

THE CHILEAN EXPERIMENT:

AN OVERVIEW

by

Sebastian Edwards

Alejandra C. Edwards

University of California, Los Angeles

March 1986

Working Paper Number 397

Second Draft
March 1986

CHAPTER 1
THE CHILEAN EXPERIMENT:
AN OVERVIEW*

by

Sebastian Edwards

and

Alejandra C. Edwards

University of California, Los Angeles

March 1986

*This is a draft of Chapter 1 of S. Edwards and A.C. Edwards Monetarism and Liberalization: The Chilean Experiment.

CHAPTER 1

The Chilean Experiment: An Overview

The study of Chile's modern economic history usually generates a sense of excitement and sadness. Excitement, because during the last 50 years Chile has been a social laboratory of sorts, where almost every possible type of economic policy has been experimented; sadness, because to a large extent all these experiments have ended up in failure and frustration.

The most recent of these "experiments" began in 1973, after the military overthrew President Salvador Allende. In the ten years following the coup, the military implemented deep reforms directed towards transforming Chile from an economy semi isolated from the rest of the world, with strong government intervention, into a liberalized world-integrated economy where market forces were freely left to guide most of the economy's decisions. These liberalization reforms were carried out at the same time as a major stabilization program, aimed at reducing a rate of inflation of approximately 600 percent was being implemented. Many of the liberalization policies undertaken roughly correspond to what a vast number of economists have been advocating for developing countries -- international trade was liberalized; the capital account was opened; prices, including interest rates, were freed; an active domestic capital market was developed; the fiscal system was reformed with a value added tax being implemented; the social security system was reformed; and the private sector began to play a more active role in the growth process.¹

The recent Chilean experiment has been labelled by a number of authors, and by the popular press, as being a "monetarist" one. There is, in fact, little doubt that the stabilization program was based on a monetarist view of the causes and mechanics of inflation. However, as is documented in Chapter

2, the type of monetarist framework used by the economic authorities evolved from a traditional closed-economy type monetarism to a more modern open-economy view of the way in which the economy works.

The period 1973-83 was characterized by acute contrasts. For example, while in 1973 Chile had the highest rate of inflation in the world (600%), in 1981 it had one of the lowest (9%). On the other hand, the rate of growth of real GDP fluctuated drastically: it was -13 percent in 1975; it then averaged almost 7 percent per annum during 1977-81, and became -15 percent in 1982.

The rapid growth of real GDP in Chile during 1977-81 and the apparent success of other policies prompted some observers to (prematurely) talk about the Chilean miracle. By the end of 1981, however, the euphoria came to a sudden end, as it became evident that the growth pace of the previous years was not sustainable. The inflow of foreign capital was halted, the foreign debt could not be paid, real interest rates skyrocketed, and a severe financial crisis erupted. These events, and a drastic deterioration of the terms of trade -- which amounted to 26 percent between 1979 and 1983 -- provoked one of the worst recessions faced by the country, from which, by early 1986, it still has not fully recovered. In addition, some of the reforms were partially reversed: tariff rates were hiked; capital movements were tightly controlled; the financial sector was plagued with bankruptcies, and was virtually nationalized.

The ultimate failure of Chile's experiment with liberalization policies has added considerable interest to this case. Perhaps the most relevant question -- and one which has far-reaching policy implications for other developing countries -- is whether this failure was the consequence of the liberalization itself, or if it was the result of other events, including foreign shocks, and inappropriate macroeconomic policies. Also, the political

environment in which these reforms and liberalization programs evolved -- an authoritarian dictatorship -- has generated interest not only among economists, but also among other social scientists. An important question here is whether it is possible to have a truly liberal and free market oriented economic system within the context of a dictatorial political regime.

The purpose of this book is to provide a detailed analysis of Chile's most recent economic experiment. The book focuses on the ten first years of the experiment, and analyzes both the stabilization program and the free-market liberalization reforms implemented by the military government. Emphasis is placed on the more novel aspects of this experience -- for example, the use of exchange rate management as a major stabilization tool. Also, the analysis tries to shed some light on the more puzzling aspects of the Chilean economy, including the persistence of unemployment, and the exorbitantly high interest rates that prevailed throughout the experience.² The book revolves around the important question of what went wrong in Chile. In particular the analysis tries to extract lessons from this experience that will be helpful both to policymakers in other countries and to development economists that are, at the present time, rethinking the framework traditionally used in their analyses.

In this first chapter we provide an overview of the military experiment with free market policies. We start by briefly describing the behavior of the Chilean economy before 1973, with special emphasis given to the Unidad Popular government of 1970-1973. We then present an overview of the military economic policies and discuss the record of growth during 1973-83. Finally, in the Appendix to this chapter a chronology of the economic reforms is provided.

1.1 The Chilean Economy Before 1973

Economic Growth: 1950-1972³

Between 1950 and 1972 the Chilean economy grew at modest rates. Real GDP grew at an average rate of 3.9% per annum, whereas real GDP per capita increased at an average yearly rate of 1.7 percent.⁴ This performance is particularly meager if compared to other countries in the region. During 1950-1972, for example, Chile's economic performance was the poorest of Latin America's large and medium size countries.⁵

In the 1940s Chile, as well as most other Latin American countries, embarked on an ambitious industrialization program based on imports substitution. This inward looking development strategy was based on the idea that small developing economies would only grow sufficiently rapidly if they were able to develop a large and diversified industrial sector. This, in turn, could only be achieved if sufficiently high protection, in the form of import tariffs or quotas, was granted to the incipient domestic industries. Most proponents of the import substitution strategy also pointed out that the high degree of protection would only be necessary as a temporary measure; after an initial learning period, these "infant industries" would move into their "adulthood," and would not require tariffs. Reality, however, showed this view to be wrong. Protectionism became a permanent feature of the Chilean economy.⁶

During the first years of the industrialization process, important heavy industries were created — mostly under the guidance of the government's Corporacion de Fomento de la Produccion (CORFO) — and the bases for the manufacturing sector were set. Between 1937 and 1950 the manufacturing sector grew at an average yearly real rate of almost 7 percent (Munoz 1966, p. 158). However, alongside with the industrialization process an impressive array of restrictions, controls and often contradictory regulations evolved. It was,

in fact, thanks to these import restrictions that many of the domestic industries were able to survive. For example, a number of comparative studies have indicated that Chile had one of the highest, and more variable, structures of protection in the developing world (Balassa 1971). As a consequence, many (if not most) of the industries created under the import substitution strategy were quite inefficient. In a carefully done empirical study Corbo and Meller (1980) found that this inward looking strategy not only generated inefficiencies, but also resulted in the use of very capital intensive techniques, which hampered the creation of employment.⁷

As in most historical cases, the Chilean import substitution strategy was accompanied by an acute overvalued domestic currency which precluded the development of a vigorous non-traditional (i.e., non-copper) export sector. The agricultural sector was particularly harmed by the real exchange rate overvaluation. The lagging of agriculture became, in fact, one of the most noticeable symptoms of Chile's economic problems of the 1950s and 1960s. As is shown in Table 1-1 the importance of agriculture in GDP declined steadily between 1950 and 1970. This table also shows that during this period mining -- which is mainly composed of copper --, and manufacturing significantly increased their share in total output.

During the 1950s and early 1960s the import substitution strategy began to run out of steam. At that time most of the easy and obvious substitutions of imported goods had already taken place, and the process was rapidly becoming less dynamic. For example, between 1950 and 1960 total real industrial production grew at an annual rate of only 3.5 percent -- almost half of the rate of the previous decade.⁸

During the 1950s inflation, which had been a chronic problem in Chile since at least the 1880s, became particularly serious; the rate of increase of

TABLE 1-1

The Structure of Production in Chile: 1950 - 1960 - 1970

(Percentages)

<u>Sector</u>	<u>1950</u>	<u>1960</u>	<u>1970</u>
Agriculture, Forestry & Fishing	13.4	11.7	8.1
Mining	5.7	6.5	11.6
Construction	2.4	2.4	4.2
Manufacturing	21.9	19.5	30.2
Services	48.1	51.3	39.5
General Government	8.5	8.6	6.4
GDP	100.0	100.0	100.0

Sources: For 1950 and 1960 CORFO, for 1970 ODEPLAN.

consumer prices averaged 36 percent per annum during the decade, reaching a peak of 84 percent in 1955. The roots of Chile's inflationary pressures rested on excessive money creation and a remarkably lax fiscal policy. In addition to these traditional factors most experts agreed that the structure of the external sector and the behavior of wages had also played important roles in this long inflationary process. Chile's economic history is plagued with failed attempts to curb inflation. During the 1950s and 1960s three major stabilization programs -- one in each administration -- were launched. In spite of the initial success of the Ibanez and Alessandri efforts, inflation maintained on average its rampant pace during these two decades, averaging a rate of 31 percent per annum. In 1970, the last year of the Frei Administration, the inflation rate stood at 35 percent.⁹

During the late 1950s and early 1960s politicians and economists came to a virtual agreement that Chile was facing a long-run economic crisis. Remarkably, perhaps, many analysts agreed on some of the principal aspects of the crisis. They recognized that the easy phase of the import substitution process had ended, and that inflation and the recurrent crises of the external and agricultural sectors had become serious obstacles for reassuming growth. Most analysts also pointed out that the uneven distribution of income and the solution of the unemployment problem represented one of the most serious challenges that any new economic program would have to face. Although most experts pointed out that the traditionally low rates of domestic savings and investment represented an important obstacle for growth, they differed on some other aspects of their analyses, and on the proposed policy packages recommended to take the country out of its relative stagnation.¹⁰

During the 1960s, and especially during the Frei administration, some efforts to reform the Chilean economy were launched. An Agrarian Reform was

started; some measures directed towards mildly liberalizing the external sector were undertaken; and an exchange rate policy based on mini-devaluations, and aimed at avoiding the erosion of the real exchange rate was implemented in 1965. In spite of these and other reforms, towards the end of the 1970s it appeared that the performance of the Chilean economy had not improved in relation to the previous 20 years. Moreover, the economy was still plagued with regulations and controls -- including very high levels of taxes to international trade -- which greatly hampered any efforts to develop an efficient, and rapidly growing, economy. In 1970 all three presidential candidates pointed out that the Chilean economy was in crisis.

The Unidad Popular Government: 1970-1973

In September of 1970 Dr. Salvador Allende was elected President of Chile. As the candidate of the Unidad Popular (UP) -- a political coalition comprised of left and center-left parties, including Communists and Socialists -- Allende became the first Marxist to be freely elected President of a Western democracy. The political aim of the UP was to transform Chile into a socialist society. This was to be achieved through the implementation of deep institutional and economic reforms, including the abolition of Congress and its replacement by a "People's Assembly", the nationalization of the mining, banking, agricultural sectors, and the nationalization of most of the manufacturing sector. All of this was to be accomplished within the existing legal framework; the program called for a democratic "Chilean road to socialism".¹¹

The analysis of the behavior of the Chilean economy during this period is well beyond the scope of the present book; in fact that task warrants, at least, a volume of its own. In this section, however, a brief description of this period is provided, since it is our belief that in order to fully understand the evolution of Chilean economic policy during the military regime, it

is essential to, at least, have a general idea of what went on during the UP period.

The UP program, and most of the technical literature generated by the UP economists, characterized the pre-1970 economy as "monopolistic" and "dependent". It was argued that the most serious problems faced by the country were the unequal income distribution, the chronic inflation and unemployment. It was further argued that the structure of internal demand, the semi-permanent crisis in the external sector and the low level of capital accumulation conspired to preclude a sufficiently high rate of growth. It was then postulated that the implementation of deep institutional -- or "revolutionary" -- reforms, plus the improvement of the distribution of income would not only constitute an important step towards the construction of socialism, but would also generate a fast pace of economic growth.¹²

An essential assumption of the UP economic program was that, in 1970, there was substantial unutilized capital capacity in the manufacturing sector (see Zorrilla 1971, p. 17; Alaluf 1972, p. 6; and Guardia 1979, pp. 61-62). The existence of a high stock of international reserves, plus the unutilized capacity would allow the government to generate major increases of aggregate demand without provoking major inflationary pressures in the short run. It was expected that this higher demand would be mostly absorbed by an increase in domestic production.

After Dr. Allende took office in early November of 1970, the UP program was rapidly implemented. In 1971 a policy of expansionary aggregate demand -- through generalized wage increases, higher rates of money creation, and significantly higher government expenditure -- was combined with major institutional reforms. By the end of the year the fiscal deficit had jumped from 3% of GDP (in 1970) to 11% of GDP. In the fourth quarter of 1971 the rate of

money creation had surpassed 100 percent per annum, and the rate of growth of domestic credit to the public sector was approaching 300 percent per year. In order to avoid a major outburst of inflation, prices were tightly controlled. On the reforms side, the banking sector was nationalized, the large copper mines were nationalized, and the agrarian reform was greatly intensified. Also, a number of manufacturing firms were de facto expropriated through a procedure called "government intervention".¹³

According to the traditional economic indicators the year 1971 was a good one. Inflation was only 22%, real GDP grew at 7.7%, real wages increased by 29% and the rate of unemployment was reduced from around 6% to below 4%.

However, these accomplishments were of a short-run nature, and had been obtained through the implementation of a macroeconomic policy that was not sustainable in the medium to long run. In particular, the ever-increasing fiscal deficit constituted a very weak spot in the economic overall picture. In 1972 the deficit reached almost 13% of GDP, and in 1973 that ratio surpassed 24%. The process of massive increases of money coupled with tight price controls resulted in a classical case of repressed inflation.¹⁴ Black markets rapidly developed, and in 1972 the level of production began to drop. A particularly serious problem evolved around the de facto process of expropriation of manufacturing firms. The government intervention was almost always preceded by long labor strikes, and by the seizure of the firms' installations by their workers. This process disrupted production not only in the seized firms, but also in the rest of the sector where uncertainty was rapidly mounting. Also the level of efficiency in the nationalized firms dropped dramatically. Contrary to what the UP economists had thought no surpluses were generated; these nationalized firms reduced output, and ran large losses.¹⁵

The expansionary fiscal and monetary policies also generated an acute crisis in the external sector. International reserves dropped sharply, and in the first quarter of 1973 reached less than two months worth of imports, a dramatic decline from their 1970 level. A system of tight exchange controls and multiple exchange rates was implemented. For example, in 1973 there were fifteen different official exchange rates, with the ratio of the highest to lowest rate exceeding 8000 percent! Partially as a result of these policies the incentives to the agricultural sector were greatly reduced. This, plus the mode of organization of the land expropriated during the Agrarian reform -- large state-owned farms -- resulted in a significant decline in agricultural output. The arbitrariness that characterized the process of de facto expropriation of industrial firms also generated a heightened level of uncertainty, which was translated into very low gross investment and private sector savings (Guardia, 1979). For example, in 1972 gross investment was 15 percent of GDP, significantly lower than the 21.3% average ratio attained between 1965 and 1970.

By late 1972 the economic and political situations were extremely chaotic. In August of that year inflation reached a monthly rate of 23 percent, and the existence of pervasive black markets was a fact almost incorporated into everyday's life. As a way to combat the generalized scarcity of goods, and in particular food, the government tried to organize a rationing scheme, where a certain amount of food (the so-called "popular basket") was made available to each household through neighborhood organizations specially created for this purpose. This rationing scheme, however, generated a massive reaction by the opposition, who argued that Chile was being transformed into another Cuba. In August of 1972 the government also launched a major stabilization attempt mainly based on the expansion of

aggregate supply. The Communist party main slogan during this period was: "Let's win the battle for increased production." Also a drastic devaluation was implemented and an attempt to control money creation was made. The fiscal deficit, however, was left untouched and, not surprisingly, the stabilization effort failed.

In October of 1972 the opposition parties organized a national strike as a protest to what were considered to be erroneous and antidemocratic government policies. The protest was particularly directed against the government economic and educational policies. This strike generated significant economic costs and greatly aggravated the situation.¹⁶ It could only be solved after President Allende incorporated representatives of the armed forces into his cabinet.

The first part of the year 1973 was characterized by a deepening of the crisis. The economic situation became increasingly precarious, with the inflationary process tending towards hyperinflation. Production decreased in all sectors and the external sector began to face an extremely serious crisis. At the political level things were not better. The opposition, after an important victory in the parliamentary elections of March 1973, became increasingly impatient. Towards mid-1973 the opposition parties were demanding the resignation of President Allende. However, what was even more serious, at this time the UP parties -- and in particular Communists and Socialists -- had entered into an increasingly serious feud, strongly disagreeing on how to face the crisis.

On the 11th of September of 1973 the Allende presidency came to a sudden and premature end. That day the armed forces staged a coup. When the military took over, the country was politically divided, and the economy was in shambles. Inflation was galloping, relative price distortions -- stemming

mainly from massive price controls -- were generalized; black market activities were rampant; real wages had dropped drastically; the economic circumstances of the middle class had been greatly damaged; the external sector was facing a serious crisis; production and investment were steeply falling; and the government finances were completely out of hand.¹⁷ Table 1-2 contains some indicators for the period 1970-1973.

1.2 The Military Experiment

The military coup of 1973 marked an important turning point in Chile's economic and political history. The ten years that followed witnessed one of the most ambitious attempts to reform an isolated and tightly government-controlled economy into a world integrated market-oriented society. These policies -- which were undertaken at the same time as a major stabilization program was underway -- can be viewed as a reaction to the long tradition of government intervention and controls that had characterized the Chilean economy since the 1930s. It is important to point out, however, that initially the military did not have a very clear long-run economic program; only slowly during the first two years the more conservative aspects of the free market policies were fully adopted.¹⁸

The Record of Growth: 1973-1983

In terms of economic growth the period 1973-83 was characterized by a highly variable record. Table 1-3 presents data on real GDP and real per capita GDP between 1970 and 1983. As may be seen, the first full year of the military regime (1974) was characterized by a small increase in real GDP and by a decline in real per capita GDP. In 1975, on the other hand, economic activity dropped dramatically, partially as a consequence of the stabilization program (see below and Chapter 2).

TABLE 7-2

Selected Economic Indicators During the Unidad Popular Government:

1970-1973

Year	(A) Rate of Inflation (December to December)	(B) Real GDP (1970=100)	(C) Industrial Production (1970=100)	(D) Government Deficit/GDP	(E) International Reserves (Millions US\$)	(F) Current Account Deficit/GNP	(G) Unemployment Rate		(H) Real Wages (1970=100)
							Santiago Area	Total	
1970	34.9%	100.0	100.0	2.9%	394	1.3%	7.1%	3.5%	100.0
1971	22.1%	109.0	110.8	11.2%	163	2.1%	5.5%	3.3%	129.0
1972	487.5%	107.6	113.6	13.5%	76	3.9%	3.7%	3.3%	114.5
1973	605.9%	101.6	106.2	24.6%	168	2.9%	4.7%	N.A.	64.4

Sources: Column (A) from Cortazar and Marshall (1980). Columns (B), (F), and (H) from Banco Central de Chile. Column (G) from IME and Universidad de Chile. Column (E) from the IFS. Column (H) from Banco Central de Chile. The total unemployment rate refers to September-December for 1970 and to October-December for rest of years. The Santiago Unemployment rate is an average for the year. Real wages were computed using the GDP deflator.

TABLE 1-3

Real Gross Domestic Product and Real Gross Domestic ProductPer Capita in Chile: 1970-1983

<u>Year</u>	(1) <u>Real Gross Domestic Product (Millions of 1977 Pesos)</u>	(2) <u>Rate of Growth of Real GDP</u>	(3) <u>Per Capita Real GDP (Thousands of 1977 Pesos)</u>	(4) <u>Rate of Growth of Per Capita Real GDP</u>
1970	283,097	2.1%	30.2	0.2%
1971	308,449	9.0%	32.4	7.1%
1972	304,707	-1.2%	31.4	-2.9%
1973	287,750	-5.6%	29.2	-7.1%
1974	290,554	1.0%	30.0	-0.7%
1975	253,043	-12.9%	24.8	-14.4%
1976	261,945	3.5%	25.3	1.8%
1977	287,770	9.9%	27.3	8.0%
1978	311,417	8.2%	29.0	6.4%
1979	337,207	8.3%	30.9	6.5%
1980	363,446	7.5%	32.7	6.0%
1981	383,551	5.3%	34.0	3.8%
1982	329,523	-14.1	28.7	-15.5%
1983	327,180	-0.7%	28.0	-2.4%
Average Growth 1974-83	--	1.4%	--	-0.8%

Source: Banco Central de Chile, Cuentas Nacionales, 1960-1983.

In the years 1977 through 1980 extraordinarily high rates of growth of GDP, which averaged 8.5% per year, were achieved. These were the years of the "miracle". However, as may be seen from Table 1-3, real per capital GDP did not regain its 1971 level until 1980. A crucial question, then, is to what extent these high growth rates were only due to a recovery process, starting from a very low initial level of GDP in 1975. As will be argued below the increase in the degree of utilization of the capital stock after 1976 accounts for a high proportion of Chile's growth during the period. This table also shows the steep decline in real GDP in 1982, and the further drop in 1983. As can be seen, in 1983 real GDP per capita was below its 1970 level!

Table 1-3 reveals the average rate of growth of real GDP for 1974-83 was only 1.4 percent. An issue that has usually come up in discussions on the recent behavior of the Chilean economy relates to the year that should be used as a base to compute the relevant growth indicators, and to establish comparisons. There are, of course, good reasons to use 1973 as the base year; it was the year the military took over the government. Some observers, on the other hand, have argued that the poor performance of 1974-76 was a legacy of the Unidad Popular government, and that 1976 is a more relevant benchmark to be used to evaluate the growth performance of the economy. When 1976 is used as the base the average rate of growth for 1976-83 turns out to be 3.2 percent, significantly higher than 1.4%, but still below the historical average for 1950-1972.

Table 1-4 contains data on sectoral growth. During the initial years of the military government most sectors performed very poorly. By the late 1970s, however, there was a marked recuperation, with the commerce and financial services sectors leading the economy. This was largely a result of the liberalization reforms which, among other things, resulted in a significant

TABLE 1-4
Rate Growth of Real GDP by Sectors

<u>Sector</u>	<u>1970</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
Agriculture and Forestry	3.6%	4.8%	-2.9%	10.4%	-4.9%	5.6%	1.8%	2.2%
Fishery	-5.4	-6.7	33.9	15.4	17.9	14.3	7.5	13.6
Mining	-3.0	-11.3	12.2	2.7	1.6	5.4	5.9	3.6
Manufacturing	2.0	-25.5	6.0	8.5	9.3	7.9	6.2	2.6
Electricity, Gas and Water	5.3	-3.8	5.8	5.8	6.7	6.8	5.9	3.5
Construction	5.5	-26.0	-16.0	-0.9	8.1	23.9	25.7	16.2
Commerce	-1.5	-17.1	2.5	24.8	20.0	11.0	10.8	5.7
Transport and Communication	4.7	-7.7	4.7	10.8	8.4	9.0	11.1	5.4
Financial Services	15.4	-4.2	9.3	14.5	20.2	28.0	22.1	8.5
Services of Dwellings	3.7	1.8	0.7	0.6	0.9	0.5	1.0	1.7
Public Administration	1.5	1.9	5.9	1.8	-3.1	-1.2	-3.3	-1.6
Education	2.6	1.8	-2.3	2.4	2.2	1.9	-0.6	N.A.
Health	3.1	-1.7	4.2	2.7	3.2	5.7	3.1	N.A.
Other Services	1.4	-4.5	3.5	5.7	5.7	6.4	5.6	N.A.
Aggregate GDP								

Source: Banco Central de Chile.

increase in the number of financial intermediaries and commerce activities. The data reported in Table 1-4 also show that the construction sector experienced very wide swings during the period. It declined by 26 percent in 1975. In 1976 it experienced a further decline, even though the other sectors and the economy as a whole were experiencing an important recovery. However, between 1979 and 1981 the construction sector went through a steep recovery, leading most sectors. As is pointed out in Chapter 6 the behavior of the construction sectors plays an important role in the explanation of the persistence of very high rates of unemployment throughout the military experience.

During the complete experiment domestic savings were very low. This is perhaps surprising, since due to the liberalization of the domestic financial market, real interest rates were positive for the first time in a long period of time. In fact, on average, during this period domestic savings were at one of the lowest historical levels. Gross domestic investment was also remarkably low, with public sector investment being at one of its lowest levels; only in 1980 did gross domestic investment surpass 20%. In Chapter 3 a detailed discussion on this subject is presented.

Since domestic savings were very low, gross capital formation was increasingly financed by foreign savings. In 1980, foreign savings reached 8.5% of GDP, while in 1981 they rose to 14.5% of GDP, representing 66% of total gross domestic investment. The current account deficits associated with these high levels of foreign savings began to generate a serious foreign indebtedness problem in 1980-81. In 1981 total foreign debt increased almost 50% -- from \$10,987 million U.S. to \$15,546 million U.S. -- reaching 50% of GDP. It was thought at the time by the economic authorities and other observers that since most of the new debt had been contracted by the private sector (without any government guarantee), this increase in foreign

indebtedness did not represent a threat for the country as a whole: if a domestic private borrower couldn't pay its foreign obligations, that was a private problem between him and the foreign creditor, which would be solved through a regular bankruptcy procedure. As the facts showed later, this distinction between private and public debt was highly artificial, and the Chilean government ended up taking over all of the private sector foreign debt, independently of the fact that the original borrowers went bankrupt, and there were no previous government guarantees on those loans.

In general, it appears that Chile's inability to increase domestic savings and gross domestic investment indicated, from the early years of the military dictatorship, that the rate of growth of the economy could not be consistently high for a long period of time. In fact, an early study on the subject pointed out that unless Chile's total savings reached 28% of GNP by 1979 it would be impossible to achieve the high sustained rates of growth of real GDP vaticinated by some optimistic observers.¹⁹

Although capital accumulation is hardly the only source of growth, the extremely modest level of investment in 1977-80 makes one wonder how Chile managed to grow so fast during this period. Some existing studies have suggested that this rapid period of growth can be partially explained by an increase in the degree of capacity utilization during 1977-80.²⁰ The other important source of growth between 1977 and 1980 is related to the efficiency gains associated to the process of resource reallocation generated by the liberalization reforms. Some studies have in fact attempted to estimate the (static) welfare gains resulting from a reduction, or total elimination, of distortions in Chile. More than twenty-five years ago, Harberger (1959) estimated that the elimination of all distortions would result in a static increase in Chile's national welfare of about 15% of national income. He also

indicated that this static effect would result in a higher rate of growth of 1 to 2 percentage points per year, for a limited period of time. Coeymans (1978), more recently estimated that the military tariff liberalization process would result in a static improvement of Chile's welfare of around 3% of national income. Schmidt-Hebbel (1981), on the other hand, estimated that the recent liberalizations policies (both trade and others) resulted in a static increase in welfare of approximately 10% of national income. He also suggests that this welfare improvement would be spread through 10 years, contributing approximately 1 percentage point per annum to the growth rate during this period. Data from a study by Meller and ----- (----) strongly suggests that during the military regime there were extremely important gains in efficiency and productivity. In Chapter -- below, the magnitude of these productivity improvements are computed and discussed in some detail.

In order to obtain a better sense of the magnitude of the importance of some of the sources of growth during 1975-80, we applied a conventional growth-accounting framework to compute the contributions to growth of changes in the stock of physical capital and changes in employment. If it is the case that changes in the degree of capital utilization and efficiency improvements made important contributions to growth, we would expect that the residuals obtained from this exercise would be very large -- that is, larger than the residuals obtained in this type of computation for Chile before 1970. Table 1-5 shows the contribution to growth of changes in the quantities of capital and labor between 1970 and 1979; and of imputed contributions to growth of changes in capacity utilization and gains in efficiency generated by the liberalization program. These latter figures were taken from Schmidt-Hebbel (1981), and are 1.5 percent per year. In these computations labor was assigned a share of 52% of GDP, while capital was assigned a 48% share. The

data on changes in the stock of capital were taken from Edwards (1985) and the data on the evolution of employment were obtained from Edwards (1980).

Column (4) in Table 1-5 shows the "grand residual" obtained after having taken into account the contributions of the quantities of capital and labor to growth. As expected, these residuals are very high -- indeed much higher than those obtained in earlier accounting studies on the sources of growth in Chile -- indicating that during the recent period factors other than changes in the quantities of capital and labor played an important role in growth.²¹ As discussed above, the most plausible variables that would explain this "grand" residual are efficiency gains and change in the degree of capital utilization. Indeed, if following Schmidt-Hebbel (1981), we assume that between 1977 and 1980 the resource reallocation process contributed with 1.5 percentage points to annual growth, and we use his estimates of the degree of capital utilization these residuals are significantly reduced.²² This is shown in columns (5),(6) and (7) of Table 1-5. However, these residuals are still fairly large -- in fact larger than what can be attributed to higher "quality" of labor and capital, and "technical progress" -- suggesting that there are still some measurement problems that should be accounted for.

Stabilization and Liberalization Policies

In terms of economic policy -- as well as overall performance -- the first decade of the military regime was by no means homogeneous. In fact, it is possible to distinguish four different phases. The first covers September 1973 through April 1975, and was characterized by an attempt to correct the most serious economic distortions introduced during the Allende regime. During this phase a gradual anti-inflationary policy was implemented, and inflation declined only slightly. Output experienced a very mild recovery, and the first steps of some of the liberalization reforms were delineated.

TABLE 3-4

The Sources of Growth in
Chile: 1975-1980

	(1) Actual Rate of Growth of GDP	(2) Contribu- tions of Changes in Physical Capital	(3) Contribu- tions of Changes in the Quantity of Labor	(4) "GRAND" Residual [(1)-(2)-(3)]	(5) Contribu- tion of Efficiency Gains	(6) Contribu- tion of Change in Capacity Utiliza- tion	(7) Residual [(1)-(2)- (3)-(5)- (6)]
1975	-12.9	-3.7	0.3	-9.5	--	-5.4	-4.1
1976	3.5	1.3	0.3	1.9	--	1.0	0.9
1977	9.9	3.8	0.6	5.5	1.5	1.6	2.4
1978	8.2	1.4	1.2	5.6	1.5	0.4	3.7
1979	8.3	1.1	1.9	5.3	1.5	0.7	3.1
1980	7.5	3.2	2.8	1.5	1.5	--	0.0

Sources: Column (1), Banco Central de Chile; Column (2) taken from table 9; Column (3) computed from Edwards (1980); Column (5) estimated from Schmidt-Hebbel (1980); Column (6) computed from data presented in Schmidt-Hebbel (1980).

Perhaps the most important characteristic of this period is that the process of privatization of public enterprises -- some of them previously nationalized during the Allende regime -- began. Partially as a result of this privatization process some very big conglomerates (the so-called "grupos") emerged. As is discussed throughout the rest of the book the grupos played a crucial role in the main events that took place during the first ten years of the military regime.

The second phase runs from April 1975 until early 1978, and corresponds to the first serious effort to curb inflation. This was attempted by following an orthodox closed economy stabilization program based on tight monetary policy, and on the elimination of the fiscal deficit. During this time the free-market character of the military program was accentuated, and important steps towards reforming and liberalizing the domestic financial sector and international trade were implemented. It was during this phase that the group of economists popularly known as the "Chicago boys" began to gain great influence, and, in fact, to fully ----- the economy. Many of these economists had been trained at the University of Chicago, and other U.S. universities, and had a strong ideological stance against almost any kind of government intervention in the development process.

The early part of this phase saw a dramatic reduction of output -- 12.9% decline in GDP in 1975 -- and a steep increase in unemployment. This phase was also characterized by a marked deterioration in the international environment. In 1975 real copper prices fell to their lowest level in two decades, inducing a resource loss to the economy equivalent to about 10 percent of GDP. Additional resources, equivalent to 2.5 percent of GDP were used to service the debt. Over and above this, oil prices increased, introducing further constraints on the already weak economic structure.

The third phase goes from early 1978 through the first half of 1981, and is characterized by a marked change in emphasis in the stabilization program. During the initial phases of the experiment the anti-inflation program was based on orthodox monetary principles. The emphasis was placed almost exclusively on controlling the rate of growth of money and on the fiscal deficit. In early 1978, with the rate of inflation still standing at 80% per annum, a drastic change in the monetarist approach took place. At this time the policymakers began to emphasize the fact that Chile had become an open economy, and the manipulation of the exchange rate replaced the control of the quantity of money as the main stabilization tool. In January 1978 Chile introduced the preannouncement of the rate of devaluation (the so-called "tablita") as the main anti-inflation measure.²³ This novel approach to stabilization was later adopted by Argentina and Uruguay. In 1979 the policy of preannouncing the rate of devaluation was replaced by a fixed exchange rate. It was expected that this move would help to finally eliminate inflation.

This phase corresponds to the days of the "miracle" -- or the "boom" as the Chileans referred to these few years. Output grew at fast rates, the availability of imported goods increased drastically and inflation -- Chile's almost eternal malaise -- finally subsided, reaching 9 percent in 1981. Unemployment, however, stubbornly remained at high levels, constituting one of the unresolved puzzles of the military regime.

A number of important reforms were implemented during this phase, including the enactment of the labor law, which among other things legally established a mechanism of 100% wage indexation with respect to past inflation. Also, the financial reform was pushed further, by relaxing a series of controls on capital inflows.

Another important, and puzzling aspect of this phase relates to the behavior of two key prices -- the real interest rate and the real exchange rate. Whereas the first remained at extraordinarily high levels during most of the period, the real exchange rate experienced a steady real appreciation, greatly harming the degree of competitiveness of the domestic sector, including non-traditional exports. In fact, according to some popular accounts, this real appreciation was the single most important cause of the failure of the Chilean experiment. In Chapter 3 we make an attempt to explain the behavior of these two key variables, and suggest that they basically responded to erroneous policy measures.

Finally, the fourth phase begins in late 1981 and is characterized by the collapse of the "miracle". By late 1981 it became apparent that the high rates of growth experienced during the previous years were coming to an end. The fourth quarter of 1981 was characterized by extraordinarily high real interest rates; by a huge current account deficit; rising unemployment; and a reduction of real GDP of 3.3% with respect to the fourth quarter of 1980. On the positive side, inflation was only 9% that year. In 1982 the economic situation worsened and became almost chaotic. GDP declined by 14.3%; in September of that year open unemployment (excluding the emergency employment programs) reached 23.7%; the exchange rate was devalued by almost 100%; a major financial crisis developed; and there were serious problems to service the foreign debt.

The causes that led to this crisis -- and to the eventual failure of the experiment -- are extensively discussed throughout the book, and especially in Chapter 3 and 8. In Chapter 8 we analyze whether the ultimate failure of the Chilean experiment can be attributed to the liberalization policies themselves, to other features including the macroeconomic policies implemented

with the liberalization reforms, or to a combination of different factors. In that chapter the possible role of external factors -- including the steep worsening in Chile's terms of trade -- is also discussed.

The 1981-82 crisis was first manifested by a very sharp increase in the real interest rate. In the third quarter of that year the real borrowing rate reached 30 percent per annum, significantly higher than its level in the third quarter of 1980 -- 5 percent. These hikes in real interest rates, plus the real appreciation of the peso placed important financial strains on most firms, with those in the import competing and export sectors being hit in a particularly hard way.

Many firms reacted to the crisis by increasing their borrowing from the banking sector. Banks, on their turn, were willing to make additional loans as a way to avert a series of bankruptcies that would have greatly affected their parent holding companies.²⁴ In late 1981 and early 1982 the level of activity dropped and firms' operational profits were greatly squeezed. The situation was aggravated by a generalized belief that a devaluation of the peso would be implemented in an attempt to correct the perceived real overvaluation. In trying to anticipate the devaluation the public exercised additional pressure on domestic interest rates, making things worse.

In a way, businessmen decided to survive a day at a time. They tried to avert or delay bankruptcy in every possible way. Many firms, especially small and medium size could not do it, and had to close down. The rest waited, hoping for some miraculous government intervention. Nothing of that sort happened; on the contrary, throughout this period the government had a remarkably passive attitude. As is explained in Chapter 2 the macroeconomic policy adopted at that time called for an "automatic adjustment". This situation was greatly aggravated by the somewhat abrupt cut in foreign funds

that took place in early 1982. At that time, and due to the evident troubles the economy was going through and to the extraordinary increase in foreign borrowing in the previous two years, the foreign banks halted most of their operations with Chile. In mid-1982 the government finally reacted and tried to avert the crashlanding by devaluing. It was, however, too little and too late. The Pinochet economic miracle had seen its final days.

In late 1982, the Pinochet government approached the IMF in order to obtain financial assistance to service the foreign debt. Private banks were also approached, and a rescheduling of the foreign debt was proposed. A standby agreement with the IMF, which called for a new orthodox stabilization program, was signed. In late 1973, ten years after Pinochet had taken over the government, and had embarked on sweeping market-oriented reforms, Chile was once again struggling to put her economy together. An interpretation of what went wrong with this liberalization experiment is the subject of the rest of this book.

Footnotes to Chapter 1

¹The liberalization of the domestic economies, and especially of the external sector, has for a long time been one of the main policy recommendations of a large group of economists that include both "conservatives" and "liberals". See, for example, Little, Scitovsky and Scott (1971), Balassa (1982), Krueger (1978), Bhagwati (1978), Bhagwati and Srinivasan (1979) and Diaz-Alejandro (1971).

²Different aspects of the recent Chilean experiment have been analyzed by Hachette (1978), Harberger (1982, 1985a,b), Foxley (1982, 1983), Ffrench-Davis (1983), Corbo (1985), Parkin (1983), Hanson (1985), Balassa (1985), Walton (1985) and Edwards (1985a, 1986).

³In this section the main characteristics of the Chilean economy during the 20 years prior to the 1973 military coup are discussed. By necessity this discussion is brief, and only highlights some of the more important aspects of the economy. Interested readers are referred to some of the existing more detailed accounts of the evolution of Chile's economic conditions during this period. On the Chilean economy before 1973 see, for example, Mamalakis and Reynolds (1971), Mamalakis (1978), Behrman (1976, 1977), Corbo (1974) and Ffrench-Davis (1973).

⁴Before 1950, Chile's economic performance was also modest. For example, Ballesteros and Davis (1963) estimated that between 1908 and 1957 output per capita grew at approximately 1 percent per year. It is interesting to note that in spite of the economy's poor performance, in 1960 Chile's income per capita was still one of the highest in Latin America, surpassed only by Argentina, ----, and -----.

⁵Between 1950 and 1972 Argentina's real GDP grew at a yearly average rate of 4.1%, Brazil's at 7%, Colombia at 5.2%, Mexico at 6.5%, Peru at 5.7% and Venezuela at 6.2%.

⁶For a theoretical analysis on the import substitution strategy see for example Chenery (1960). See also Chenery (1975). For a criticism of this approach see Krueger (1978). For a historical analysis of the process within the Latin American context see Furtado (1970). Munoz (1966) carefully analyzes the case of Chile. See Diaz-Alejandro (1971) for the case of Argentina.

⁷Almost all analysts agree that the import substitution protectionist strategy resulted in significant inefficiencies and low rates of employment creation. See, for example, Behrman (1976), de la Cuadra (1969), Martner (1971) and Guardia (1979). Cortes Douglas, Butelman and Videla (1981) provide a historical analysis of the evolution of protectionism in Chile.

⁸See Munoz (1966). On the exhaustion of the easy phase of import substitution in Latin America see Furtado (1970). On Chile see Pinto (1964).

⁹On the early inflationary experience see Felter (1932) and Subercedeaux (1922). For the 1940s and 1950s see Hirshman (1961) and Harberger (1961). For the 1960s see Corbo (1974), Behrman (1977) and French-Davis (1971). It should be pointed out that the analysis of the causes of Chile's inflation had been characterized by an acute debate between "monetarists" and "structuralists". For the former, money creation was the main cause of inflation (see, for example, Luders (1968) and Luders and Arbildua (1969)). For the latter, however, money creation was only the propagation mechanism, with the causes of inflation being closely related to the structure of the economy, including the system of land tenure. See, for example, Hirshman (1961), Sunkel (1958) and Felix (1961).

¹⁰Undoubtedly, the most influential economic work of this period was the book by Ahumada (1958). In this volume the author argued that the Chilean economic crisis stemmed from four basic causes: (a) the stagnation of agriculture, (b) the chronic inflation, (c) the uneven distribution of income, and (d) the economic and institutional centralism. For other analyses of the crisis see, for example, Pinto (1959, 1964).

¹¹See "Programa Basico de la Unidad Popular" (1969) and Allende et al. (1971).

¹²For the UP economic diagnosis see, for example, Vuskovic (1970), Martner (1971), Aranda and Martinez (1970), Zorrilla (1971), Alaluf (1972) and Guardia, Martinez and Ramos (1979).

¹³From a legal standpoint the ownership of most of these firms still remained with the original private owners. However, after "intervening" them the government could exercise complete control. For a detailed description of the process used to expropriate these firms see Universidad de Chile (1973, pp. 85-161). See also Martinez (1979).

¹⁴See, for example, the discussion in Cauas and Corbo (1972).

¹⁵Between 1971 and 1972 318 firms were seized by the government through "intervention" or similar procedures. See Universidad de Chile (1973). An important assumption of the UP model was that after the nationalization of the "monopolistic firms" the state would capture the "surplus", with those funds used to increase investment (see Guardia, 1979). However, as mentioned, the great majority of these firms didn't generate "surpluses"; quite on the contrary, losses were generalized, and both output and investment dropped.

¹⁶The existing evidence suggests that this national strike was partially financed by the CIA. See U.S. Senate (1975).

¹⁷Of course, the UP supporters have long recognized that during the period serious economic mistakes were made, and that the UP had plunged the country into "economic chaos" (Sideri, 1979). The papers in Sideri's volume (1979) contain interesting self-criticisms by former senior UP officials, including Clodomiro Almeyda, a former Minister of Foreign Affairs and Defense during the Allende administration. The main point of these criticisms is that there were mistakes in the short run economic conduction. According to this view the short run behavior of the economy -- galloping inflation, pervasive shortages, black markets and so on -- was inconsistent with the long-run institutional reforms. It should be pointed out that in this volume, as in most of the UP self criticism literature, the behavior of the economy is evaluated not so much by the use of traditional indicators, but in terms of how far the revolutionary program was pushed. See also Vuskovic (1975), for an insider's critical view of the UP economic policy.

¹⁸On this point see, for example, Edwards (1985a,b). See also Foxley (1983).

¹⁹Perhaps the most prominent optimist -- besides Pinochet himself -- was Jose Pinera, a Harvard educated economist, who was twice cabinet minister during the first ten years of the military regime. In 1977 Pinera publicly predicted that Chile would grow at an average real rate of 8% per year between 1980 and 1990!

²⁰See, for example, Edwards (1985a), Schmidt-Hebbel (1981), and Corbo and de Melo (1983).

²¹For previous studies on the sources of growth see, for example, Harberger and Selowsky (1966), Elias (1978) and Schmidt-Hebbel (1981).

²²One has to be careful, however, in interpreting these results. A serious problem is that Schmidt-Hebbel's measure of capacity utilization does

not take into account the changes in the structure of production generated by the liberalization and other reforms.

²³The main rationale for this policy was the belief that in an open economy the domestic rate of inflation very rapidly converges to the level of world inflation plus rate of devaluation of the domestic currency. See the detailed discussion in Chapter 2.

²⁴As discussed in detail in Chapters 3 and 4 during the military experiment banks and big conglomerates established intricate ownership relationships.