

CHAPTER 1

Economic Development in Chile since the 1950s

Throughout its independent history, Chile had been one of the most politically stable and democratic countries in Latin America. Despite the destabilizing effects of external shocks, which were frequent, Chile succeeded in modernizing its institutions, fostering social mobility, and bringing about economic progress.

By 1970, Chile had one of the less uneven income distributions in the region. A sizable middle class had evolved, although it was concentrated in urban areas. During the 1960s, distribution generally improved, also extending into the rural sector. Nevertheless, social advances and political development increased expectations of improvement in the low- and middle-income sectors much faster than the actual rise in economic well-being.

The traumatic mismatch between political and economic development, repeatedly noted by leading observers of Chilean economic history (Encina 1911; Pinto 1973; Moulián 1982), became evident once more in the late 1960s. Early political development spurred expectations of change and modernization; economic and social strategies, however, lacked the coherence and effectiveness necessary for the achievement of productive development with the speed and direction required by political changes.

In this chapter, crucial features of the Chilean economy from the Great Depression of the 1930s onward are highlighted, quickly advancing to the period of focus of this book, that is, the Pinochet regime and the two following democratic governments of presidents Aylwin and Frei Ruiz-Tagle.

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production and business activity via the *Corporación de Fomento de la Producción* (CORFO), which was created in 1939. While the private sector had reservations about the degree of autonomy given to CORFO by statute to create public enterprises (see Muñoz and Arriagada 1977), in practice rather harmonious relations prevailed between the entrepreneurial state and the private sector. Industrial development got a boost and achieved considerable momentum in the 1940s. The massive unemployment of the preceding decade was reduced, and strides were made in institutional and technological organization. CORFO itself initiated programs of technological research and natural resource exploration.

During the 1950s, however, the development model began to encounter new problems. Many of the deficiencies of Chile's industrialization process made themselves felt; particularly the stagnation of agriculture. In addition, unbalanced emphasis on import substitution discouraged the development of new exports, severely restricting trade options and the management of the balance of payments. Such disequilibria intensified during populist periods. The instability of traditional export prices was transmitted to the domestic economy through recurrent balance of payments shocks. Growing inflationary pressures drove living standards down, bringing protests from labor unions and social activists.

Populist Expansion and Orthodox Stabilization, 1952–58

One of the signals warning of the intensity of the problems of the Chilean economy was the accelerating inflation of 1952–55, when the annual rate of increase in consumer prices jumped from 12 to 86 percent.¹ This led policymakers to the conclusion that new economic strategies had to be found. This inflationary episode began with a moderate surplus of installed capacity, associated with the restrictive policies applied in earlier years and some binding constraint in the external sector. The years 1952 and 1953 saw expansionary domestic policies, wage hikes, and an appreciating exchange rate, all accompanied by a positive terms of trade effect, which improved from 1951 to 1953. After two years of expanding aggregate demand, at a rate that nearly duplicated the creation of capacity, a higher rate of resource use was achieved, though in the context of disequilibria in the external and fiscal sectors. Exports diminished because of the increase in domestic demand and exchange rate appreciation. The impact was heightened by a sharp fall in the terms of trade in 1954.

The government of President Carlos Ibáñez, which had been elected by a large majority in September 1952 with the support of independents

1. The next three presidential periods, covering 1952–70, are described and analyzed in detail in French-Davis 1973.

and the Left, lost its popularity, encountered growing social unrest, and ended up adopting an orthodox stabilization program.

Both the money supply and government spending were sharply curtailed, and the complex system of regulations introduced during the years of the Depression and World War II was cut back. But recessionary effects soon led to the partial rollback of these initiatives on political grounds.

A Thwarted Attempt at Capitalist Modernization, 1958–64

President Jorge Alessandri tackled the reform of the economic system in a more comprehensive way, though with a simpler stabilization program. As a true exponent of business leadership and heir to a liberal-conservative tradition, he believed that the country needed substantive reforms in two areas: its institutional structure should allow the executive branch more freedom of action, especially in reforming the state, and its economic policy should make the private business sector the engine of development with the help of an active fiscal policy. This required a broader scope for the market and competition—especially from external sources. But, given the prevailing high inflation rate, Alessandri attached great importance to achieving stabilization in the short run. Only with price stability, in his view, could a climate stimulating long-term private investment be attained. Stabilization was to be achieved by eliminating the “inflationary financing” of the fiscal deficit and fixing the nominal exchange rate. Consequently, a stabilization program anchored to the exchange rate and supported by abundant foreign loans to the government was designed. These credits were to finance both the external imbalance expected in the transition period and the fiscal deficit (Ffrench-Davis 1973).

This program enjoyed temporary success. Inflation was indeed substantially reduced in 1960–61, but the balance of payments deficits were so great that the country’s international reserves were soon depleted. As a result of this currency crisis, it became necessary to devalue in 1962. Import restrictions were resumed, and inflation shot back to its former level. While agriculture remained stagnant, the investment ratio and industrial growth rose, but the increase in exports was not sufficient to offset the great expansion in imports, which, despite an improvement in the terms of trade between 1959 and 1961, exceeded available external financing.

Seen in perspective, the experiment of the Alessandri government stands out as the first serious postwar effort to modernize the mixed economy and the nature of state intervention. An attempt was made to

limit the state's direct entrepreneurial endeavors so that the private sector would increase its participation. The intent was not to reduce the state to a passive role but to follow a classic Keynesian model in which the state acts primarily through fiscal policy, stimulating private investment by means of public spending and seeking to create a climate of confidence, stability, and favorable expectations over the medium term. This approach was backed up with a moderate liberalization of import restrictions and various export incentives.

The policy's failure stemmed from a lack of understanding of short-term stabilization mechanisms and their medium-term repercussions. The stabilization scheme overlooked two predictable lags: as inflation declines from a level higher than the international rate, the real exchange rate appreciates; and as trade and foreign currency are liberalized, imports begin to outpace exports—a process spurred by the appreciating exchange rate. As was demonstrated at the time, and would be shown again later, a nominal peg of the exchange rate is usually a counterproductive instrument of stabilization.

Gradual Stabilization and Structural Reforms, 1964–70

The strategy of the Christian Democratic government of President Frei Montalva, elected in 1964, was based on a three-point platform: a gradual, multianchored, nonrecessionary stabilization program; an industrial modernization program that reactivated the role of the state as the generator of investment initiatives, introducing new, leading-edge sectors (such as telecommunications and the petrochemical industry) and developing nontraditional exports; and a program of structural and social change that included agrarian reform, the first steps in the nationalization of the nation's large copper mines, and the development of community and labor-based grassroots organizations designed to foster popular participation in an effective political democratization.

The stabilization program inherited a 50 percent annual inflation rate in October 1964. It was based on a package of economic policy instruments in addition to the monetary and exchange-rate instruments that had dominated policy programming in the past.

In 1964, productive capacity was underutilized and real wages were depressed, which made it possible to reconcile a boost in output, a wage increase, and a reduction of inflation, all within the ranges calculated by the government (French-Davis 1973). This was facilitated by significantly improved terms of trade in 1965–66. Nevertheless, an economic and social dynamic was unleashed that placed serious obstacles in the way of the program.

First, on the economic side, the increased fiscal outlays of 1965

were funded by a significant tax reform, which boosted revenue, reduced evasion, and improved tax equity. Spending continued to rise in 1966, however, exceeding projections and reaching unfinanceable levels, especially for public works and housing. In the second place, after strong growth of the gross domestic product (GDP) in 1965–66, underutilized productive capacity gradually became exhausted, while investment continued at moderate levels. In the third place, real wages also rose more than planned, with a sharp surge in the organized sectors. This resulted in cost pressures on consumer prices and had a negative impact on government spending and inflationary expectations. Strikes spread, and relations between the government and labor organizations deteriorated (except in agriculture).

Inflation, which had dampened in 1965–67, began to rekindle in the following years. Nominal wages of the organized sectors continued to climb to levels inconsistent with overall economic performance. Fiscal policy, after a minishock centered on public investment in 1967, remained repressed in subsequent years as a means of alleviating inflationary pressures.

The result was a gradual rise in the underutilization of productive capacity starting in 1967, and targets began to be missed. Nevertheless, no disequilibria as traumatic as those of 1955, 1962, or more recent decades were recorded. The regulation of the economic system was rather successfully maintained, adjusted to the excessive rise in wages, the variable that was most difficult to keep under control. It is interesting to note that during this process, instead of diminishing, the investment rate rose to over 20 percent in 1970.

Inflation reached 36 percent in 1970, which was somewhat less than the initial 50 percent. Productive capacity growth averaged around 4.3 percent per annum, and actual GDP grew throughout the period at an annual rate of approximately 4.0 percent (see table 1.1), spurred by heavy public and government-promoted private investment. Labor income improved noticeably, and social organizations such as labor unions and neighborhood councils expanded vigorously. The external sector achieved significant success in reducing the high propensity to crises with the pioneer introduction in 1965 of a crawling peg exchange rate policy (see chap. 4).²

2. Undoubtedly, the good performance of the copper market and its partial nationalization contributed to this balance. In 1968 and 1969, an improvement in the terms of trade was recorded, equivalent to 6 percent of GDP. In 1970, there was a terms of trade negative shock of 3 percent of GDP. A significant fraction of the net positive balance was captured by the Chilean government and saved as international reserves in the Central Bank in order to be able to face future deterioration of copper prices. This was a pioneering approach to the implementation of a copper stabilization fund.

TABLE 1.1. Comparison of Key Macroeconomic Variables, 1959–2000

Variable	During the Government of						
	Alessandri 1959–64	Frei Montalva 1965–70	Allende 1971–73	Pinochet 1974–89	Aylwin 1990–93	Frei Ruiz-Tagle 1994–99	Lagos 2000
GDP growth ^a	3.7	4.0	1.2	2.9	7.7	5.6	5.4
Growth of exports ^b	6.2	2.3	–4.2	10.6	9.6	9.4	7.5
Rate of inflation ^c	26.6	26.3	293.8	79.9	17.7	6.1	4.5
Unemployment rate	5.2	5.9	4.7	18.1 ^d	7.3	7.4 ^d	10.0 ^d
Real wages (1970 = 100)	62.2	84.2	89.7	81.9	99.8	123.4	134.4
Investment (% of GDP) ^e							
In 1986 pesos	—	—	—	18.0	24.6	30.0	26.6
In 1977 pesos	20.7	19.3	15.9	15.6	19.9	24.1	22.3
Government surplus (% of GDP)	–4.7	–2.5	–11.5	0.3	1.7	1.2	0.1

Sources: Central Bank and the Budget Office (DIPRES); Jadresić 1986, 1990; Marcel and Meller 1986; Larraín 1991.

Note: Annual growth rates of GDP and exports; average of annual rates of inflation and unemployment.

^aUntil 1985 in 1977 pesos; for 1986–2000 in 1986 pesos.

^bExports of goods and services for 1959–85 in 1977 pesos and for 1986–2000 in 1986 pesos.

^cFrom December to December.

^dWith emergency employment included; without these, it is 13.3 percent in 1974–89, 7.3 percent in 1994–99, and 9.2 percent in 2000.

^eGross fixed investment.

A great disequilibrium that increased over the years took place in the sociopolitical arena. It was also the 1960s in Chile! Political antagonisms prevented the formation of a broad coalition government. Social organizations could not be induced to join in the task of political and economic transformation that the government had set out to accomplish. In the final analysis, this revealed serious institutional and political failures, which contrasted with the expectations that had been aroused. The wisdom of hindsight suggests that without a broad and solid coalition this strategy's chances for success were slim. Turf battles and differences concerning the nature and degree of change prevented the formation of a large majority in favor of progressive reform.

Although the attempt ended in relative failure because it could not achieve political continuity and not all its aims were met, considering the magnitude of the challenge, the strategy arguably attained a fair degree of success. The Frei government performed a good diagnosis and instituted an adequate program of changes. The productive capacity growth rate could not be raised above the 4.3 percent just mentioned, but inflation was curbed and income distribution improved significantly. The share of wages in national income rose from 45 percent in 1964 to 52 percent in 1970 according to the national accounts. A significant reform of the tax system was accomplished and 51 percent domestic control over the large copper mines was achieved, leading to the capture of a sizable share of the economic rent from that natural resource. The rural sector—with the implementation of structural reforms, most notably the agrarian reform—and the industrial sector were modernized. Exports were diversified, with a steady increase in nonmining items, and there was a strengthening of Latin American regional integration, which was also instrumental in trade diversification. The state apparatus was also modernized by providing it with better qualified human resources and more responsive institutions. The sophistication of economic policy making was increased through better understanding of the role of prices and basic macroeconomic equilibria. A stable real exchange policy was put in place (see chap. 4) and maintained, and strides were made in rationalizing the import regime and export promotion (Ffrench-Davis 1973).

Additional Reforms and Macroeconomic Disequilibria, 1970–73

The Unidad Popular (UP) government sought farther reaching structural change, particularly with respect to property and without regard for macroeconomic equilibrium. It proceeded without a social and political working majority. In the view of the UP's economic policymakers, short-term policy had to pave the way for an electoral majority sufficiently

large to implement deeper structural change. Accordingly, straight populism dominated macroeconomic policy.

When President Allende took office in late 1970, his government inherited a surplus of installed capacity (see fig. 1.1) and high international reserves. This allowed an expansionist policy with rapidly rising wages and social expenditures. Economic activity responded positively, with an 8 percent rise in GDP and no significant inflationary pressures or external gaps in 1971. However, the expansion was carried out with public revenue losses due to drops in real (public) utility rates, appreciating exchange rates, weakening public and private investment, and a rapidly expanding money supply. Meanwhile, structural changes, including completion of the nationalization of the large copper mines and the nationalization of the banking system and many other enterprises, were under way. In addition, many firms and farms were taken over arbitrarily by workers or political groups.

Aggregate demand rose disproportionately with respect to the creation of new productive capacity, while the equilibria of the external, fiscal, and monetary sectors worsened at an accelerating pace. This deterioration was intensified by the constant worsening of the terms of trade from 1970 to 1972.

Actual production declined during 1972–73 by 4.1 percent because of the sectoral imbalances and bottlenecks resulting from the external gap, innumerable strikes, distortions in official relative prices, a growing black market, and accelerating inflation (Bitar 1979). The investment ratio decreased, although there was still a minor increase in productive capacity (see fig. 1.1). In other words, the decreases in output recorded in 1972 and the months preceding the September 1973 coup reflected not a net loss of capacity but growing underutilization. The rise in output during the months following the coup proves this assertion.

Allende's economic policy ended up hurting the government politically when contraction, accompanied by growing inflation, set in. Idle productive capacity as well as the state's ability to regulate and administratively control price and trade imbalances and distortions were highly overestimated. The full force of the macroeconomic disequilibria made itself felt in the second year of the administration, and from there on the struggle for power absorbed most of the efforts and energies of both rulers and ruled. Economic disequilibria, low governance, and the growing inability to reach political agreements finally gave way to the institutional breakup and the prevalence of the coup supporters.

The Neoliberal Strategy, 1973–89

The initial concerns of Pinochet's dictatorial government lay with controlling the macroeconomic disequilibria and especially the high inflation

rate.³ Soon the focus shifted to the inefficiencies of the prevailing economic system in accordance with neoliberal beliefs, which became increasingly popular at the international level in the following years. As an extremist neoliberal group extended its power until it dominated public policy making, the range and depth of the economy's structural changes increased (see chap. 2).

The principal reforms were abolition of price controls; across the board import liberalization; financial market deregulation, both in terms of access by new institutions and of interest rates and credit policies, followed at the end of the decade by a broad deregulation of capital flows; reduction of the public sector and restrictions on the activities of public enterprises; the return of expropriated businesses and lands to their former owners; privatization of traditional public enterprises; suppression of most current labor union rights; and tax reform, which, along with eliminating some distortions (e.g., the cumulative effects of sales taxes corrected by implementing a value added tax), sharply reduced the share of direct and more progressive taxes.

The traditional role of the state, as entrepreneur and promoter of investment and industrialization, was to be curtailed as quickly as possible so that those functions might be fulfilled exclusively on the basis of decisions taken by private agents in liberalized open markets.

The implementation of this strategy was complicated by two developments that affected the Chilean economy during most of the 1970s: an extremely high inflation rate, which the monetarist stabilization policy had great difficulty bringing under control; and the first oil shock, which, coupled with a sharp decline in copper prices in 1975, created severe balance of payments problems.

Utilization rates recovered in the twelve months following the military coup of September 1973. The labor discipline imposed through the repression of unions, the liberalization of prices, exchange rate devaluation, increased public works investment, and high copper prices removed bottlenecks and favored greater use of installed capacity and potential GDP. Rising copper prices in 1973–74 more than offset increased spending on oil imports, with a net improvement in the terms of trade equivalent to almost 5 percent of GDP in 1974 compared to 1972.

These developments helped lower inflation to 370 percent in 1974. Nevertheless, the price of copper dropped sharply in the second half of 1974, while the oil shock persisted, with a net negative overall effect amounting to 6.4 percent of GDP in 1975 compared to 1972.⁴ This

3. Prices in 1973 rose at an annual rate of 600 percent, and in the last four months of the UP government the annualized inflation rate reached 700 percent.

4. This is the difference between the terms of trade deterioration in 1975 and the improvement in 1973 and 1974. Copper prices began to rise in the third quarter of 1973.

shock, coupled with persistent inflation, prompted the government to introduce a sharp adjustment program, based on a reduction of aggregate demand, which was led by fiscal and monetary contraction, and a significant exchange rate devaluation.

Soon economic activity began to slow, with a sharp decline in imports and an increase in nontraditional exports. Once again, the intense and rapid response of the trade balance to large shocks of aggregate demand was demonstrated. The novel element for Chile was the strength of the increase in export volume (see tables 1.1 and 8.1). There were four causes of this increase: a very sharp real devaluation, export capacity installed in earlier years, removal of bottlenecks in the sector, and a sharp reduction in domestic demand (see Ffrench-Davis 1979b). Inflation, on the other hand, was slow to respond. Existing indexation and inertial expectations concentrated the impact of the restriction of aggregate demand mainly on the level of economic activity. For three years, the inflation rate hovered around 300 percent, diminishing only after mid-1976 when the government introduced other stabilization mechanisms besides money supply control (Foxley 1983; Ramos 1986). One of the mechanisms was rather peculiar, consisting of an implicit deindexation through the manipulation of the consumer price index, which was underestimated month after month from 1976 to 1978 (see Cortázar and Marshall 1980). Another mechanism consisted of a series of profusely publicized exchange rate revaluations (see chap. 4).

The sharp 17 percent drop in GDP in 1975 and the slow pace of subsequent recovery generated a high average underutilization of capacity between 1975 and 1979 (see fig. 1.1). The predominance of sharp demand-reducing policies over a weak set of switching policies explains the significant underutilization of productive capacity. This manifested itself in high unemployment, depressed wages, numerous bankruptcies, and low capital formation. Given the deep recession, subsequently Chile could sustain a vigorous recovery for several years, with significant actual GDP growth, while potential GDP rose slowly. The noticeable recovery generated an image of economic and financial success, which was advantageous in light of the plebiscite of 1980, which institutionalized the authoritarian regime. Something similar occurred in the 1980s, when the crisis of 1982–83 was followed by recovery and a period of economic expansion, reaching the productive frontier or capacity in 1989.

In 1979 a new stage of automatic macroeconomic policy was introduced when the government fully adopted the monetary approach to the balance of payments. It had achieved a fiscal surplus and a free import system, with a uniform tariff of 10 percent. In this framework, the nominal exchange rate was frozen. The aim was to anchor the Chilean economy to the current world inflation rate, which, although it was then

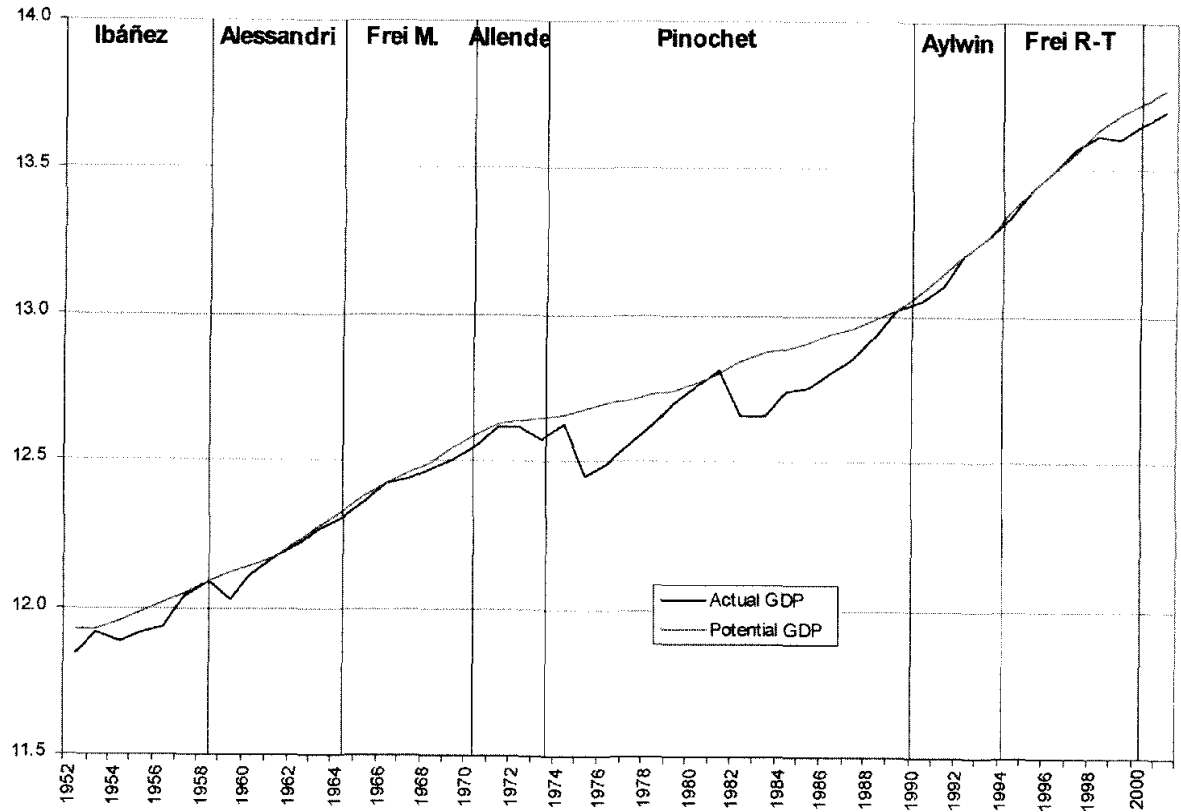


Fig. 1.1. Actual and potential GDP, 1952–2001 (natural log scale). Frei M. = Frei Montalva; Frei R-T = Frei Ruiz-Tagle. (Data from author's calculations on the basis of Central Bank data and Marcel and Meller 1986. A "consensus forecast" for effective GDP was used for 2001.)

at a two-digit level, was only one-third of Chile's 36 percent. This policy was supported by heavy foreign lending, which more than covered, until 1981, an expanding external deficit (see chap. 5).

The policy was successful in terms of curbing inflation, which at the beginning of 1982 stood at the international level. But once again the severity of other macroeconomic disequilibria was underestimated. Efforts were concentrated on bringing down inflation, while external equilibrium and investment in human and physical capital were overlooked. Since 1979, the real exchange rate had lost a third of its purchasing power, the external debt had doubled, the export boom had faltered in 1981–82, and the current account deficit had climbed to 21 percent of GDP in 1981.⁵

Underlying these disequilibria was a serious diagnostic error. The government assumed that since it had achieved a fiscal surplus and external borrowing was being decided by private agents a foreign exchange crisis would never occur. For the second time in a decade, the Chilean economy underwent a recession of considerable magnitude, the worst in Latin America in 1982–83, with GDP declining 14 percent.⁶

The productive sectors, including agriculture, manufacturing, and construction, faced massive bankruptcies. Political discontent spread, and demonstrations of opposition to a dictatorship that had been iron fisted proliferated, with many former supporters among the participants.

As the government's power weakened, it was compelled to revise its strategies in several respects. The climate of discontent and protest made possible the reconstitution of some social movements that had been dismantled, especially the labor unions and the political parties of the Center and Left. In the economic arena, several attempts at adjustment were made, including successive devaluations, the reintroduction of some protective tariffs, stringent regulation of the financial system, implicit nationalization of private debt, renegotiations of foreign debt with creditor banks, and massive financial aid to the private sector (see chap. 6).

The government yielded to business pressures to adopt a more pragmatic strategy. However, this greater pragmatism was biased in favor of upper-income sectors, including generous subsidies, while a tough position was maintained toward labor and grassroots organizations.

5. Figures were calculated on the basis of the exchange rate in 1976–78. With the appreciated exchange rate of 1981, the deficit was 14.5 percent of GDP. Keep in mind that GDP in current U.S. dollars was \$15.4 billion in 1978, \$32.6 billion in 1981, and \$19.8 billion in 1983. Given the enormous volatility in these years, it is advisable to "normalize" the exchange rate in order to make intertemporal comparisons.

6. For 1974–85, I have generally used the series of national accounts published by Marcel and Meller (1986). According to Central Bank figures, the drop in 1982–83 was 15 percent.

The consequence was a further deterioration in income distribution (see chap. 9).

A strong, sustained recovery of economic activity and domestic production began in 1986. In 1986–87, the recovery proceeded in a sustainable macroeconomic framework. In the next two years, the situation changed: the expansion of demand and economic activity accelerated, culminating in the overheating of the economy in 1989, when GDP increased by 10 percent. The difference between that figure and the forecast of about 5 percent per year in 1988–89 was associated with an increase in aggregate demand resulting from expansion of the money supply, tax reduction, and import liberalization and some exchange rate appreciation, which made imports cheaper. A sharp improvement in the terms of trade (copper prices) in 1988–89 and the installed capacity still available made a sharp jump in economic activity feasible.

The 1980s ended with the Chilean economy enjoying a high rate of capacity utilization. The economy did, however, show some substantial disequilibria. During 1988–89, a number of macroeconomic variables showed inconsistent trends over the medium term. Aggregate demand had grown swiftly — by 22 percent — in two years, and GDP had risen by 18 percent. Exports grew vigorously in the two-year period, but imports rose even more. The gap between spending and production was compensated for by an improvement in the terms of trade equivalent to 5 percent of GDP in 1989 as compared to 1987. Output, in turn, grew swiftly due to idle capacity. Productive capacity was expanding by less than a total 8 percent in the biennium. The contrast with the 18 percent increase in effective GDP led to full utilization of installed capacity and overheating of the economy. This manifested itself in accelerating inflation and a deteriorating external sector. At the beginning of 1990, inflation reached 23 percent, twice the 1988 rate.⁷

The reforms had a significant effect on productive structure. Trade liberalization applied simultaneously with a tough monetary stabilization policy induced a depression that featured a 26 percent drop in industrial production in 1975. Despite numerous bankruptcies, the sector achieved a recovery based on a rise in productivity among the surviving companies and dynamic export expansion. While between 1969–70 and 1978 the industrial sector grew by only 0.2 percent per annum, exports rose by an average of 15 percent (Vergara 1980), with great heterogeneity in the sector. Some branches showed notable productivity and export dynamism, while others did not survive (see chap. 3).

The high rate of business bankruptcies cannot necessarily be attrib-

7. This is the inflation rate for the twelve months ending in January 1990. Between August 1989 and January 1990, the annualized rate of increase in the consumer price index (CPI) was 31 percent.

uted to inefficiency protected by the earlier development strategy. In fact, after 1973, the long recession, real annual interest rates at an average of 38 percent, and accelerated import liberalization, together with exchange rate revaluation, can be identified as the decisive factors leading to business mortality. Manufacturing lost a significant share of GDP. Exports, on the other hand, achieved great dynamism, particularly nontraditional goods. Between 1974 and 1980, the share of nontraditional exports (including industrial products) in total sales abroad rose from 8 to 20 percent. This was due to the notable growth of nontraditional exports at a rate of 18 percent per annum in that period (see chap. 8).

The rejuvenated business sector featured a surge of new groups exhibiting much innovative competitiveness. Furthermore, many classical conditions for development arose, among them the "correction" of some prices (especially exchange rate depreciation in the 1980s and the reduced cost of imported inputs), low real wages, market deregulation, guaranteed property rights, and the elimination of many union rights.

Nonetheless, it should be noted that "price corrections" were very contradictory until 1982. The neoliberal orthodoxy did not consider that financial liberalization could lead to high *outlier* interest rates or that trade liberalization could be accompanied by continuous exchange rate appreciation, as was the case between 1979 and 1982. Neither was it considered that the private sector would be promoted amid a sharp restriction of aggregate demand, as in 1975–76 and 1982–83. All this helps to explain why modernization was associated with economic growth of only 2.9 percent between 1974 and 1989 and why the average investment ratio was notoriously below the level of the 1960s.

As on many other occasions in Chilean history, economic policy was strongly influenced by transitory improvements in copper prices. During the last two years of the regime, copper enjoyed a notably high price. It is undeniable that 1988–89 would have been very different had there been a "normal" copper market in those years. However, it was obvious that external prices would eventually decline, as began to occur in late 1989. Thus, the Pinochet regime finally could boast an economy with impressive export figures, and a portion of the productive sector was modernized. But modernization had still eluded the large majority of firms, and evident macroeconomic disequilibria had to be corrected in 1990.

Income inequality was notably greater than two decades earlier (see chap. 9); for instance, in 1989, average and minimum wages were still below those in 1970. In political terms, the salient development was the effective organization of social movements and political parties, which were able to compel the democratization of the system, even under the rules unilaterally imposed by the dictatorial regime. Following the triumph of the opposition in the plebiscite of October 1988 and

the presidential election of December 1989, a democratic president, Patricio Aylwin, took office in March 1990.

Democracy, Reforming the Reforms, and Development, 1990–2000

The 1990s were dominated by the administration of the *Concertación de Partidos por la Democracia*, which assumed power in 1990 with the successive elections of Patricio Aylwin (1990–93) and Eduardo Frei Ruiz-Tagle (1994–99). Both gave rise to a period of the greatest prosperity in Chilean economic history, with a sustained average growth rate of 7 percent between 1990 and 1998 that marked a clear break with the historical trend of expansion of GDP (see fig. 1.1), with high rates of capital formation and a generalized atmosphere of stability.⁸

The new administration of Patricio Aylwin concentrated its efforts on stabilizing the economy after the 1988–89 electoral boom of the Pinochet regime and achieving stronger, more stable, and more sustainable GDP growth. This required, among other things, an increasing investment ratio, the implementation of macroeconomic policies achieving sustainable equilibria and diminishing vulnerability to external shocks, and progress in the solution of the most urgent social demands by enabling larger segments of the population to benefit from the modernization of the economy. The aim was to reconcile macroeconomic and macrosocial equilibria and implement a style of economic policy that would become legitimate within the new democratic framework.

The government decided to avoid a radical change in existing economic policy, seeking “a change in continuity” and thus breaking with the rehashing tradition of several previous governments. In order to accomplish this goal, the government of Aylwin had to obtain the support of the trade unions and incorporate workers into the macrosocial decision-making process. This was intended to benefit the groups that had suffered most from the effects of the long period of adjustment of the 1980s.

The new administration had to cope with a potential conflict between macroeconomic stability and the demand that more resources be allocated to lower income groups. On the one hand, it changed the composition of public spending, increasing the share of social spending in the budget, and, on the other, it rapidly presented to the Parliament a tax reform package intended to increase fiscal income.

Likewise, in 1990 the government proposed a reform of the labor

8. Collections of studies with different perspectives can be found in Pizarro, Raczynski, and Vial 1996; Cortázar and Vial 1998; and Larraín and Vergara 2000.

code to Congress. Among other goals, this was aimed at balancing the bargaining powers of employers and workers and sought to endow current labor legislation with greater legitimacy. To get this law passed, an agreement was reached between the government, labor and employer organizations, and most political parties (Cortázar 1996). However, the reforms agreed upon (including the tax reform) were always less comprehensive than those originally proposed by the government. A determining factor was the group of senators that had been appointed under the Constitution designed by Pinochet, which more than compensated for the majority achieved by candidates of the new government in 1989 and 1993.

In 1990, a tripartite agreement was also reached between the government and the representatives of unionized workers and employers; this agreement provided for an increase of 28 percent in the real minimum wage between 1989 and 1993. In April 1991, it was agreed that after this recovery stage any future real increase in the minimum wage would be linked to labor productivity gains and that the criteria for nominal adjustments would be forward looking, not past, inflation.⁹

In the early 1990s, significant progress in income distribution and poverty reduction was achieved in this constructive climate. After 1993, progress in the achievement of equality seemed to come to a halt; nevertheless, poverty continued to decline. While 45 percent of the population lived in poverty in 1987, by 2000 this figure had been reduced to 21 percent (see chap. 9).

It should be pointed out that the greater social effort was attained with notable fiscal responsibility. As a result of the tax reform of 1990,¹⁰ the expansion of economic activity and imports, a higher than expected copper price (captured by Chile thanks to the nationalization of large copper mines, now grouped under *Corporación Nacional del Cobre de Chile [CODELCO]*), and a decline in tax evasion, state income increased significantly, by 3 percent of GDP. This allowed the government to increase public spending, in particular social expenditure, and at the same time expand nonfinancial public sector savings from 2 percent in the 1980s to nearly 5 percent of GDP in the 1990s (table 1.2).¹¹ Higher savings not

9. Nevertheless, in 1998 a sizable additional triennial real adjustment was established by law. The minimum wage applied to about 12 percent of the labor force in the 1990s.

10. The opposition argued that the increase in the value-added tax included in the reform would tend to impose a recessive effect as low income families consumed a larger part of their income. Nevertheless, a consistent comparison also has to consider that most resources are transferred to these families through an increase in social spending. The net effect is evidently progressive.

11. Notice that these figures are net of depreciation of capital goods in public firms; this depreciation is included in private savings. Moreover, the fiscal sector generated

only financed public investment but generated an average fiscal surplus of 1.4 percent of GDP in the 1990s.

A new political agreement in 1993 enabled the approval of several previously transitory modifications on a more definite basis. Subsequent evidence rejected the prediction of critics of the reform that it would have a negative impact on investment. After a decline in 1991—associated with the lagged effect of the 1990 adjustment—capital formation increased in 1992 and again in 1993, reaching record levels in the next five years (see table 1.1). This high productive investment was the principal explanation behind the outstanding annual GDP growth, which rose from below 3 percent in 1974–89 to 6.4 percent in 1990–99. As empirical studies show robustly, private investment, given its irreversibility, is positively correlated with macroeconomic equilibria whenever they appear to be sustainable and fulfill two key conditions. First, effective demand has to be consistent with the productive capacity being generated, and, second, macroeconomic key prices (the interest and exchange rates) must be *right* (see Agosin 1998; Coeymans 1999; Ffrench-Davis 2000, chap. 6; and Servén and Solimano 1993).

Given the macroeconomic disequilibria generated in 1988–89, a severe adjustment through the increase in interest rates was carried out in order to control the expansion of aggregate demand and a new outbreak of inflation. This adjustment was considerably complicated soon after by large capital inflows, which, like other economies in the region, Chile had been receiving since the early 1990s (Ffrench-Davis, Agosin, and Uthoff 1995). The gap between domestic and international interest rates had increased significantly, inducing a strong inflow of short-term “hot money” and an appreciation in the exchange rate in the second half of 1990 (with a drop from the depreciated ceiling to the appreciated floor of its 10 percent crawling band). The Central Bank was forced to buy large amounts of foreign currency to defend the band’s floor.

The strong external supply of both short-term and portfolio capital threatened to considerably diminish the capacity of the authorities to conduct monetary policy independently of external events, since they intended to avoid excessive fluctuations in the real exchange rate and

financing to cover the deficit of the public social security system. Under the social security reform, the public sector continued paying retired workers and financed part of the new pensions while income was shifted to the private system. The figures do not consider the quasi-fiscal deficit of the Central Bank—which was initially caused by government intervention intended to prevent a massive bankruptcy of the domestic financial system in 1983; it was enlarged, subsequently, with heavy operational losses in sterilization to soften exchange rate appreciation in the 1990s (on this latter issue, see Ffrench-Davis, Agosin, and Uthoff 1995).

aggregate demand. The diminished effectiveness of monetary policy becomes particularly complicated when fiscal policy is too inflexible to regulate aggregate demand in the short term.

On the other hand, economic authorities faced the need to differentiate between permanent appreciation pressures, resulting from Chile's net improvement in productivity and from having surmounted the debt crisis, and transitory pressures. Having identified the former, an attempt was made to avoid the latter in order to maintain the competitiveness of tradables.

Faced with a massive capital inflow, the Chilean authorities sought to reconcile these two objectives — an interest rate suited for keeping domestic balances and an exchange rate consistent with external balances — by applying several policy measures. Among these were active exchange rate policy and monetary sterilization; selective liberalization of capital outflows; a reserve requirement (*encaje*) for foreign loans and liquid inflows; and the extension of a tax, which had previously applied only to domestic currency loans, to include foreign currency loans (see chap. 10).

These policies were successful in the sense of reducing short-term and volatile inflows. But foreign direct investment (FDI)—both risk capital exempted from the reserve requirement and associated credits subject to it—became increasingly large. FDI was stimulated by the attractive features of the Chilean economy: rich natural resources and the almost tax free transfer of the economic rent abroad (a loophole inherited from the dictatorship, which requires correction), high quality macroeconomic policies, and the positive perception of the democratization process. Therefore, a large surplus in the capital account, much higher than the deficit in the current account, was generated.

The set of policies, especially those affecting short-term capital inflows, contributed to keeping the deficit in the current account within sustainable levels (2.5 percent of GDP in 1990–95) and preventing an excessive increase in more volatile external liabilities. In so doing, Chilean economic authorities contributed significantly to macroeconomic stability, the export strategy, and overall growth. This became evident when Chile showed nearly complete immunity during the Mexican crisis of 1994–95 (see chap. 10; Ffrench-Davis 2000, chap. 10; Ffrench-Davis and Reisen 1998; and Stiglitz 1998).

In 1990–95, GDP growth surpassed 7 percent. If one compares the growth achieved in this period with that of other years of good performance in the past three decades (1966, 1971, 1981, and 1989), one can see that, in contrast to previous occasions, this time (1) GDP growth, both actual and potential, was sustained for several rather than one or two years; (2) growth occurred in a context of macroeconomic equilibrium, with high productive investment; (3) growth occurred without

significant inflationary pressures or pressures on external accounts; and (4) an orderly fiscal balance was maintained. Both in 1966 and in the 1990s, considerable GDP growth was achieved without placing significant pressure on the rate of inflation, but in 1966 growth was based on an increase in public spending, while in the 1990s it was induced by exports and productive investment. In the other three episodes of a considerable rise in GDP (1971, 1981, and 1988–89), significant imbalances occurred. In 1971 and 1989, domestic productive capacity became exhausted, generating an inflationary surge, while in 1981 an external imbalance equivalent to 21 percent of GDP occurred.

After each of these years of unsustainable macroeconomics in the last four decades, an adjustment program with significant welfare costs had to be implemented. These significant changes in the macroeconomic environment reflect, on the external front, the instability of the terms of trade and financing. On the domestic front, they reflect the high sensitivity of external balances to aggregate demand, especially when the economy is operating close to its productive frontier.

The impact of the adjustment program in 1990 on other economic variables was less severe and quickly reversed. As mentioned earlier, investment ratios recovered in 1992 and reached record levels starting in 1993 (see table 1.1). The principal merit of policies in 1990–95 was that they resisted allowing increased domestic absorption of capital inflows and faster disinflation with an appreciating exchange rate and a large external deficit.

However, these policies lost their strength after 1995, and could not prevent real appreciation of the peso and imbalances in the external accounts in 1996–97. Thus, Chile entered the “vulnerability zone,” where it was caught by the Asian crisis. What was the cause of the change? Various factors can be mentioned. First of all, the strength shown in face of the Mexican crisis in 1995 created a misleading sense of invulnerability. The immunity had been the result of a policy approach that prevented excessive exchange appreciation, a high current account deficit, and a significant stock of liquid external liabilities. Second, after 1995 a change in priorities could be observed, with the prevalence of anti-inflationary objectives. Third, the belief that financial crises would not occur in the future prevailed in international circles, and this implicitly or explicitly supported proposals for full financial opening; understandably, such overoptimism was absorbed domestically by private and some public authorities. Fourth, the outstanding record of Chile transformed it into a preferred destination for foreign investors in a context in which huge amounts of capital were being supplied to emerging economies. Chile, despite this larger capital surge, kept most of its regulations

unchanged. The outcome was a net inflow equivalent to 10 percent of GDP in 1997.

Therefore, when the Asian crisis affected Chile in 1998, with a strong negative shock in terms of trade, the economy had accumulated a significant disequilibrium: a real appreciation of 16 percent between 1995 and October 1997 and a current account deficit of 5.7 percent of GDP in 1996–97 (compared to 2.5 percent in 1990–95).

Again, adjustment, after macroeconomic disequilibria led by excessive capital inflows in 1996–97,¹² was costly. Beginning in mid-1998, aggregate demand fell sharply (with the drop reaching 10 percent in 1999, while GDP decreased by 1.1 percent). Since productive capacity kept rising, resting on the still high investment ratio up to 1998, a large gap emerged between actual and potential GDP in 1999 (see figs. 1.1 and 11.1), which was still significant in 2001.

It is useful to examine in some detail the existence of the gap. This is not obsolete physical capacity. It is economically productive capacity that was in use in 1997, to which we discount an estimate of nonsustainable output (see the discussion that follows); new capacity was being created at a speed of about 7 percent per year, which continued in 1998 and 1999, determined by the high investment ratios up to 1998 included. The recessive adjustment started by mid-1998, with effective GDP rising only 3.9 percent in 1998 and falling 1.1 percent in 1999. Altogether, this generated a gap of about 9 percent in 1999. That was the determinant of the sharp drop in the investment ratio in 1999 and 2000.

As I have shown repeatedly, a significant gap between effective GDP and the production frontier is followed, always, by a drop in productive investment. As in Mexico in 1995, Argentina in 1995 and 1999–2001, and Korea in 1998, in Chile the investment ratio diminished substantially (by 17 percent in 1999) and remained low during 2000; the output gap plus the drop in investment had a deepening impact on employment, too. Both reduced the speed at which the production frontier was moving in the 1990s: 7 percent per year.

Notwithstanding the gap in 1998–2000, actual GDP rose by 6 percent in the 1990s, more than twice as fast as in the 1970s and 1980s. The

12. Assertions that fiscal policy was mainly responsible for disequilibria are not supported empirically: 90 percent of excess demand in 1996–97 was located in the private sector and financed with net capital inflows. The fiscal expenditure was financed with new revenues, while public savings reached its highest level during the biennium (see table 1.2), as well as a significant surplus (2.1 percent of GDP). However, indeed, a countercyclical approach should have implied a moderation of fiscal expenditure or an additional increase in taxes during that biennium, but this would not have been enough to compensate for the great private sector imbalance. The source of disequilibria — that is, capital inflows — had to be tackled.

TABLE 1.2. Gross Savings and Investment, 1985–2000 (percentage of GDP at current prices)

Years	Fixed Investment Ratio	Change in Stocks	Savings Ratio				
			External	National	NFPS	CBF	Other
1985–89	19.4	1.8	4.9	16.4	2.0	1.5	13.0
1990–95	22.9	1.7	2.5	22.1	4.4	0.7	17.0
1996–98	25.4	1.7	5.9	21.2	5.2	0.0	16.1
1999–2000	22.1	0.7	0.9	21.9	3.1	-0.4	19.2
1989	23.6	1.6	1.8	23.3	3.1	3.8	16.4
1990	23.1	2.0	1.9	23.2	2.5	2.3	18.4
1991	19.9	2.6	0.3	22.3	3.6	0.7	18.0
1992	22.4	1.4	2.3	21.5	5.0	0.3	16.2
1993	24.9	1.6	5.6	20.9	4.9	-0.2	16.2
1994	23.3	0.8	3.0	21.1	4.9	0.2	16.0
1995	23.9	1.9	2.0	23.8	5.4	1.1	17.3
1996	24.8	1.8	5.8	20.8	5.8	0.3	14.7
1997	25.5	1.7	5.7	21.6	5.6	0.1	16.0
1998	26.0	1.4	6.2	21.2	4.1	-0.5	17.6
1999	21.9	0.2	0.2	21.8	2.5	-0.7	20.0
2000	22.3	1.1	1.6	21.9	3.7	-0.2	18.3

Source: Calculations are based on data from the Central Bank and DIPRES.

Note: The figures for the nonfinancial public sector (NFPS) include the general government and cash profits of public firms, principally of CODELCO (the public copper producer), collected by the Treasury. CBF corresponds to the Copper Buffer Fund, which is deposited by CODELCO in a Treasury account at the Central Bank. Other includes net private savings plus the Central Bank balance, profits of public firms not transferred to the Treasury and capitalized by these firms, and depreciation reserves of all public and private firms.

leading force behind that outstanding performance was the vigorous investment ratio achieved in the 1990s. The average ratio (27.9 percent in 1990–99) was ten points larger than during the neoliberal experiment (18 percent in 1974–89; all in 1986 prices).

On the other hand, during the 1990s the national savings ratio averaged 22 percent (at current prices), the highest in recent decades, and one-third higher than the 16.4 percent achieved in 1985–89 (table 1.2). This provided financing for 87 percent of total investment. The high savings ratio was associated with the stimulating macroeconomic environment faced by firms, leading to greater use of installed capacity, high profit margins, and large reinvestment coefficients (Agosin 1998; Ffrench-Davis 2000, chap. 6).¹³

The savings capacity is strongly affected by the terms of trade.

13. As has been pointed out, the convergence between the productive frontier and effective demand is an essential element for efficient macroeconomic policies. The absence or disregard of this fundamental macroeconomic equilibrium has been characteristic of Latin American economies since the 1980s. See ECLAC 2000, chap. 8.

These continue to be extremely unstable in Chile. For instance, table 1.2 shows that in 1989 the high price of copper implied additional inflows equivalent to 3.8 percent of GDP into the copper buffer fund (CBF), which is a source of public and domestic savings. On the contrary, in 1999 the fund lost 0.7 percent of GDP. This represents a net difference of 4.5 percent, which ought to be used to adjust the gross figures of public and national savings in table 1.2 in order to improve the quality of data on effective savings effort in each year. However, that is only part of the story. The CBF covers just a fraction of the change in the proceeds of the large public firm CODELCO due to price fluctuations. Consequently, copper price changes have a residual effect on the net profits of CODELCO and all of these profits are transferred to the Treasury. Thus, fluctuations of that price have an impact on national savings beyond those on the CBF. But the savings of the private sector are also affected by the terms of trade, particularly when they affect exports of national firms.

In the 1990s, the volume of exports of goods and services grew at a rate of 9.5 percent per annum, while potential GDP expanded by 7 percent. Thus, exports and investment (which grew by 10 percent annually in this period) were the driving forces behind economic growth, increasing the external links of the Chilean economy and its potential for sustainable growth.¹⁴ It is interesting to note that the rate of export growth was relatively similar in the last three decades. In this context, it is remarkable that GDP growth in the 1990s performed notably better because nonexports also grew dynamically, reflecting broader systemic competitiveness and the positive impact of sustainable macroeconomic equilibria (see chap. 8).

The Concertación administration compares favorably with all regimes since the 1950s in terms of GDP growth, inflation, real wages, and fiscal surplus (see tables 1.1 and 1.2). The performance of investment and savings and the generation of new productive capacity were also considerably improved. However, the unemployment rate, though lower than one-half the average rate under the Pinochet regime, did not recover to the level of the 1960s.¹⁵ Moreover, by 2001 after a long recessive gap since 1998, unemployment was posing one of the greatest challenges

14. In 1999, exports of goods and services represented 42 percent of GDP (at 1986 prices), that is, 17 points more than in 1980. Expressed in 1999 current prices, the figure amounts to only 29 percent due to a decline in real prices of exports and exchange rate appreciation compared to 1986.

15. The lowest unemployment rate occurred during the Allende administration. Nevertheless, this rate was achieved with considerable public sector employment in non-productive activities and enormous, hidden, macroeconomic imbalances made that low unemployment rate unsustainable.

for recovering growth with equity (see chap. 11). Another big challenge was to find the way back to sustainable macroeconomic equilibria and the recovery of productive investment after some confusing swings between the neoliberal and growth with equity approaches.

Long-Term Trends in Economic Growth

Macroeconomic policies intended to ensure high use of productive capacity are a key ingredient of a good public policy. In order to grow with equity—as we have shown throughout this book—the improvement of macroeconomic policies is unavoidable. For a better analysis of this issue, we need to examine the evolution of potential GDP or productive frontier (PF) or capacity, which has been estimated here for the last half century.

Potential GDP is the maximum aggregate supply of goods and services that can be achieved at any period, given the imperfections prevailing in the production process and factor quality. The determinant variable for achieving that maximum is an effective demand consistent with potential supply.

There is a significant asymmetry in the actual performance of the economy. Effective GDP can be placed much below the PF, while it cannot stay above that productive capacity in a sustained way. The PF can be surpassed only temporarily, as a result of exhaustion of inventories, growing inflationary pressures, or nonfinanciable external deficits or under transitory terms of trade positive shocks.

Counting with a credible estimate of potential GDP contributes to understanding economic history and to guiding future macroeconomic policies: monetary, fiscal, and exchange rate policies and prudential regulation of the capital account. How can the PF be estimated?

There are many sophisticated methodologies with which to estimate potential output, but they do not control for the effect of recessions. Therefore, these estimates account for the trend or historical average of GDP, including cycles, which implies a downward bias of potential GDP.¹⁶ The use of these estimates affects the quality of both historical analyses and macroeconomic policy because it tends to reproduce past recessions in the future and hide the crucial variable: the sustainable economic frontier—of full utilization of capital and labor and efficiency in economic management—at which the battery of macroeconomic policies must be aimed.

16. Examples are the popular Hodrik-Prescott filter and estimations of production functions that do not correct for capital utilization or the sustainability of the growth path. One expression of the resulting biases is the erratic estimates of total factor productivity that are obtained.

The methodology used here focuses on estimating this frontier. First, I identified the peaks of use of capacity along the period studied. In this sense, there is wide consensus among economists: in the last three decades, the Chilean economic peaks were located in 1971, 1974, 1981, 1989, and 1997. I assume that in those years potential and actual GDP were similar.¹⁷ Then, the net increase of output was calculated (GDP corrected by depreciation of capital) between two peaks and the net increase of the stock of capital (the sum of the net investment of each year lagged by one period). The ratio between both is usually called the incremental output—capital ratio or the coefficient of gross marginal productivity.¹⁸ Subsequently, this ratio and annual investment were used to estimate potential GDP between peaks.¹⁹

In the early postwar decades, Chile lost ground among the countries of Latin America and the developing world. While the region's GDP grew by 5.5 percent per year in the first two postwar decades, Chile's average annual rate was 4.6 percent in the 1960s, and it fell below 1 percent in 1971–73 and to 2.9 percent in 1974–89. With population increasing by 2.3 percent annually in the first period and 1.6 percent in 1974–89, the per capita growth rates amounted to only 2.4 and 1.3 percent, respectively.

17. We search for the main biases in each of the annual *peaks* identified in getting a figure for potential GDP. We have corrected for the two main sources of bias. First, bias is introduced when the PF is underestimated by effective GDP; this happens when the peak is not achieved throughout the year (e.g., in 1974, with a recession starting in the third quarter). Second, bias can occur when the PF is overestimated, with an excess of imports without sustainable external financing; the excess allows a large value added in the marketing of imports (intensively in 1981, partly compensated by the underutilization in producing tradables, due to a much appreciated exchange rate; moderately in 1997).

18. I work with the reciprocal of the incremental capital-output ratio (ICOR). Here I am associating increases in output with net fixed capital formation. Apart from investment in human capital, there have been changes in the use of factors such as technology and natural resources (Marfán and Bosworth 1994). Employment grew by 1.9 percent in the 1960s, 1.7 percent in 1974–81 (with an increase of 3 percent in the labor force), and 3.9 percent in 1982–89. In addition, the use of natural resources intensified. Numerous empirical studies examine the quantity and quality of labor and capital. See Hofman 1999; Morandé and Vergara 1997; and Coeymans 1999. The latter author controls for cycles more than the others do.

19. Estimates by Marfán (1992) for 1960–88 yield annual rates of change in productive capacity similar to those obtained in this chapter. The similarity of the results, within the time frame common to both studies, is accounted for by the choice of the peaks method and agreement in the identification of peaks. Given the large cycles of the Chilean economy, empirical studies, which do not take the level of activity into account, can be significantly biased in their results for total factor productivity. For instance, Roldós (1997) gives a change in total factor productivity (TFP) per annum of –3.8 percent in 1981–85 and 0.9 percent for 1986–90, evidently distorted by the 1982 recession. Which estimate reflects better the trend in productivity changes? In this case, the average approximates to the real TFP.

Potential productive capacity expanded in fairly stable fashion in the 1960s, with relatively high capacity utilization, compared to the large gaps between actual and potential GDP of the 1970s and 1980s. In fact, capital formation and the growth of productive capacity were more unstable in these two decades (see fig. 1.1 and table 1.1). The low level of investment and slow expansion of the productive frontier seem to be associated with the low average capacity utilization and real macroeconomic disequilibria of these two decades. The gap between effective and potential GDP reflects the trend in aggregate demand, its relationship to effective demand (which is the one located in domestic resources), and the match between the structures of demand and supply of both products and factors.

The instability of economic activity had negative repercussions in two respects. First, underutilization of capacity tends to reduce the social and market profitability of capital; it diminishes the availability of investment funds and worsens the financial condition of enterprises. In addition to discouraging investment, it reduces effective productivity. On the other hand, this instability depresses productive employment and negatively affects the sustainable income level in the future.

Table 1.3 presents three indicators. Column 1 is the marginal coefficient *potential* output/capital, measured between peaks. Column 2 shows the gap between actual and potential output; that is, the rate of use of potential GDP. Column 3 presents the marginal coefficient *effective* output/capital.

The data suggest that potential productivity was similar in 1962–71 and 1982–89 and higher than 1975–81. How does one reconcile this with the belief that in the two more recent decades productivity was much greater thanks to the opening of the economy and the liberalization of

TABLE 1.3. Effective and Potential Gross Productivity of Capital, 1952–98 (averages for each period)

	Effective GDP/Potential GDP (1)	Marginal Coefficient	
		Product/Capital (2)	Effective Product/Capital (3)
1952–61	0.96	0.26	0.25
1962–71	0.98	0.35	0.34
1972–74	0.96	0.12	0.12
1975–81	0.90	0.28	0.26
1982–89	0.88	0.36	0.32
1990–98	0.99	0.46	0.45
1952–98	0.95	0.33	0.31

Note: According to the data used for figure 1, column 2 is the ratio between the change in net domestic product and net investment between the peaks.

markets? The answer would be that the surviving enterprises in the 1970s and 1980s had higher productivity but that the mortality rate of enterprises was greater and that to measure economic performance all agents should be considered rather than just the winning segment.

Massive bankruptcies implied the destruction of capital (a lot of which would have been productive under normal demand and “right” prices). Losses resulting from sharp import liberalization and large exchange rate appreciation were very significant in the 1970s (see chap. 3). The situation improved in the 1980s, partly as a result of better macroprices (the exchange and interest rates), but it was restricted by the recessive effects of the binding foreign currency scarcity during the debt crisis.

In the 1960s, excessive protection and administrative obstacles fostered inefficiencies, but greater real macroeconomic stability helped improve efficiency and keep more enterprises afloat. It concentrated effort on creating enterprises rather than on transferring existing assets and provided more predictable patterns of demand and more stable relative prices (which stimulated productive investment, given its irreversibility). Development was also more integrated, which offered more productive opportunities for broader sectors of society. This environment, despite numerous inefficiencies, explains the better performance of productivity in the 1960s vis-à-vis the 1950s and the near match with potential productivity in the 1980s.

With respect to effective productivity, considering good and bad years in each subperiod, table 1.3 shows that the high underutilization of productive capacity in 1974–89 involved a sharp deviation between effective and potential productivity in the two corresponding subperiods. The years of great underutilization of capacity have been associated with deliberate or involuntary recessive adjustments following expansions, with fiscal, monetary, or balance of payments disequilibria. Underutilization also intensified when stabilizing policies rested on only one or two stabilization policy instruments instead of using multiple anchors (Ffrench-Davis 2000, chap. 6). Major gaps occurred in 1954–56, 1959, 1973, 1975–79, 1982–87, and most recently in 1999–2001.

Once all idle capacity was being used in 1989, the productive frontier increased vigorously at annual rates of around 7 percent in response to an increase in the investment rate by 10 points of GDP between 1982–89 and 1990–2000 (see table 10.4). Prevailing domestic stability throughout almost the whole decade, which was achieved by means of prudent countercyclical policies like the selective regulation of foreign short-term or volatile capital, determined the framework for a virtuous cycle of a higher utilization rate of existing capital, thus generating higher investment, and generally a more efficient use of

productive resources, reflected in significant productivity growth of labor and capital.²⁰

Growth of productive capacity is not a given immutable figure but the result of public action and the behavior of social, political, and economic agents. All of this occurred in the half century analyzed, in a context conditioned by the external environment and the ideas then in fashion.

The outstanding performance of the 1990s reached a turning point when the Asian crisis hit the Chilean economy. However, the inflection was also associated with two additional factors. On the one hand, there is a structural element: dynamism in exports, FDI, and domestic investment were strongly influenced by natural resource exploitation (as in copper and forestry) and the development of public services (as in energy and telecommunications) in megaprojects that will hardly be reproduced in the next decade (Moguillansky 1999). Consequently, a large number of smaller projects in sectors with systemic competitiveness will be necessary in this new framework. This will require a more intense effort to *complete* long-term capital markets; encourage diffusion, assimilation, and adaptation of technology; broaden labor training; and open external markets for Chilean nontraditional products (all with special emphasis on the development of small and medium enterprises [SMEs]).

The second factor is the macroeconomic environment. As we will see in chapter 10, policies applied in the second half of the decade lost coherence and the ability to control the vulnerability of the Chilean economy in the face of external shocks. Consequently, when the Asian crisis exploded, a climate of instability returned to Chile once again, opening a significant gap between effective and potential GDP since mid-1998. This gap, as will be demonstrated throughout the text, was the main cause of the sharp drop in the investment ratio in 1999–2000. There is a double challenge to resume high growth and improving equity.

20. Data adjusted for quality give a total factor productivity change of -0.4 percent for the 1970s, -1.4 percent for the 1980s, and 1.4 percent for 1991–95 (Roldós 1997).