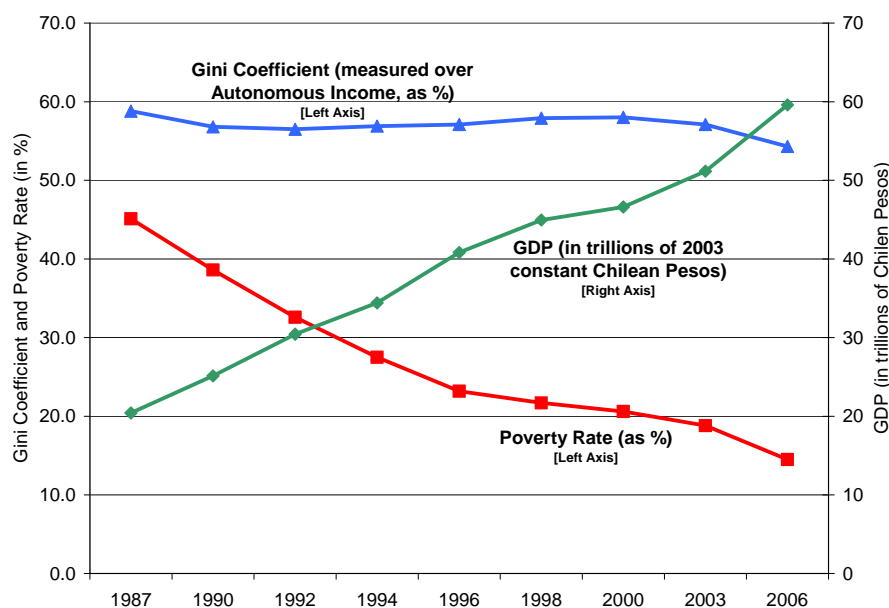
Country	Year	Poverty rate, %	Extreme poverty rate, %	Gini coefficient		Income share of:		Ratio 10/1 (10th versus 1st)
				Autonomous income, %	Monetary income, %	Top 10%	Bottom 20%	
Chile								
	1987	45.1	17.4	57.7	57.7	47.40	3.20	54.00
	1990	38.6	12.9	56.3	56.2	47.30	3.80	39.00
	1992	32.6	8.8	56.2	55.9	47.40	4.10	35.00
	1994	27.5	7.6	56.3	54.9	47.20	3.80	37.00
	1996	23.2	5.7	57.6	56.3	47.10	3.20	54.00
	1998	21.7	5.6	57.8	57.0	47.40	3.20	53.00
	2000	20.6	5.7	57.8	57.2	47.90	3.20	57.00
	2003	18.8	4.7	56.7	55.0	46.90	3.50	46.00
	2006	14.5	3.2	55.2	53.2	44.70	3.40	45.00
Other countries								
Brazil	2001			59.3		46.95	2.47	53.97
Finland	2000			26.9		22.57	9.62	5.61
Ireland	1997			34.3		27.23	7.44	9.36
Portugal	1997			38.5		29.84	5.75	14.99
Spain	2000			34.7		26.61	6.97	10.35
Sweden	2000			25.0		22.18	9.12	6.20
USA	2000			40.8		29.85	5.44	15.00
Uruguay	2000			44.6		33.71	4.78	18.62

Source: Own elaborations for Chile, based on Ministry of Planning (*CASEN Surveys*, 1987-2006); For other countries, World Bank (2007).

¹³ The exact number of people exiting poverty is sensitive to the definition of the poverty line. In Chile poverty lines are calculated based on consumption shares recorded in the household surveys of the 1980s. Observers argue that this is a low poverty line (diminishing measured poverty).

¹⁴ See Solimano (1998, 2005) for a discussion on the theories of inequality and social policy. On the links between distributive justice and economic development, see Solimano, Aninat and Birdsall (2000). There is a growing economic literature, which indicates that inequality of income and wealth (closely related to inequality of opportunities) is problematic for both ethical and instrumental reasons. Inequality can harm growth through various channels, generating social polarization and political instability, inviting higher taxation that is detrimental to investment. In addition, in unequal societies there is an economic loss, as many talented individuals and excluded social groups cannot realize their productive potential because of the paucity of credit, limited information on opportunities, lack of social contacts, and reduced access to political power.

Figure 8
Chile: Growth, poverty, and inequality, 1987-2006



Source: Own elaboration based on data from Central Bank of Chile (GDP) and Ministry of Planning (CASEN Surveys for poverty rate and Gini coefficient estimation).

The Chilean experience of the last two decades illustrates the complexities and nuances of the relation between economic growth and social inequality. Contrary to the predictions of a *negative* relation between inequality and growth based on the modern theory of political economy (developed by Alesina and Rodrik 1994 and others), persistent inequality in Chile apparently *did not harm growth* (and was largely unaffected by growth itself) in the last 20 years (although the pace of poverty reduction could have been faster if inequality, for a given rate of growth of GDP, had been lower). However, this is not the only sign of a possible relation between growth and inequality: older theories of savings-driven growth¹⁵ predict that a certain concentration in income distribution is needed to boost national savings and finance growth. This suggests a positive relation between inequality and growth (this was part of Kaldor's (1954) critique that capitalist growth and income concentration go hand in hand). In Chile, it is also apparent that the acceleration of economic growth *per se* has not led to a decline in inequality. That high and stable Gini coefficients coexist with relatively rapid growth is an empirical conundrum, and suggests that both variables (inequality and growth) behave *independently* from each other.¹⁶

Despite the reduction of poverty in the recent past, evidence shows that the vulnerability to poverty is still a potential problem, particularly during recessions. In fact, it is estimated that nearly 30 per cent of the population have incomes within 40 per cent of the official poverty line (see Lopez and Miller 2008). This reveals that significant

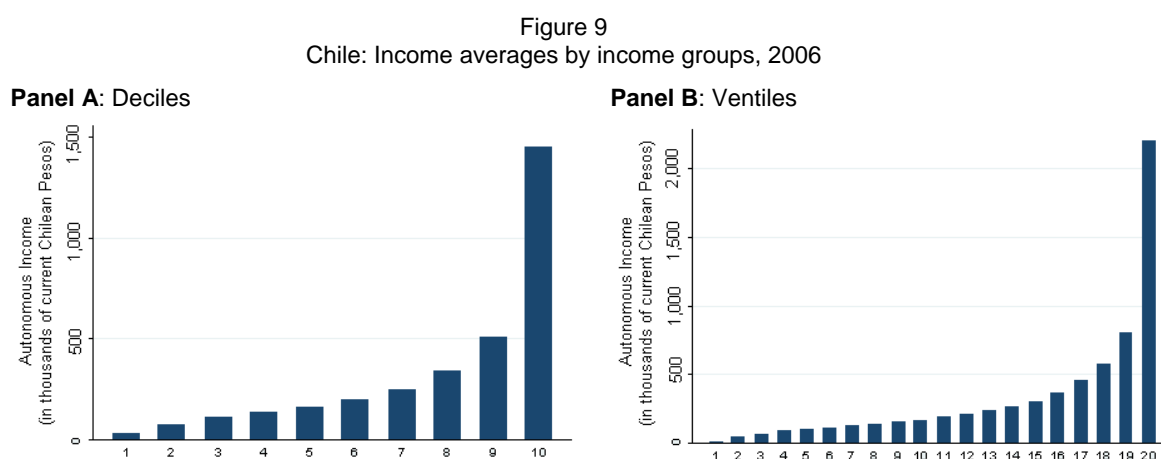
¹⁵ For example, in the Kaldor model, workers have a lower propensity to save than capitalists.

¹⁶ Solimano and Torche (2007) investigate this issue for Chile and note a degree of independence between both variables. See World Bank (2005) *World Development Report 2005/06* devoted to equity and development that stresses the multidimensional nature of inequality as encompassing both economic, institutional and political determinants.

numbers (of people) could fall into poverty if the economy is hit by adverse shocks. Inequality data highlight a picture of significant and persistent disparities in income: the richest top 10 per cent of the population in Chile captures nearly 47 per cent of the income until 2003 and 45 per cent in 2006. In contrast the bottom 20 per cent captures only 3.4 per cent of income in 2006. The Gini coefficient for autonomous income (say, the income earned on the market before government subsidies and transfers) had in the 1987-2006 period an average value of 56.8, declining slightly thereafter. In turn, the Gini coefficient for total income—that which includes state transfers and subsidies—is slightly below the Gini for autonomous income but the differences are not very significant. These Gini values are at the high-end with respect to Latin America, a region already characterized by high inequality (see Table 5).

Panels A and B of Figure 9 show the shares of income by deciles and ventiles (the distribution ordered by groups of 5 per cent). It is apparent from Figure 9 that inequality of incomes in Chile is mainly due to concentration at the top (the richest 10 and 5 per cent) rather than acute poverty at the bottom of the distribution. In turn, income distribution is relatively even (lower disparities of income) from the first to the ninth deciles. The main difference is in the income share of the top decile relative to the rest. The same point can be made by looking at Table 6 where the values of the Gini coefficients for the complete distribution (from deciles 1- 10) are *significant higher* than the Gini for the deciles 1-9 (and 10th). In fact, if the top decile is excluded from the overall distribution, the resulting inequality levels are not too different from those exhibited by the more egalitarian countries (a Gini below 0.4, see Table 5).¹⁷ Our measure of inequality focuses on income flows. However, *wealth distribution* is often much more concentrated than income distribution. Using data on wealth from a UNU-WIDER study on wealth distribution (Davis et al. 2006), it is apparent that the Gini coefficients for wealth are significantly higher than the Gini coefficients for income at the country level (see Solimano 2008).

An indicator of wealth concentration in Chile can be extracted from the *Forbes Magazine* publication that has collated information since 1982 on the wealth levels of



Source: Own elaboration based on Ministry of Planning (CASEN Survey 2006).

¹⁷ A mathematical note is relevant here: due to the formula of the Gini that includes several interaction terms the total (or average) Gini coefficient for the whole distribution is *not* the average of the Gini for the individual sub-components.

the ‘super-rich’ (billionaires). As Table 7 shows, Chile, out of a total population of 16 million people, has four billionaires (individuals whose net worth is estimated to exceed one billion dollars). The estimated combined wealth of the four richest people in Chile is 12.5 per cent of the country’s GDP (estimated for 2008). As a reference point, the United States in 2007 had 406 billionaires (out of a population of 300 million) whose combined wealth amounted to around 10 per cent of the GDP of the US. Wealth concentration seems to be lower in the US than in Chile!

Table 6
Chile: Gini coefficients by income groups, 1987-2006

Year	Total Gini, %	Gini, 1st-9th deciles, %	Gini, 10th decile, %
1987	57.7	39.5	34.3
1990	56.3	36.4	37.6
1992	56.2	36.0	38.2
1994	56.3	37.0	39.4
1996	57.6	39.6	37.1
1998	57.8	39.6	36.4
2000	57.8	38.3	40.0
2003	56.7	37.5	39.6
2006	55.2	38.1	35.3
Average	56.8	38.0	37.5

Source: Solimano and Torche (2007), based on Ministry of Planning (*CASEN Surveys*, 1987-2006).

Table 7
Chile: Individuals with the largest net worth, 2004-08

	2004	2005	2006	2007	2008	<i>Forbes</i> ranking	
	In millions US\$ (current)					2007	2008
Andrónico Luksic ¹	3,400	4,200	–	–	10,000	–	77
Anacleto Angelini ²	2,500	2,900	3,700	6,00	1,000	119	1062
Eliodoro Matte and family	2,800	2,700	4,100	5,600	7,900	137	117
Sebastián Piñera	–	–	–	1,200	1,300	799	897
Total of the four major fortunes	8,700	9,800	7,800	12,800	20,200		
Chile’s GDP (in current US\$)	95,026	115,000	145,841	154,000 ³	161,700 ⁴		
Four major fortunes as % of GDP	9.16	8.52	5.35	8.31	12.49		

Notes: ¹ Luksic died in August 2005; inherited by his widow, Iris Fontbona and family;
² Angelini died in August 2007; inherited by his widow, Maria Nosedá Zambra;
³ GDP 2007 estimated on the basis of a growth rate of 5.2%;
⁴ GDP 2008 calculated, based on the average of the projection range (4.5-5%) from the Central Bank of Chile.

Source: Own elaboration on the basis of data from Fazio (2005), *Forbes* (2008) and World Bank (2007).

4.1 On the causes of the persistence of inequality

Why does inequality remain so high in Chile? Several explanations can be put forward to account for the level and persistency of inequality. These explanations combine the effect of globalization, wealth concentration, and lack of social mobility, labour market and political economy factors:

- i) *Skewed access to the opportunities opened by globalization and liberalization policies.* Markets become larger with external opening and the scope for wealth creation expands, but these opportunities tend to be captured by individuals with tertiary education levels, with entrepreneurial drive and risk-taking attitudes in addition to good social connections and access to credit. As access to education in Chile is stratified by income levels, these gains tend to accrue more to high-income individuals. Entrepreneurship and risk-taking attitudes may be distributed more randomly across populations but access to enabling factors such as credit or social connections is, in any case, far from being uniformly distributed in society.
- ii) There is a significant *concentration of ownership* in key sectors of the economy in Chile such as banking, manufacturing, retail trade, private pension managing companies (AFP) and private health providers (ISAPRES), pharmacies and other sectors with high rates of return for unit of invested capital (see Solimano 2007). This creates super-normal profits and contributes to income inequality.
- iii) *Strong differences in the quality of private and public school systems.* There are large differences in the amount of resources per student of the public school system compared to private schools (a ratio of approximately one to four); as education is the main mechanism of upward social mobility, children of the working classes and the middle class generally attend lower quality public schools while the offspring of the upper-middle class and elites go to the better quality private schools. This difference between the two school systems creates a powerful mechanism of preserving social inequality in the Chilean society.
- iv) *Low level of worker unionization and limited bargaining power of the working classes* reduce its capacity to appropriate a higher share of the productivity gains generated by a growing economy, a point underscored already by the famous David Ricardo. This also affects the labour share in national income.
- v) An apparent *low preference by the authorities for public policies oriented towards reducing income and wealth inequality.* This was the case not only in the Pinochet regime but also during the democratic governments in power since 1990. During the later periods, social policies have focused more on poverty reduction and social protection than on the alleviation of inequality, failing to exploit the complementarities between the two set of policies.

4.2 The segmentation of social services and the persistency of inequality

The persistence of inequality nearly two decades after the restoration of democracy is one of the salient features of the Chilean model. This raises some intriguing questions on the relationship between democracy and equality that deserve further analysis. It also shows a shift away from the redistributive economics in the historical social priorities of the Chilean centre-left.¹⁸ The social policies of the *Concertación* governments have

¹⁸ Part of the ‘traditional left, in Chile, i.e., the Chilean Communist Party, is not in government nor party to the coalition that has ruled since 1990.

been guided by at least four underlying general principles: (i) economic growth is the main force to reduce poverty measured on an income basis (in reference to a poverty line); (ii) increase in the level and better targeting of monetary transfers to the very poor and most vulnerable, (iii) increase in public spending in education, health, housing and pensions, (iv) more recently the Lagos and Bachelet governments started reforms in the systems of private provision of social services in health care and in the pensions system, also the Bachelet government has expanded pre-school education and created a number of new nursery homes for children while their parents work. The Bachelet government has put more emphasis on social protection than the other previous *Concertación* governments. The main features of social and labour policies of the post-1990 period are summarized in Table 8.

Table 8
Chile: Social matrix, by government administration, 1990-2008

	Administration of:			
	Aylwin (1990-94)	Frei (1994-99)	Lagos (2000-05)	Bachelet (2006-08)
Poverty	Decreases	Decreases	Decreases	Decreases
Inequality (Gini coefficient)	High	High	High	Small decline
Increase & focalization of subsidies	Yes	Yes	Yes	Yes
Minimum wage	Real increase	Real increase	Real increase	Real increase
Education:				
Expenditure	Increase	Increase	Increase	Increase
Reforms	Program P-900 (poor schools), Program MECE (quality of education)	School day extended; teacher evaluation	12-yr education compulsory; digital alphabetization	Educational reform
Health:				
Expenditure	Increase	Increase	Increase	Increase
Reforms	Strengthening of public hospitals, coverage extended	Strengthening of public hospitals, coverage extended	Plan Auge, modification by law for Isapres	
Social security reforms	No	No	No	Yes; approved in 2007
Goals for greater equality made explicit	No	No	No	Unclear
Deconcentration of property policy	No	No	No	Partial
Strengthening of trade unions & social organizations	Light	Light	Light	Light
Consumer defence policy			Creation of a board of free competition; modification of the consumer law	More active
Democratization of the access to credit	Partial	Partial	Partial/increases	Partial/increases

Source: Own elaborations; Solimano and Pollack (2006).

In retrospect, the priorities of the social and labour policies of the democratic administrations are characterized by:

- i) The lack of explicit and active policies oriented towards reducing income inequality and anti-trust policies for preventing a concentration of ownership and wealth in economic conglomerates in critical sectors of the economy;
- ii) The lagged consideration of the middle class as a valid target of social policy, a trend partially redressed in the Lagos and Bachelet administrations through the expansion of health and social security benefits to this population group;
- iii) An excessive emphasis on targeting that generated (often unintended) exclusions of social benefits for border-line individuals, including children;
- iv) Underinvestment in public education, as reflected in the very significant difference in the level of spending per student between public and private schools;¹⁹ and
- v) The absence of labour legislation oriented towards rebalancing the bargaining power of workers and employers that had been severely debilitated during the Pinochet regime.

The increased privatization of social services (schools, private health providers, private capitalization of pensions) that was started during the military regime and was continued with the advent of democracy created a highly segmented regime for access to health and education services. The private system serves the upper-middle classes and the rich (the only segments of the population that can afford to pay for privately provided social services), whereas the bulk of the middle class and the poor are in the public system with generally under-funded public schools and hospitals. Furthermore, the private social security system had some discriminatory rules against women and very stringent criteria applying to eligibility to minimum pensions. Some of these limitations have been addressed by the Lagos and Bachelet administrations; in fact, President Bachelet started talking of establishing a ‘state of social rights’ in Chile. This has shifted then to a state of social protection. The main concrete step in this direction is the recent reform of the social security system oriented towards improving minimum pensions, making its coverage universal, correcting inequities in the system against women, and other changes. Nevertheless, the new law preserves, virtually intact, the high-fee private capitalization pension system in which private companies administer the pensions of millions of people. The vulnerability of the system has become apparent with the financial crisis of 2008 which led to a decline in the value of pensions of various higher profitability-high risk portfolios of the pension plans.

4.4 Labour market, workers unionization and social conditions

The link between the social conditions of the population and the workings of the labour market is important. Various authors—Riesco (2008) Solimano and Pollack (2006) Infante and Sunkel (2004)—have studied these links with respect to Chile. Several conclusions emerge from these studies:

¹⁹ See Lopez and Miller (2008).

- i) Poor families are more vulnerable to negative economic shocks than the non-poor, as the poor have larger families, a lower number of income earners and have higher dependency ratios;
- ii) Poor families (indigent and poor non-indigents) have a high incidence of unemployed and inactive members;
- iii) The incidence of unemployment among the poor is closely related to their education level, which is much lower among the poor income strata;
- iv) Workers coming from indigent and poor households tend to work in lower productivity sectors,
- v) The Chilean labour market is characterized by job fragility, frequent shifts of workers across jobs and from employment to unemployment (Riesco 2008). This implies that the degree of job fragility and vulnerability is particularly serious for women and low-skilled workers. One consequence of this is the non-attainment of the minimum pension in the private capitalization system which, as minimum requirement, implies continuous contributions for 20 years (often related to a stable job) in order to qualify for such minimum pension.
- vi) There is significant segmentation in the Chilean labour market between the formal and informal sectors. According to Infante and Sunkel (2004), while around 87 per cent of the workers in the formal sector have formal work-contracts, only 50 per cent of informal workers have it. In addition, social security benefits are available to 84 per cent of the workers in the formal section versus only 35 per cent of those in the informal sector. Working conditions are generally also worse in the informal sector (longer working hours and less safety at the work-place). Informal sector workers are less educated (average education amounting to 9.6 years) than formal workers (average education of 12.2 years); also poverty is higher among informal sector workers than within the formal sector. Furthermore, working women are concentrated in the informal sector, where they earn lower salaries than men (20 per cent less in the formal and 45 per cent less in the informal sector).
- vii) The degree of labour unionization in Chile is very low. It started to decline during the military regime and the trend continued with the return of democracy. Before the 1973 military coup, the rate of unionization was over 20 per cent, declined to 16 per cent in 1992 and to 11 per cent in 2006. In addition, the per cent of workers subject to collective bargaining is currently around 8 per cent (Riesco 2008).

4.5 The rise of crime and insecurity

A worrisome feature of urban life and social conditions that concerns all segments of Chile's population, is the significant increase in urban violence, robbery and crime of the last 10-15 years. According to statistics, the number of people per 100,000 inhabitants reporting incidence of violence associated with assaults, robbery and stealing has increased by 124 per cent between 1990 and 2005 (Beyer and Vergara 2006).²⁰ A detailed explanation for the rise in violence and robbery in this period is an

²⁰ Unfortunately, statistics for this period on the actual number of violent, robbery-related incidents are not available.

important topic for future research.²¹ But some factors contributing to increased urban violence and crime can already be highlighted: a high incidence of unemployment among the youth, a segment often found to be engaged in robbery and crime, the fact that as the economy grows and prospers, expectations of economic advancement become more common among all population groups. However, in a country with high inequality and limited upward social mobility such as Chile, some people—particularly the unemployed or precariously employed, often young individuals coming from low-income or dysfunctional families—may feel that they share relatively little of the macro prosperity and therefore resort to crime especially in the affluent urban neighbourhoods, as Beyer and Vergara (2006) observe. Also they often come from weakly constituted or fragmented families. This latter factor in Beyer's and Vergara's statistical analysis is denoted by a variable showing the proportion of families in which the head of household are women; this variable, in turn, has a statistically significant effect on the rate of reported cases of crime and violence. Also the rate of urbanization has a positive effect on reported crime, confirming the presumption that this is mainly an urban phenomenon. The cost of undertaking a crime survey proxied by the number of arrests and time spent in jail as well as some anti-crime policies (the programme called *Plan Cuadrante* but apparently not for the *Barrio Seguro*) has a negative effect on the reported crime rates. In any case, social conditions such as fragility of employment, inequality and rising expectations along with increasing urbanization and insufficient police and judiciary systems may account for the expansion of crime in Chile.

5 Looking at the future: development potential, competitiveness, and quality of life in Chile

Over the last two decades, Chile has shown that it has been able to grow at respectably high rates even though the growth process has not always been steady. The 'consensus forecast' of the government and local economists is that Chile's potential growth is about 5 per cent per year in the medium run. These predictions, of course, will be affected by how the current international financial crisis impacts on the Chilean economy. Although this rate of growth is below the average observed in the last two decades, it yields a respectable *GDP growth rate per capita* of 3.5 per cent per year (assuming a population growth of 1.5 per cent per annum). Of course, all these projections are conditional on the behaviour of the main long-run determinants of economic growth in addition to demographic trends. On the economic side, a critical variable will be the level and quality of investment in human and physical capital, rate of growth of total factor productivity, the efficiency of resource allocation and the quality of public policies. Investment and innovation require the stability of rules of the game as well as stability in the macro, social and political arenas. Excessive inequality can be a potential destabilizing factor if compounded by modest growth and disappointed expectations. A hundred of years ago, Chile lived through a period of initially high development expectations that were later dashed in the early twentieth century. It is also very important to invest in 'enabling social and institutional factors', such as a good level of education, research and development, low bureaucracy and moderate costs of conducting business, effectiveness and quality of institutions

²¹ One of the few empirical studies on the determinants of crime and violence in Chile is Beyer and Vergara (2006).

(including the incidence of corruption). Chile does well by international standards on some of these scores. In others, the record is less than brilliant (see Table 9).

Chile faces perhaps one of its more important challenges on the *education* front. According to the international PISA and TIMSS tests of educational attainment for middle and high school students in science, reading and math, Chile is well below the OECD standard, although above that of Latin America (on the PISA test). Public expenditure per student (as a share of GDP) is 4.4 percentage points below the OECD level in primary education, 10 percentage points in secondary education and 15 percentage points in tertiary education. In tertiary education, public spending in Chile is near 20 percentage points below the average for Latin America (Table 9). However, these large differences are probably due to the increasing importance of Chile's private university system, so public spending in tertiary education can underestimate the overall effort in this sector.

Expenditure on research and development in Chile is about one-fifth of the average of OECD countries. The number of Chilean researchers in R&D activities is just a fraction of those in OECD, but twice the number of the Latin American average.

Chile has low indices of *perceived corruption* (i.e., Transparency International) and is close to the levels of OECD in this matter. However, in recent years the incidence of irregular practices and of corruption in the public sector has risen. Bureaucratic corruption²² seems to be low but 'political corruption' is apparently on the rise and 'party quotas' for the appointment of government officials at different levels in the public administration exist. It has been noted that 'party operators' in the public sector try to extract from various government agencies and ministries resources for financing their political campaigns, patronage or jobs and contracts for family, party-members and friends. The magnitude and extent of these practices are still largely an open question.

At the same time, with respect to the criterion *cost/ease of doing business*, Chile scores relatively well according to the World Bank index that measures the various considerations affecting the cost of establishing and running a business: the time to set up or discontinue a company, difficulties with regard to tax payments, labour regulations, or cost of credit. In the index ranking countries according to the level of business costs, from lower to higher cost, Chile is in 33rd place in a list of 178 countries. The average for Latin America is 89 while the OECD average is 28. In addition, Chile's degree of competitiveness (see competitiveness index in Table 9) is close to the OECD levels and above that of Latin America.

On the criterion of the *quality of life*, Chile scores relatively high in the human development index; closer to the average of OECD, and above that of Latin America. Life expectancy for females is 81 years of age and 74 years for males. Health indicators for children are good, particularly with regard to the low indices on diarrhoea. Negative trends in the quality of life, however, are the increased crime rates, congestion and pollution of the urban areas and extra time spent in public transportation, particularly in the capital city of Santiago after the inauguration of a new, but largely defective, system of public transportation (the *Transantiago* system).

²² See Tanzi (2008).

Table 9
Chile: Development indicators from an international perspective

		Chile	OECD	Latin America & the Caribbean
Education:	PISA ⁽¹⁾	430	497	402.0
	TIMMS ⁽²⁾	400	522	—
Public expenditure per student (% of GDP per capita) ⁽³⁾	primary	14.12	18.51	12.02
	secondary	14.87	25.01	14.66
	tertiary	15.96	30.98	36.72
Public spending in education (% of GDP) ⁽³⁾		3.87	5.21	4.31
Science and technology ⁽⁴⁾				
Expenditure on R&D (% of GDP), 1996-2003		0.57	2.40	0.57
R&D researches (per million people), 1990-2005		444.0	3,211.0	226.0
Institutional quality and competitiveness				
Corruption perception index ⁽⁵⁾		7.0	7.25	3.72
Cost of doing business ⁽⁶⁾		33.0	28.0	89.07
Competitiveness index ⁽⁷⁾		4.77	5.00	3.89
Health indicators and human development				
Life expectancy at birth (yrs) ⁽⁸⁾	male	74	76	69
	female	81	81	74
Death among children under 5-yrs due to (%): ⁽⁸⁾	diarrhoeal-related	0.50	0.90	7.88
	pneumonia	6.2	2.49	8.51
Human development index ⁽⁹⁾		0.87	0.93	0.78

Sources and notes:

- (1) Own elaboration based on data from OECD (2007) and Ministry of Education (2007). An average of the three areas of the test (science, reading and mathematics) was calculated to obtain a general score. Note: averages for Latin America were calculated on the basis of the results of six participating countries (Argentina, Brazil, Chile, Colombia, Mexico and Uruguay).
- (2) Own elaboration based on data from Mullis et al. (2004: 34) and Martin et al. (2004: 36). The average for OECD was calculated based on available data for the 14 participating countries. No other country participated from Latin America and the Caribbean except Chile in this test. An average of the two areas of study (science and mathematics) was calculated to obtain a general score.
- (3) World Bank (2007) for average of data for the 1999-2005 period. OECD corresponds to high-income OECD countries (25 nations).
- (4) World Bank (2007). OECD corresponds to high-income OECD countries (25 nations);
- (5) Transparency International. CPI score relates to perceptions of the degree of corruption as seen by business people, and country analysts, and ranges between 10 (highly clean) and 0 (highly corrupt).
- (6) World Bank (2008). Ranking: 1 = the most business-friendly regulations; 178 = the least business-friendly.
- (7) World Economic Forum (2007). Scores range from 1 to 7, with 7 = the most competitive.
- (8) Averages calculated on data from WHO (2005) based on information for the latest year available.
- (9) UNDP (2007). Values range between 0 and 1, with 1 = the highest level of human development.

Physical environment is an important topic. Chile approved new legislation for the protection of the environment already in the early to mid 1990s. However, the prevailing institutional framework is characterized by the absence of a strong central entity (a ministry of the environment or equivalent) and responsibilities are spread across various agencies; the most important of these being the CONAMA (*Corporación*

Nacional del Medio Ambiente, National Environmental Agency). Also the ministry of the presidency is responsible for a range of environmental issues in addition to various other issues such as indigenous populations. Experts agree that Chile still devotes modest public budgets for environmental protection and that these miscellaneous agencies often lack the human and financial resources needed for monitoring and control in sensitive areas. On the other hand, part of the environmental spending in Chile is carried out by the private sector (e.g., water and sewerage treatment). A positive force for more environmental protection in Chile is coming from external sources: Chile's free trade agreements with the United States, the European Union and other countries along with the impending accession to the OECD. With these agreements, there will be a need to enforce stricter environmental standards similar to the ones adopted in developed nations. How fast this convergence will take place is an open question.

6 Final remarks

In the last twenty years or so, Chile has made important achievements in terms of the acceleration of economic growth, productive modernization and the consolidation of macroeconomic stability. Still, economic growth has decelerated in the last decade and the international financial crisis will very likely reduce growth in the short term. Free markets and a prominent role for the private sector have been the centrepieces of the development strategy started by the military. With the advent of democracy, a more gentle and human version of the economic model imposed in the military period has taken place. The democratic governments since 1990 have made advances in poverty reduction and social protection of the poor. However, democracy in Chile has failed to alleviate the high levels of social inequality **and reduce the economic power of Chilean elites**. It is interesting to note that a reasonable level of social peace and lack of serious social conflict have evolved in Chile in the last twenty years. This is interesting and perhaps puzzling at the same time: on the one hand, the acceleration of economic growth in terms of per capita income tends to reduce social tensions, but on the other hand, persistent inequality can increase social conflict. In Chile, however, weak unions and largely demobilized social movements may account for the tenuous link between inequality and conflict. Another possibility is that people prefer pro-growth policies, thus tolerating inequality, provided that the economy is growing. Can the high-inequality equilibrium be maintained indefinitely in the future? As societies become richer, its citizens will demand more social rights, less inequality and more social inclusion. A reduction in social inequality would require changes on several fronts: (i) more resources to the public sector for education; (ii) curtailing further concentration of wealth and market shares in banking, retail trade, private pensions systems and private health provision, and other sectors; (iii) more effective regulation of big business; (iv), enhanced bargaining power of labour unions and better labour rights and (v) effective support to the sector of small- and medium-sized enterprises. Chile needs to rebalance labour relations in the context of a more prosperous society that made labour unions increasingly marginalized. Another worrisome trend of the Chilean economic growth model is the impact on the environment and natural resource base, and its export orientation based on the intense exploitation of natural resources. The critical decision is whether Chile should continue pushing for growth along the same, decades-old strategy of resource-intensity and neglect of inequality, or to rebalance the priorities of the development strategy for more social equality and protection of the environment.

In a turbulent international economy, economic and financial policies to maintain the credit flow, inflation under control, the stability of the banking system and economic growth at a reasonable level will be essential. In addition, anti-crisis policies will need to support small-scale firms because this sector generates nearly 80 per cent of the country's employment, activate public programmes that are intensive in employment and provide social protection to the poor and the middle classes.

The Chilean model, with all its achievements, faces the limits of neoliberal economics for producing social equity and environmentally balanced development in unequal and highly stratified societies even when applied by social-democratic administrations subject to democratic scrutiny. The political economy correlate of a redefinition in development priorities may mean less power for the dominant elites (economic and political) and broader social participation for the middle class and the working people to support new and more equitable development priorities.

References

- Alesina, A., and D. Rodrik (1994). 'Distributive Politics and Economic Growth'. *Quarterly Journal of Economics*, 109 (2): 456-90.
- Bennett, H., and R. Valdés (2001). 'Series de Términos de Intercambio de Frecuencia Mensual para la Economía Chilena: 1965-1999'. Working Paper 98. Santiago: Central Bank of Chile.
- Beyer, H., and R. Vergara (2006). 'Delincuencia en Chile: Determinantes y Rol de las Políticas Públicas'. Santiago: Pontificia Universidad Católica de Chile. Mimeo.
- Bitar, S. (1979). *Transición, Socialismo y Democracia*. Mexico City: Siglo Veintiuno Editores.
- Braun, J., M. Braun, I. Briones, J. Díaz, R. Lüders, and G. Wagner (2000). *Economía Chilena 1810-1995: Estadísticas Históricas*. Working Paper 187. Santiago: Instituto de Economía, Pontificia Universidad Católica de Chile.
- Central Bank of Chile (n.d.). *Online Database*. Available at: www.bcentral.cl.
- Corbo, V., and A. Solimano (1991). 'Chile's Experience with Stabilization Revisited'. In M. Bruno, S. Fischer, E. Helpman, N. Liviatan, with L. Meridor (eds), *Lessons of Economic Stabilization and Its Aftermath*. Cambridge, MA: MIT Press.
- Davies, J., S. Sandstrom, A. Shorrocks, and E. N. Wolff (2006). 'The World Distribution of Household Wealth'. Helsinki: UNU-WIDER. Available at: www.iariw.org/papers/2006/davies.pdf.
- De Gregorio, J. (2004). 'Economic Growth in Chile: Evidence, Sources and Prospects'. Working Paper 298. Santiago: Central Bank of Chile.
- De Gregorio, J., and A. Tokman (2004). 'Overcoming Fear of Floating: Exchange Rate Policies in Chile'. Working Paper 302. Santiago: Central Bank of Chile.
- Díaz, J., R. Lüders, and G. Wagner (2007). 'Economía Chilena 1810-2000. Producto Total y Sectorial. Una Nueva Mirada'. Documento de Trabajo 315. Santiago: Instituto de Economía, Pontificia Universidad Católica de Chile.

- ECLAC (2006). *Statistical Yearbook for Latin America and the Caribbean*. Santiago: ECLAC.
- Edwards, S., and A. Edwards (1987). *Monetarism and Liberalization: The Chilean Experiment*. Cambridge, MA: Ballinger Publishing.
- Fazio, H. (2005). *Mapa de la Extrema Riqueza al año 2005*. Santiago: LOM Ediciones, Colección Ciencias Sociales.
- Ffrench-Davis, R. (1973). *Políticas Económicas en Chile 1950-70*. Santiago: Ediciones Nueva Universidad.
- Ffrench-Davis, R. (2002). *Economic Reforms in Chile. From Dictatorship to Democracy*. Chicago: University of Michigan Press.
- Forbes Magazine* (2008). 'The World's Richest People. World's Billionaires'. Online edition. Available at: www.forbes.com.
- Foxley, A. (1983). *Latin American Experiments in Neo-Conservative Economics*. Berkeley: University of California Press.
- Fuentes, R., M. Larraín, and K. Schmidt-Hebbel (2006). 'Sources of Growth and Behaviour of the TFP in Chile'. *Cuadernos de Economía*, 43 (May): 113-42.
- ILPES-ECLAC (several years). *Statistical Reports for Latin America and the Caribbean*. Santiago: ILPES-ECLAC.
- Infante, R., and G. Sunkel (2004). *Chile. Trabajo Decente y Calidad de Vida Familiar, 1990-2000*. Santiago: Organización Internacional del Trabajo.
- Kaldor, N. (1957). 'A Model of Economic Growth'. *Economic Journal*, 67: 591-624.
- Larraín, F., and P. Meller (1990). *La Experiencia Socialista-Populista Chilena: La Unidad Popular, 1970-73*. Colección de Estudios CIEPLAN. Santiago: CIEPLAN.
- Larrañaga, O. (2001). 'Distribución de Ingresos 1958-2001'. In R. Ffrench-Davis and B. Stallings (eds), *Reformas, Crecimiento y Políticas Sociales en Chile desde 1973*. Santiago: CEPAL.
- Lopez, R., and S. Miller (2008). 'Chile: The Unbearable Burden of Inequality'. *World Development*, 26 (12): 2679-95.
- Maldonado, R. (comp.) (1993). *Pedro Vuskovic, Obras Escogidas sobre Chile 1964-1992*. Colección Chile en el Siglo XX. Santiago: Ediciones Centro de Estudios Políticos Latinoamericanos Simón Bolívar.
- Martin, M. O., I. V. S. Mullis, E. J. Gonzalez, and S. J. Chrostowski (2004). *TIMSS 2003 International Science Report. Findings From IEA's Trends in International Mathematics and Science Study at the Fourth and Eighth Grades*. Chestnut Hill: MA: TIMSS & PIRLS International Study Center, Boston College, 36.
- Meller, P. (1997). *Un Siglo de Economía Política Chilena: 1890-1990*. Santiago: Editorial Andrés Bello.
- Ministry of Education (2007). 'PISA 2006: Rendimientos de estudiantes de 15 años en Ciencias, Lectura y Matemática'. Santiago: Curriculum and Evaluation Unit, Ministry of Education.

- Ministry of Finance (2007). *Online Database*. Santiago: Ministry of Finance. Available at: www.dipres.cl.
- Ministry of Planning (2007). 'Encuesta de Caracterización Socioeconómica Nacional 2006. Principales Resultados Educación'. Santiago: Ministry of Planning.
- Ministry of Planning (various years). *CASEN Surveys*. Santiago: Ministry of Planning Available at: www.mideplan.cl/casen/.
- Mullis, I. V. S., M. O. Martin, E. J. Gonzalez, and S. J. Chrostowski (2004). *TIMSS 2003 International Mathematics Report. Findings From IEA's Trends in International Mathematics and Science Study at the Fourth and Eighth Grades*. Chestnut Hill, MA: TIMSS & PIRLS International Study Center, Boston College, 34.
- National Institute of Statistics (INE). *Online Database*. Available at: www.ine.cl.
- OCDE and CEPAL (2005). *Evaluación del Desempeño Ambiental, Chile*. Santiago: OCDE and CEPAL.
- OECD (2007). *PISA 2006, Vol. 2: Data*. Available at: www.pisa.oecd.org/pages/0,2987,en_32252351_32235731_1_1_1_1_1,00.html.
- Riesco, M. (2008). *Cambios en el Modelo Social Chileno*. Santiago: CENDA.
- SII (Chilean Customs Office and Internal Revenue Service) (2003). SII Website. Available at: www.sii.cl.
- Solimano, A. (1993). 'Chile'. In L. Taylor (ed.), *The Rocky Road to Reform. Adjustment, Income Distribution and Growth in the Developing World*. Cambridge, MA: MIT Press.
- Solimano, A. (1999). 'The Chilean Economy in the 1990s: On a Golden Age and Beyond'. In L. Taylor (ed.), *After Neoliberalism. What Next for Latin America?* Chicago: University of Michigan Press.
- Solimano, A. (2007). 'Sobre la Reproducción de la Desigualdad en Chile: Concentración de Activos, Estructura Productiva y Matriz Institucional'. CIGLOB Working Paper 01. Santiago: International Center for Globalization and Development.
- Solimano, A. (2008) 'The Middle Class and the Development Process'. Serie Macroeconomía del Desarrollo 65. Santiago: UN-ECLAC.
- Solimano, A. (ed.) (1998). *Social Inequality. Values Growth and the State*. Chicago: University of Michigan Press.
- Solimano, A. (ed.) (2005). *Political Crises, Social Conflict and Economic Development. The Political Economy of the Andean Region*. Cheltenham: Edward Elgar Publishers.
- Solimano, A. (ed.) (2006). *Vanishing Growth in Latin America. The Experience of Late XX Century*. Cheltenham: Edward Elgar Publishers.
- Solimano, A., and A. Torche (2007). 'La Distribución del Ingreso en Chile 1987-2006: Análisis y Consideraciones de Política'. CIGLOB Working Paper 4. Santiago: International Center for Globalization and Development.

- Solimano, A., and M. Pollack (2006). 'The Search of Macroeconomic Stability and Growth under Persistent Inequality: The Case of Chile'. In G. A. Cornia (ed.), *Pro-poor Macroeconomics. Potential and Limitations*. London: Palgrave Macmillan.
- Solimano, A., E. Aninat, and N. Birdsall (eds) (2000). *Distributive Justice and Economic Development. The Case of Chile and Other Developing Countries*. Chicago: University of Michigan Press.
- Sunkel, O. (ed.) (1994). *Sustentabilidad Ambiental del Crecimiento Económico Chileno*. Santiago: Centro de Análisis de Políticas Públicas, Universidad de Chile.
- Tanzi, V. (2008). 'La Corrupción y la Actividad Económica'. In A. Solimano (ed.), *Las Termitas del Estado: Ensayos sobre Corrupción, Transparencia y Desarrollo*. Colección CIGLOB. Santiago: International Center for Globalization and Development (forthcoming).
- Transparency International (2007). *Corruption Perception Index 2007*.
- UNDP (2007). *Human Development Report 2007/2008*. New York: UNDP.
- WHO (World Health Organization) (2005). *Core Health Indicators*. Geneva: WHO. Available at: who.int/whosis/database/core/core_select.cfm.
- Williamson, J. (2008). 'The Objectives of Central Banks: Only Inflation?'. Paper prepared for the UN-ECLAC Project REDIMA (Red de Diálogo Macroeconómico). Santiago.
- World Bank (2005). 'Equity and Development'. In *World Development Report*. Washington, DC: World Bank.
- World Bank (2007). *World Development Indicators*. Online database. Washington, DC: World Bank.
- World Bank (2008). *Doing Business Report 2008*. Washington, DC: World Bank.
- World Economic Forum (2007). *The Global Competitiveness Report 2007-2008*. Geneva: WEFForum. Available at: [www.weforum.org/en/initiatives/gcp/Global% 20 Competitiveness% 20Report/index.htm](http://www.weforum.org/en/initiatives/gcp/Global%20Competitiveness%20Report/index.htm).