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## II

# Bolivia's Economic Crisis

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# 1 An Overview of Macroeconomic Performance

In the first half of the 1980s, Bolivia experienced an economic crisis of extraordinary proportions. As seen in table 1.1, Bolivia's economic debacle in this period was striking even in comparison with the poor performance of Bolivia's neighbors. Like its neighbors, Bolivia suffered from major external shocks, including the rise in world interest rates in the early 1980s, the cutoff in lending from the international capital markets, and the decline in world prices of Bolivia's commodity exports. But the extent of economic collapse in the face of these shocks suggests that internal factors as well have been critical to Bolivia's economic performance. The Bolivian hyperinflation of 1984–85, for example, was one of the most dramatic inflations in world history and one of the only hyperinflations that did not result from the dislocations of war or revolution.<sup>1</sup>

In some ways, Bolivia's economic recovery since 1985 is as remarkable as the economic crisis during the first half of the decade. In the fall of 1985, the new government of President Víctor Paz Estenssoro succeeded in eliminating Bolivia's hyperinflation. The inflation was cut from 25,000 percent per year during the hyperinflation to a remarkable 10.7 percent per year in 1987.<sup>2</sup> As shown in figure 1.1, the disinflation was almost instantaneous: by early 1986 virtual price stability had been restored.

The stabilization is all the more amazing in view of the extremely large and adverse shocks which hit the Bolivian economy *after* the start of the stabilization program. As we discuss below, the prices of all of Bolivia's major exports (even the illicit exports such as coca leaf) plummeted in late 1985 and after. The terms-of-trade deterioration further squeezed real incomes, worsening the decline of over 25 percent in per capita income levels that had occurred in the first half of the 1980s. The terms-of-trade decline further embittered the political conflicts in Bolivia, which have always been acute, and also directly reduced government revenues, thus threatening the macroeconomic stabilization program.

Table 1.1 Economic Performance in the 1980s, Selected Countries

Country	GDP Growth (annual rate), 1980-85	Inflation (annual rate), 1980-85	Debt-GDP Ratio,* 1985	Terms of Trade, 1985 (1980 = 100)
Bolivia	-4.5	569.1	136.8	86
Latin America				
Argentina	-1.4	342.8	56.4	88
Brazil	1.3	147.7	43.8	87
Mexico	.8	62.2	52.8	98
East Asia				
Malaysia	5.5	3.1	62.0	85
Indonesia	3.5	10.7	36.6	97
Korea	7.9	6.0	43.0	105

Source: World Bank (1988).

\*Medium- and long-term debt, public and private.

In 1987 Bolivia experienced its first positive GNP growth after seven years of decline, with an increase in GNP of 2.3 percent. Growth increased to about 3.0 percent in 1988. These positive growth rates during 1987-88 averaged about the same as population growth (2.7 percent per year), so that per capita income remained stagnant after eight years of sharp decline. The greatest disappointment of the stabilization experience after 1985 indeed has been the failure of Bolivia to resume solid and

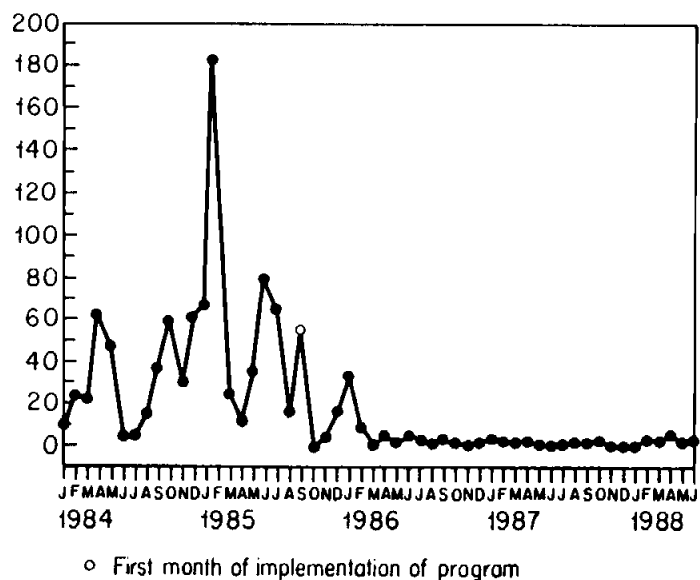


Fig. 1.1 Monthly inflation rates, 1984-88

Source: Institute of National Statistics, Bolivia.

positive per capita GNP growth. In our view, the continuing economic stagnation is not a result of the stabilization effort per se, but is rather a result of the recent external shocks together with internal disarray that preceded the stabilization program.

This monograph focuses on Bolivia's economic crisis and recovery in the 1980s, with a special emphasis on the role of external debt in the economic dynamics. The bulk of our attention is on the period from 1952 to 1985, from the Bolivian Revolution to the end of the hyperinflation. We do consider more briefly the period of economic recovery, 1986-88, but in view of the lack of perspective on recent events, we are not as comprehensive in our coverage of the years after 1985.

We view the hyperinflation as the culmination of deep trends in the Bolivian economy and society, rather than the result of short-run forces in the early 1980s. One pervasive theme of our work is that the recent economic crisis is a reflection of political and social conflicts in Bolivian society that have undermined the development process for decades. We thus lay great stress on the failures of politics in accounting for the failures of economic performance.

### 1.1 Some Basic Characteristics of the Bolivian Economy

Bolivia is a landlocked country with the second lowest per capita income in Latin America (U.S.\$470 in 1985). All indicators of economic and social development in Bolivia lie well below the Latin American averages. The economy has been heavily dependent on two exports, tin and natural gas, for the past thirty-five years. Not surprisingly, the cycles of expansion and contraction of the Bolivian economy have followed quite closely the movements in the world market prices of tin and petroleum. Moreover, as we shall see, the accumulation of foreign debt up until 1980 took place in a procyclical pattern, in that Bolivia became able to attract foreign loans precisely during the phase of high international prices for its exports. At the same time, in the mid-1970s, a thriving underground economy developed based on coca-related exports, a development that has deep implications for the functioning of the economy and the country's political institutions.

Bolivia's long-term growth problems begin with the inherent difficulties of growth in a landlocked mining economy centered in breathtaking, yet forbidding, terrain more than 14,000 feet above sea level. Bolivia is a very large and sparsely populated country. Its area is greater than the combined areas of the United Kingdom, West Germany, and France, with a population of only six million. The country is divided geographically between the Andean highlands, where the mining industry is located, and the lowlands to the east, where petroleum products and commercial agriculture are situated. From the beginning of colonial development, Bolivia's political and economic

center of gravity has been in the highlands. The secular decline of the mining sector has led in recent decades to a shift in economic and political activity to the east. This shift, which is the cause of significant political conflict, was accelerated by the sharp crash of tin prices in October 1985.

Bolivia's economy since the colonial period has been based on mining, first silver from the colonial period until the late nineteenth century, and then tin in the twentieth century. With the population centered in the highlands and neighboring valleys, transport costs are extremely high. Therefore, while it has been profitable for Bolivia to export minerals such as silver and tin that have a high value added per unit weight, and therefore a low share of transport costs per unit value, Bolivia has been unable to overcome the transport costs for almost any kind of manufactured product. The problem of transport costs was greatly exacerbated by Bolivia's loss of its littoral on the Pacific Coast in the traumatic War of the Sea against Chile and Peru in 1879.

The requirement of high value added per unit weight in Bolivian exports helps to explain Bolivia's only real diversification of exports in recent years: coca leaf derivatives (the precursors of cocaine) and petroleum products. Petroleum products, particularly natural gas exported to Argentina, can be carried out of the country by pipeline, while coca leaf can be profitably transported even if carried on a peasant's back. Table 1.2 shows Bolivia's concentration of non-coca exports in recent years. Among Bolivia's measured exports (i.e., excluding coca), tin and petroleum products usually accounted for much more than half of total exports during the 1960s, 1970s, and 1980s. Coca exports in the 1980s are generally estimated to equal the sum of tin and natural gas exports.

Table 1.2 Share of Tin and Natural Gas in Total Exports of Bolivia, 1952-84

Year	As % of Merchandise Exports	Year	As % of Merchandise Exports
1952	59.9	1969	57.3
1953	64.2	1970	52.0
1954	55.2	1971	58.4
1955	56.0	1972	61.3
1956	55.1	1973	57.2
1957	58.9	1974	46.6
1958	56.1	1975	48.1
1959	68.2	1976	47.9
1960	71.0	1977	62.4
1961	87.3	1978	72.0
1962	89.7	1979	65.9
1963	80.6	1980	63.6
1964	80.8	1981	68.3
1965	80.5	1982	73.5
1966	70.2	1983	77.6
1967	58.5	1984	86.1
1968	58.9		

Source: Central Bank of Bolivia, *Boletín Estadístico* (La Paz), various issues.

Many of Bolivia's problems can be seen as the tragic playing out of the secular decline in the mining sector, a process that has been underway for at least half a century.<sup>3</sup> Actually, Bolivia's first deep crisis came with the depletion of silver deposits and the fall of world silver prices at the end of the last century. Good fortune, however, pulled Bolivia out of crisis when a boom in world demand for tin followed the development of the modern canning process. The apogee of modern Bolivian economic development relative to the neighboring countries was reached in the first two decades of the twentieth century, when tin was intensively developed and when export earnings provided the basis for a major extension of the country's infrastructure, including roads and the railway system.

Tin lodes were increasingly exhausted in the 1920s, and Bolivia began to lose export competitiveness with other producers. When tin prices collapsed at the start of the Great Depression, Bolivia became the first country in that crisis to default on its sovereign foreign debt, in January 1931. Bolivia was also the last country in Latin America to settle these defaulted debts after World War II. The collapse of tin undermined both the economy and the political system, and eventually ushered in the Revolution of 1952.

### 1.1.1 Aggregate Growth

Table 1.3 shows some indicators of long-term growth.<sup>4</sup> Real GDP grew between 1952 and 1985 at the average annual rate of 2.4 percent. If the crisis years of 1982-85 are left out, the average annual rate is 3.2 percent (or 0.4 percent in per capita terms). The growth, of course, was not smooth and was characterized by well-defined cycles. The years 1952-57, in the aftermath of the Revolution, showed negative rates of growth as important social changes prompted major dislocations of production. In particular, agricultural output in cash crops suffered a substantial reduction after the first year of an ambitious agrarian reform. The high inflation of those years, coupled with misguided policy measures that attempted to suppress the symptoms of inflation, also had important negative real effects.

After the inflation stabilization of late 1957 until the early 1960s, growth resumed at a moderate pace. In 1959 the negative rate of growth is explained by a sharp drop in tin prices brought about by the mild world recession of 1958-59 and the sales of tin in international markets by the Soviet Union. From 1962 to 1972, very healthy rates of growth are observed, higher on average than the growth rates of the "export boom years" between 1972 and 1977. The growth in the 1960s is due importantly to a favorable international environment, internal political stability under President Barrientos, and the payoffs on earlier investments in petroleum and commercial agriculture in eastern Bolivia. Appropriate use of foreign aid funds, entrepreneurship provided by the educated Bolivians who had fled from the Revolution and had returned in the mid-1960s, and the substantial investment expenditures made by the Bolivian Gulf Oil Corporation were also important sources of growth.

Table 1.3 Real GDP, Levels and Rates of Growth, 1952–88

Year	Real GDP	Growth Rate (%)	Five-year Average (%)
1952	7.600		
1953	6.000	-9.47	
1954	7.023	2.00	
1955	7.395	5.30	
1956	6.957	-5.92	
1957	6.726	-3.32	-2.27
1958	6.887	2.39	
1959	6.864	-.33	
1960	7.159	4.30	
1961	7.309	2.10	
1962	7.717	5.58	2.81
1963	8.213	6.43	
1964	8.608	4.81	
1965	9.202	6.90	
1966	9.847	7.01	
1967	10.470	6.33	6.29
1968	11.222	7.10	
1969	11.757	4.77	
1970	12.370	5.21	
1971	12.976	4.90	
1972	13.729	5.80	5.57
1973	14.646	6.68	
1974	15.400	5.15	
1975	16.417	6.60	
1976	17.418	6.10	
1977	18.151	4.21	5.75
1978	18.761	3.36	
1979	19.104	1.83	
1980	18.990	-.55	
1981	19.064	.35	
1982	18.528	2.81	.43
1983	17.314	-6.55	
1984	17.160	-.87	
1985	16.660	-1.75	
1986	16.375	-2.00	
1987	16.752	2.30	-2.00
1988	17.255	3.00	

Source: Central Bank of Bolivia, *Cuentas Nacionales no. 4, Departamento Cuentas Nacionales* (La Paz: 1983), and for 1984–88, IMF, *International Financial Statistics*.

Notes: 1988, estimated. Five-year averages are calculated as geometric averages over the period.

Growth remained relatively strong during the Banzer regime, 1971–78, but the bases of the observed prosperity became more tenuous. Bolivian growth was based importantly on heavy foreign borrowing from private banks, as well as a temporary commodity price boom which favored the country. The pace of growth started to sharply decline from 1978 on. The high inflation of 1982–85, to which we devote substantial attention in chapter 5, was accompanied by negative rates of growth.

In regard to the composition of output, shown in table 1.4, primary production, including agriculture, accounted for 47 percent of GDP in 1952;

Table 1.4 Sectoral Composition of GDP (percentages)

Sector	1952	1957	1962	1967	1972	1977	1982	1985*
Primary	46.51	44.84	39.94	38.40	29.08	25.75	34.21	32.23
Manufacturing	14.15	12.34	14.05	15.28	14.60	15.86	11.96	9.83
Nontradables I	4.61	4.60	5.42	6.30	5.35	5.93	4.04	4.15
Nontradables II	34.73	38.23	40.60	40.02	50.97	52.46	46.15	50.69
Indirect taxes	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	<sup>b</sup>	2.64	3.10
GDP	100	100	100	100	100	100	100	100

Sources: Ministry of Planning, *Revista de Planificación y Desarrollo* (La Paz: 1970); Central Bank of Bolivia, *Boletín Estadístico* (La Paz), various issues.

Notes: Percentages are computed from basic data in real terms. Nontradables I = energy and construction. Nontradables II = commerce, transportation, and other services.

\*Estimated figures.

<sup>b</sup>Indirect taxes are included in each sector.

the corresponding percentage was 32 in 1985. The share of manufacturing in GDP in 1952 was 14 percent, compared with a low 9 percent in 1985. Construction and energy accounted for almost 5 percent of GDP in 1952 and for 4 percent in 1985. Commerce, transportation, and other services (denoted “nontradables II” in the table) constituted 35 percent of GDP in 1952, with that share rising to 51 percent in 1985. This latter group of industries, which experienced such a dramatic increase in share, are generally nontradables. Between 1967 and 1977, services increased its share in the economy from 40 percent to more than 50 percent of GDP. This change in the composition of GDP, with a higher share of nontradables (services plus a significant but unknown percentage of agricultural and manufacturing output), became in the 1980s an important explanatory factor of the difficulties of servicing the accumulated foreign debt.

### 1.1.2 Foreign Trade

Bolivia’s growth and development have been very strongly tied to foreign trade. With the exception of a few years in the period 1952–82, generally associated with strong political disruptions, exports amounted to more than 20 percent of GDP in current prices (table 1.5). The dependency on imports is obviously very high with import-GDP ratios rarely below 20 percent (in some years, the ratio is over 25 percent).

As we noted in table 1.2, Bolivia’s legal exports during 1952–85 were highly concentrated in two major exports, tin and natural gas, with natural gas exports beginning in 1972. In some years, more than 70 percent of measured exports are in these two commodities. Export diversification was one of the principal economic policy goals of the revolutionary period of 1952–56. However, after the stabilization program of December 1956, the policy was largely abandoned and the export concentration on tin increased substantially. After 1966 the share of tin in total exports declined because of the growing importance of petroleum and agricultural exports. The cycle of

Table 1.5 Trade as a Percentage of Bolivia's GDP, 1956-85<sup>a</sup>

Period	Exports	Imports	Total
1956-60	17.7	24.6	42.3
1961-65	18.5	25.0	43.4
1966-70	20.7	24.0	44.7
1971-75	26.8	22.5	49.3
1976-80	20.7	23.4	44.1
1981-85	15.5	13.7	29.2

Sources: For 1956-80, Central Bank of Bolivia, *Boletín Estadístico* (La Paz), various issues; for 1981-85, unpublished data from the World Bank.

<sup>a</sup>Annual averages. Percentages are derived from National Accounts data in current prices.

decreasing dependency on tin and natural gas ended around 1977. During the crisis years of 1982-85, natural gas became the most important export. In 1985 natural gas and tin constituted almost 90 percent of all exports.

The performance of exports was rather dismal from 1952 to 1985, as can be observed in table 1.6, but again very definite cycles of expansion and contraction can be distinguished. Between 1952 and 1961, the average annual rate of export growth was negative. In the quinquennium 1962-67 there was a healthy recovery that then slowed down between 1967 and 1971. The big boost in the dollar value of exports occurred between 1972 and 1977 because of higher prices, but in volume terms the growth of exports was negative during 1970-75 and very low during 1976-80. It is notable that despite the uniformly good real prices for exports during most of the 1970s, the output response was weak.

The year 1974 has been called by some observers a "miraculous" one for Bolivian exports. The index of export prices almost doubled from its level of the previous year. In the export basket, the price of tin increased 70 percent in nominal terms and 40 percent in real terms. Tin prices would remain high with a slight downward trend until the collapse of the market in 1985 (figure 1.2).

Imports generally followed the growth path of exports, though in the 1980s, imports fell sharply as export earnings were devoted increasingly to debt servicing. Transportation and insurance costs loom large in the CIF value of imports, given the geography of Bolivia and its rudimentary transportation network. Transportation costs are also a very important determinant of the structure of Bolivian exports. As mentioned earlier, because of the high costs of transportation, exports have to be of high value added per unit of weight.

### 1.1.3 Capital Formation and the Sources of Funds

The share of fixed investment in GDP varied widely during 1952-85, as is shown in table 1.7. The long-run value of this rate seems to be, however, above 15 percent. In the two years following the Revolution of 1952, the investment rates fell below this long-run value, but there was a substantial recovery in 1955 and 1956 despite extremely high inflation. In fact, contrary to what occurred during the 1980s, forced savings (i.e., the inflation tax) helped to sustain a high investment rate.

Table 1.6 Annual Rates of Growth of Main Export (volumes), 1950-85

Period	Tin	Natural Gas <sup>a</sup>	Total Exports
1950-55	-2.3	—	-.3
1955-60	-7.0	—	-6.1
1960-65	4.2	—	3.0
1965-70	2.8	—	9.4
1970-75	-2.2	—	-5.5
1975-80	-2.0	5.6	1.5
1980-85	-6.4	1.7	-2.9

Source: Data are export volumes reported in the IMF, *International Financial Statistics* (Washington, DC), various issues.

Note: Growth rates calculated as geometric averages of period shown.

<sup>a</sup>Natural gas exports began in 1972.

In the 1960s, investment rates were very high, comparable to those of the high-growth period of Brazil. However, these rates were sustained to a very significant extent by the contribution of foreign savings. Between 1975 and 1978, there was another upsurge in the investment rate, sustained similarly by foreign savings, leading to increased indebtedness. The investment rate fell in 1981 in line with the increasing difficulties in obtaining foreign financing. From 1982 onward, the investment rate fell precipitously as disbursements of foreign credits almost disappeared.

As shown in table 1.8, the contribution of domestic savings to gross capital formation has been substantial and should not be underestimated.

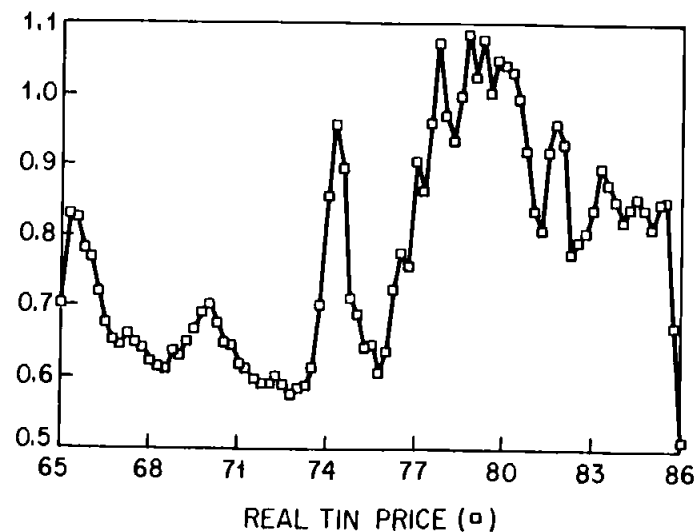


Fig. 1.2 Relative price of tin in world markets (1980=1.0)

Table 1.7 Investment Rates (percentage of GDP), 1952–85

Year	Investment Rate	Year	Investment Rate
1952	16.0	1969	20.0
1953	10.0	1970	14.0
1954	13.0	1971	15.0
1955	20.0	1972	16.0
1956	20.0	1973	15.0
1957	19.0	1974	15.0
1958	15.0	1975	17.0
1959	15.0	1976	17.0
1960	17.0	1977	17.0
1961	14.0	1978	18.0
1962	21.0	1979	17.0
1963	20.0	1980	14.5
1964	20.0	1981	12.4
1965	20.0	1982	9.8
1966	17.0	1983	6.6
1967	18.0	1984	8.8
1968	25.0	1985	6.5

Sources: Ministry of Planning, *Revista de Planificación y Desarrollo* (La Paz: 1970); Central Bank of Bolivia, *Boletín Estadístico* (La Paz), various issues; and unpublished World Bank data.

Note: Investment rates are computed as real investment divided by real GDP.

A high share of foreign savings in total investment was concentrated in a few subperiods: the 1960s, with foreign aid provided by the Alliance for Progress and with important foreign direct investment in the petroleum sector; and the late 1970s, with credits from commercial banks and suppliers. Gross national savings (i.e., domestic savings less net factor income plus current transfers) as a percentage of GNP experienced large fluctuations over the years 1958–85. During most of the 1970s, the saving rate was over 15 percent, and in 1974, it rose to more than 20 percent. From 1978 on, however, the rate began to fall, eventually to very low levels in the years of the economic crisis. A picture emerges in which two features stand out: first, the Bolivian economy can generate respectable national saving rates and, second, these high rates are generally the product of high growth in the economy supported by a favorable terms of trade or by access to foreign loans. The public enterprises played an important role in generating domestic savings during these high-growth years.

The domestic financial system, constituted mainly by commercial banks, has played an important role in the formation of private savings. The data in table 1.9 indicate that financial deepening reached its maximum in the mid-1960s. It is interesting to note that the real value of monetary balances (measured as M2) in 1965 was the highest in the entire 1952–85 period and that this peak was obtained without the dollar-indexed savings deposits that were the most common form of deposit after 1975. The evidence seems to indicate that the most important factor that induced savings in the banking system in the 1960s was the low and stable inflation rates of those years.

Table 1.8 Sources of Financing for Gross Capital Formation (as a proportion of total), 1952–85

Year	Domestic Savings	Foreign Savings
1952	94.4	5.6
1953	79.4	20.6
1954	98.9	1.1
1955	99.1	.9
1956	98.9	1.1
1957	93.2	6.8
1958	78.2	21.8
1959	83.4	16.6
1960	76.0	24.0
1961	81.9	18.1
1962	75.3	24.7
1963	73.4	26.6
1964	105.3	-5.3
1965	78.7	21.3
1966	80.7	19.3
1967	77.5	22.5
1968	66.4	33.6
1969	64.2	35.8
1970	87.8	12.2
1971	79.7	20.3
1972	82.5	17.5
1973	92.3	7.7
1974	132.1	-32.1
1975	72.1	27.9
1976	84.3	15.7
1977	76.8	23.2
1978	56.3	43.7
1979	50.7	49.3
1980	67.4	32.6
1981	94.7	5.3
1982	128.5	-28.5
1983	84.7	15.3
1984	100.3	-3
1985	63.0	37.0

Sources: For 1952–79, Central Bank of Bolivia, *Cuentas Nacionales no. 4*; for 1980–82, *Departamento de Cuentas Nacionales*; for 1983–85, elaborated with data from the World Banks.

#### 1.1.4 Inflation

The annual inflation rates during 1952–88 are shown in table 1.10. It will be observed in that table that Bolivia had a bout with high inflation in the wake of the Revolution of 1952, that lasted until the stabilization of 1957. At that time, Bolivian inflation rates were the highest ever known in Latin America. Inflation ended with an IMF-sponsored stabilization plan and with loans and subsidies from the U.S. government to support the budget. Details on that inflationary episode and how it was ended are given by Eder (1968).

The 1960s and 1970s were characterized by low inflation, except after the devaluations of late 1972 (and the protracted relative price adjustments that lasted until the first months of 1974) and of late 1979. From 1980 onward



Table 1.9 Monetary Variables as a Percentage of GDP, 1961–85 (selected years)

Year	Money Base	M1	M2
1961	8.0	8.6	13.7
1965	10.0	11.8	17.6
1969	10.6	11.2	14.0
1973	8.7	9.4	12.5
1977	10.4	10.4	14.5
1981	8.6	8.9	15.5
1985	2.3	2.3	3.5

Source: Elaborated with data from Central Bank of Bolivia, *Memorias Anuales* (La Paz), various issues.

Note: Monetary indicators are annual averages.

Table 1.10 Annual Inflation Rates, 1954–88

Year	Inflation Rate	Year	Inflation Rate
1954	124.8	1972	6.5
1955	77.9	1973	31.4
1956	181.2	1974	62.8
1957	115.5	1975	8.0
1958	3.0	1976	4.4
1959	20.3	1977	8.1
1960	11.5	1978	10.4
1961	7.5	1979	19.7
1962	5.8	1980	47.2
1963	-.7	1981	32.1
1964	10.1	1982	123.5
1965	2.9	1983	275.6
1966	6.9	1984	1,282.4
1967	11.1	1985	11,857.1
1968	5.4	1986	276.3
1969	2.2	1987	14.6
1970	3.8	1988	16.0
1971	3.6		

Sources: For 1953–70, Central Bank of Bolivia, *Memorias Anuales* (La Paz), various issues; for 1971–81, Instituto Nacional de Estadística, *Resumen Estadístico* (La Paz: 1982); for 1982–85, Unidad de Análisis de Política Económica (UDAPE), *Anexo* (La Paz); for 1986–88, IMF, *International Financial Statistics*.

Note: Rates are calculated as year-to-year changes of annual average price levels.

until the fall of 1985, inflation rates were very high, crossing the 100 percent barrier in 1982. Inflation reached hyperinflationary levels in 1984 (i.e., monthly price changes in excess of 50 percent), with the hyperinflation lasting from May 1984 to September 1985. The inflation ended dramatically with the New Economic Policy of the Paz Estenssoro government, which was launched on 29 August 1985.

The Bolivian inflations of 1953–57 and 1982–85 had their roots in weak fiscal budgets. Importantly, Bolivia (unlike Brazil, for example) did not have the institutional mechanisms that produced inertial inflation. Wage indexation was implemented only in 1983, when high inflation was well on its way, and

lasted until August 1985. The labor unions have had little experience in collective bargaining, and there have been very few formal labor contracts with escalator clauses or even with well-defined periods of validity. The practice in the labor unions has frequently been to ask for wage increases whenever there has been a significant erosion in real wages and to go to the Ministry of Labor for arbitration if the unions do not reach a settlement with the employers. During the last months of the hyperinflation, wages in many private sector firms, especially for qualified labor and in the service sector, were linked to the dollar in informal arrangements that were not legally binding.

In the high-inflation episode of 1953–57, the fiscal troubles were the result of deliberate policies to enhance production diversification projects in the eastern region of Santa Cruz with deficit financing, that is, by printing money. Inflation was used to generate forced savings to finance capital expenditures in a growing public sector. In the more recent experience of the early eighties, the replacement of foreign financing by internal financing to cover prolonged fiscal deficits was the most important explanatory factor of high inflation.

#### 1.1.5 The Expansion of the Coca Economy

An important question that arises when studying the Bolivian economy of the late 1970s and early 1980s concerns the role played by coca production and exports of processed coca leaves in the form of cocaine paste or refined cocaine. After 1978, illegal cocaine exports became a very important source of foreign exchange. A booming underground economy developed around the coca trade, with far-reaching consequences for the legal sectors of the Bolivian economy and for the international relations of Bolivia.

Until around 1975, coca leaves were marketed essentially for legal domestic uses.<sup>5</sup> The sharp increase in demand for cocaine (and other drugs) in the United States that started in the 1970s and emerged later in other industrial countries strongly increased the demand for coca leaves. Production responded rapidly to the demand shift. Coca paste was transported from Bolivia to Colombia, refined there, and marketed in the United States by Colombians. By 1980 some Bolivians started to refine the paste and market it without intermediaries in the U.S. market. Bolivia's involvement in the cocaine business increased rapidly and took several forms: production of coca leaves, coca paste, and refined cocaine.

It is very hard to come up with precise figures concerning Bolivia's production and exports of coca-based products given the illegality of the activity, but preliminary estimates of the FOB value of cocaine chlorohydrate have been computed by Doria Medina (1986) using data on acreage prepared by the Earth Satellite Corporation and information on the technology of deriving cocaine from coca leaves. The figures, in 1980 dollars, are 412.2 million for 1980, 563.9 for 1981, and 758.5 for 1982. In 1980 this represented 40 percent of recorded exports of goods and services; in 1981, 56 percent; and in 1982, 83 percent. These estimates are fairly conservative.

If export values are difficult to estimate, gross value added in the cocaine industry (and related activities) are even harder to come by. Under the rather arbitrary assumption that material inputs other than coca leaves are 20 percent of gross output in cocaine chlorohydrates, the gross value added estimates would represent 5.7 percent of GDP in 1980; 7.5 percent of GDP in 1981; and 10.8 percent in 1982. If one considers cocaine and coca production as vertically integrated industries, these percentages increase to 7.3, 8.8, and 12.7, respectively. Undoubtedly, these figures are very high, but significantly less than the wild estimates sometimes given in the press.

## 1.2 Summary of the Monograph

With this basic introduction to the Bolivian economy, we now turn to a summary of the remainder of the monograph. The outline of the work is as follows. Chapter 2 provides an overview of the political economy of macroeconomic policymaking in Bolivia since the 1952 Revolution. Great stress is put on the weakness of fiscal institutions in the face of heavy social and sectoral demands. The chronic fiscal weakness led to a remarkably overextended public sector, one that reached effective bankruptcy by 1985. During the period of hyperinflation, 1984–85, the government paid its way almost entirely through money printing.

Chapter 3 highlights some of the main directions of development policy during 1952–85, especially involving public investment spending and trade policy. We show that most of the period is characterized by a development strategy of “state capitalism,” in which the public sector is called upon to be the leading engine of growth through public sector investment spending and overall guidance of the private sector. The paradoxical result, however, is that as the government tried to control too much, it ended up controlling very little indeed. The model of state capitalism was particularly undermined by the chronic instability in policymaking that resulted from the rapid turnover of governments.

In chapter 4 we consider important characteristics of Bolivia’s international trade, focusing both on structural features (e.g., the heavy dependence on a small number of primary commodities), as well as policy choices. Our analysis of trade policies since 1952 makes clear that Bolivian governments continued to focus on primary commodity exports as the key to Bolivian growth, despite the secular decline in tin and the mixed fortunes regarding petroleum exports.<sup>6</sup> Bolivian governments typically spent more time and energy on attempting to improve the terms of trade for tin (mainly through the International Tin Agreement, which collapsed in 1985) than on a diversification of the export base into manufacturing.

Import policies have generally been ill-focused, leading to an enormous range of effective protection across sectors, with little discernible long-term

strategy in the distribution of incentives and with little attention to the indirect effects of import policies on the profitability of exports. Similarly, exchange rate policies were often pursued for fiscal purposes (e.g., overvalued exchange rates allowed the central government to appropriate some of the rents from export-oriented state enterprises that were otherwise hard to tax), rather than for the purpose of stimulating nontraditional exports.

Chapter 5 describes the process of foreign debt accumulation, which was the counterpart of the large budget deficits of the public sector in the 1970s and early 1980s. Bolivia’s external debt, particularly from the private financial markets, rose dramatically in the 1970s, mostly during the Banzer era. Bolivia’s rapid accumulation of external debt in the 1970s reflected three forces at work. First, part of the foreign borrowing financed a plausible attempt to generate a more diversified export base through various investment projects. Some of these projects were successful, but more often the investments proved to be expensive failures. Second, the foreign borrowing also reflected an attempt to finesse internal distributional conflicts by using borrowed money to pay for social demands for spending. Third, some of the foreign borrowing had the purpose and effect of enriching a narrow set of private interests through the public sector’s access to foreign loans. Similarly, an overvalued exchange rate, maintained through foreign borrowing, became a channel for capital flight for wealthier individuals.

By the late 1970s, the precariousness of Bolivia’s financial situation was clear. Banks pulled back from new lending, and in 1980 Bolivia began to miss payments due to the banks. Note that this occurred almost two years ahead of the global debt crisis, usually dated to Mexico’s suspension of principal payments in August 1982. Bolivia signed a rescheduling agreement with the banks in April 1981, which fell apart when Bolivia missed payments due in September 1982. Payments were restarted in 1983, but then suspended again in mid-1984. Since then, Bolivia has made no interest payments to the commercial banks.

Chapter 6 lays out the dynamics of the hyperinflation during 1982–85, focusing on the complex causal links among the budget deficit, the money supply, the exchange rate, and the price level. President Hernán Siles Suazo therefore inherited an extraordinarily difficult financial position in October 1982. In the event, the Siles government was too weak and often too confused in its policies to restore fiscal order. Siles tried several times to implement a comprehensive stabilization program (during November 1982, November 1983, April 1984, August 1984, November 1984, and February 1985), but in each of these cases, some combination of Siles’ political opponents in Congress and his ostensible “allies” in organized labor torpedoed the adjustment efforts. As the inflation accelerated, tax collections fell sharply in real terms, thereby exacerbating the fiscal crisis. The inflation under Siles went from annual rates of several hundred percent in 1982 and

1983 to several thousand percent in 1984 and 1985. The hyperinflation began in May 1984 and ended in September 1985, upon the accession to power of the Paz Estenssoro government.

In chapter 7 we detail the process of stabilization since 1985 and discuss some of the general lessons about ending high inflation that might be applied to other economies in the region. The successful stabilization program was carried out by the newly elected centrist government of Paz Estenssoro. The economic program, which was unveiled just three weeks after the government came to office, was remarkably wide ranging and indeed radical, encompassing not only plans for macroeconomic stabilization but also for trade liberalization, administrative and tax reform, and deregulation and privatization in the domestic market. The so-called New Economic Policy constituted nothing less than a program to dismantle the system of state capitalism that had prevailed over the previous thirty years.

Chapter 8 describes the novel arrangements that Bolivia has negotiated in order to escape the severe overhang of external debt. Bolivia took one "heterodox" step in its stabilization program: it maintained a *total suspension* of interest payments on its commercial bank debt, pending a longer-term settlement on the debt. For this reason, the Bolivian program might be characterized as "internal orthodoxy, external heterodoxy." The debt suspension was an integral piece of the political and economic strategy of the government.

The Bolivian debt strategy paid off. After years of negotiations, Bolivia's creditor banks ultimately accepted the argument that the debt should be reduced. Bolivia won the right to buy back part of its debt at the secondary market price, under the condition that it use money donated by donor governments to pay for the buyback. In May 1988, Bolivia repurchased \$308 million in principal (approximately 47 percent of the outstanding debt) from the commercial bank creditors, at a price of about 11 cents on the dollar. Bolivia continued to repurchase debt at 11 percent of par and by mid-1989 had repurchased in total about 70 percent of the outstanding debt.

In the concluding chapter 9, we discuss briefly the challenges facing Bolivia in the future, once stabilization has been accomplished. The key fact that we focus on is the weakness of Bolivia's traditional export base and the consequent need for the development of new sources of export earnings. Bolivia will have to diversify beyond mineral exports to new agricultural exports and light manufacturing. The latter could be spurred importantly by an opening of the Brazilian market to Bolivian light manufacturing exports. We stress that accomplishing this transition will require careful and sensitive attention to regional and social conflicts which remain powerful in the country. The government will probably have to contemplate specific measures to address these conflicts so that the structural transformation can proceed with internal political stability.

## 2 Political Economy and Macroeconomic Policymaking, 1952–87

In this chapter we review the major trends in Bolivian growth and development between 1952 and 1987. We have chosen 1952, the year of the Bolivian Revolution, as the relevant starting year for the analysis because the changes wrought by the Revolution shaped Bolivian economic and political development for the next thirty-five years. The review in this chapter will help to establish the links between foreign borrowing and the main macroeconomic developments.

The developments in the export markets (and the attendant changes in foreign indebtedness) could have been used to define the main temporal phases of the economy. We have chosen instead to divide the 1952–87 period using the criteria of political economy, according to the degree and character of state intervention in the economy. Given that this period encompasses several subperiods of intense political turmoil that seriously affected economic policymaking, the issues of state intervention in the economy and political instability receive more attention in our analysis than is perhaps typical of a country study.

In view of this emphasis on the political economy of Bolivian economic development, we begin this chapter with a detailed account of the major political developments since the Revolution of 1952, with a stress on their effects on the macroeconomy. Then, we turn to a summary of the main dimensions of economic performance, including growth, inflation, trade, and debt management, in the context of the political-economic history.

### 2.1 Bolivian Political Economy, 1952–87

This period witnessed a variety of policy phases that clearly deserve separate treatment. While the fundamental strategy of development set after the Revolution of 1952 did not change substantially until the end of 1985, the degree and the nature of state intervention in the economy differed significantly among the phases. Economic policy was shaped as much by political considerations as by macroeconomic objectives. Noneconomic objectives were very much present, and political turmoil itself left a deep mark on the period.

Table 2.1 gives a brief political chronology of Bolivia since the Revolution of 1952. The most striking aspect of the chronology is the instability of constitutional rule in the country. The Revolution was led by the National Revolutionary Movement (the MNR), which governed Bolivia

Table 2.1 Political Chronology of Bolivia, 1952–89

Year	Political Event
1952	Bolivian Revolution, carried out by Nationalist Revolutionary Movement (MNR), under the leadership of Dr. Víctor Paz Estenssoro.
1952–56	Presidency of Paz Estenssoro; important reforms, but sharp rise in inflation, reaching 178.8% in 1956.
1956–60	Presidency of Hernán Siles Suazo (MNR); economic stabilization under U.S. and IMF supervision and finance.
1960–64	Second presidency of Paz Estenssoro.
1964	Third presidency of Paz Estenssoro; Paz deposed in military coup led by General René Barrientos Ortuno.
1964–66	Co-presidency of Alfredo Ovando Candía and Barrientos Ortuno.
1966–69	Civilian presidency of Barrientos (dies in helicopter crash, April 1969).
1969	Vice President Luis Siles Salinas becomes president; Siles Salinas deposed in coup by Ovando Candía.
1970	Ovando Candía deposed by General Miranda; Miranda deposed by General Juan José Torres.
1971	Torres rules left-wing radical government; Torres deposed in coup, jointly sponsored by the military party Bolivian Socialist Phalange (FSB) and the MNR.
1971–73	General Hugo Banzer Suarez rules with MNR and FSB support.
1974–78	Banzer presidency under military rule; MNR and FSB withdrawal from government in 1974.
1979	General Juan Pereda becomes president in election marked by accusations of fraud; Pereda deposed by General David Padilla, who calls for 1979 election.
1979	Election results in stalemate (no majority); Senate President Walter Guevara Arze serves as interim president; Guevara deposed by Colonel Natusch Busch; Natusch Busch resigns in 15 days; president of Chamber of Deputies, Lidia Gueiler, becomes interim president.
1980	Electoral stalemate; Gueiler deposed in coup by General Luis García Meza.
1981	García Meza forced to resign in favor of General Bernal; Bernal resigns in favor of General Celso Torrelio.
1982	Torrelio deposed in coup by General Guido Vildoso; Congress reconvenes and names Siles Suazo as president.
1985	Siles Suazo announces early elections; Paz Estenssoro becomes president; new economic policy declared on 29 August 1985.
1989	Paz Zamora of the Movimiento Izquierda Revolucionario (MIR) elected president; governs in coalition with the Acción Democrática Nacionalista (ADN) party led by General Banzer.

for twelve years, winning elections in 1956 and 1960. The military toppled the civilian regime in 1964 and ruled without interruption until 1978. A period of political chaos followed during 1978–82, with a rapid alternation of military and civilian rule. Civilian rule was restored in 1982, with the accession to power of Siles Suazo, and then was continued with the presidency of Dr. Víctor Paz Estenssoro, which began in August 1985.

As in other Latin American nations, intense conflicts over income distribution contributed to a chronic alternation of power between populist

and anti-populist politics. In Bolivia, however, this alternation has been particularly sharp. Generally, the military rule was anti-populist and especially anti-labor. There was, however, a brief populist phase of military rule under General Ovando and then General Torres in 1969–71, which coincided with the leftist military government in Peru under Juan Velasco. The civilian governments have all drawn their leaders from the MNR, though these governments have varied widely in their policies, with populist phases during 1952–56 and 1982–85, and conservative phases during 1956–64 and 1985–89.

The leaders of the Revolution of 1952 drew inspiration from the Mexican Revolution and from Mexico's Institutional Revolutionary Party (the PRI) in the formation and policies of the MNR. The experience under the Rosca (the disparaging name given to the pre-Revolution oligarchy) had thoroughly discredited private wealthholders as a class capable of leading national development. The leaders of the Revolution looked to the public sector as an engine of growth that would be more broadly based and equitable. They put in place an economic system which can broadly be called state capitalism, which assigned the bulk of capital formation to the public sector, both for infrastructure and for industrial production in state enterprises. The leading state enterprises were COMIBOL, the national mining company, and YPF, the state petroleum company.

The whole concept of more equitable growth through a large state sector collapsed in a mass of inconsistencies over the thirty years between the Revolution and the onset of the Bolivian hyperinflation. During the post-Revolution period, leftist leaders were always too weak politically to satisfy their distributional aims. To the extent, for instance, that they aimed to raise public sector salaries or to increase public sector investment and employment, they lacked the capacity to tax income and wealth, which was essential to finance the larger state sector. If necessary, the Bolivian army was prepared to intervene to forestall populist or redistributionist actions, as it did in 1971. For these reasons, leftist or populist leaders have been constantly forced to rely on inflationary finance or foreign aid and foreign borrowing to carry out their distributional and developmental goals. The first high inflation in Bolivia came in the wake of the Revolution, and the second came with the left-wing government of Siles Suazo in 1982.

Leaders on the right, such as Barrientos and Banzer, were not interested to limit the power of the state, but rather to use the state to satisfy their own agenda. While governments on the left sought redistribution through higher wages and a larger role for public sector workers, governments on the right often sought to bolster favored segments of the private sector through generous government subsidies. Governments of the left have generally paid for higher public salaries through printing money (i.e., the inflation tax) or through foreign borrowing, since they have been forestalled from raising taxes. Governments of the right, on the other hand, have rejected higher

taxes outright and have instead sought to finance the government through a reduction of public sector wages (often with overt repression of labor) and also through foreign borrowing. Note one common theme of both types of governments: let the foreigners pay!

We now turn to a more detailed look at several key subperiods in Bolivia's political history since the Revolution. In doing so, we use a taxonomy that borrows heavily upon Malloy and Borzutsky (1982) and Malloy and Gamarra (1988).

## 2.2 The Revolutionary Period, 1952–56

The Revolution of 9 April 1952 that swept the *Movimiento Nacionalista Revolucionario* (MNR) into power, with Dr. Víctor Paz Estenssoro at the head, brought profound changes to the Bolivian economy and political structure.<sup>1</sup> Four important economic changes should be highlighted: (1) the three largest mining concerns were nationalized; (2) a very broad land reform program was initiated; (3) import substitution and export diversification became official policies; (4) a march to the hitherto underdeveloped eastern lowlands was begun through various government-sponsored colonization projects.<sup>2</sup>

The nationalization of mines was a natural outcome of a process of greater taxation and control of the private mining enterprises that had been underway for decades. Before nationalization, taxation occurred directly but also indirectly, through manipulations of the export exchange rate. With increased taxation and controls, the mining enterprises sought ways, legal and illegal, to evade them. As the government exhausted its taxing power, it was natural for the issue of nationalization to arise.

An occupation of the mines by their workers in 1952 pushed the MNR leadership to undertake the nationalization. The MNR leaders, who were by and large moderate reformers with middle-class roots rather than extreme revolutionaries, thought that government control of the mines, as urged by the miners, was better than workers' controversy. Land reform also went beyond the intentions of most MNR leaders and again was a policy imposed on them by the squatting by landless peasants.

Export diversification, import substitution, and the march to the East were, however, deliberate development policies. Two instruments had an important role in those policies. First, through overtaxation of the mining sector with differential rates of exchange, resources were transferred to the new activities, especially in the East. Second, many public sector investment projects were financed with forced savings, that is, the inflation tax.

A point of some importance about the Revolution should be noted. In spite of the official rhetoric of "anti-imperialism," the government was generally supportive of foreign capital, as long as it was not from the Tin Barons. After 1955, following changes in the legislation governing the

petroleum sector, Bolivia received significant amounts of foreign direct investment in petroleum. Substantial American mining interests belonging to W. Grace Co. were never threatened with nationalization. It should also be mentioned that, to the surprise of the neighboring countries, a close cooperation with the United States developed during the revolutionary period.

At the same time that the MNR was undertaking development projects, it tried to satisfy the demand of its support groups for increased consumption. There was a clear inconsistency between these two claims that exacerbated the distributive problems. Malloy and Borzutsky (1982, 46) correctly point out:

The Bolivian revolution quickly demonstrated some inescapable facts of the reality of the situation of economic backwardness and structural dependency, namely that (a) a relatively backward country cannot follow a simultaneous policy of economic development and popular consumption and (b) any process of restructuring for development demands that some social groups pay the "cost of the new course."

## 2.3 Stabilization and the Beginnings of State Capitalism, 1957–64

The revolutionary process entered into economic chaos by mid-1956. The period was marked by high inflation rates, foreign exchange rationing, a rapidly rising black-market premium for foreign exchange, shortages of food and other essentials, stagnant output in the mines and in traditional agriculture, and a decline in tin prices following the end of the Korean War boom.

The deteriorating situation clearly required a drastic stabilization program. Such a program was announced on 15 December 1956. The program shares many elements with the one enacted almost thirty years later in August 1985: exchange rate unification, a sharp reduction in public expenditures (around 40 percent in real terms), complete price liberalization and elimination of all subsidies, and a wage freeze after an initial limited rise in compensation. All policies directed toward diversification in production and exports came to a halt with the anti-inflationary package of 1956. A shortage of funds in the public sector and the strictures of an IMF agreement forced a sharp cut in government investment. A planning board for state sector investment was created, but its role was very modest.

The stabilization effort was largely sustained with donations from the United States, using food aid (Public Law 480 funds) and direct budgetary support. The world recession of 1957 and a substantial fall in tin prices in that year made things even more complicated and increased dependency on foreign aid. In exchange for U.S. support, the government of Bolivia committed to resume payments on foreign bonds that had been defaulted on in 1931 (see Ugarteche 1986; Baptista 1985). Notwithstanding the commitment, Bolivia defaulted again on this debt in 1960.

In regard to development policies, the government tried to rehabilitate COMIBOL, the state mining enterprise. The other two principal state enterprises, YPFB (oil) and the Development Corporation of Bolivia (CBF), were at that time relatively well-run enterprises that could stand on their own. COMIBOL, on the other hand, had been left completely decapitalized by the government management during 1952–56 and suffered from many ailments ranging from inadequate machinery to labor indiscipline. In 1961 the Triangular Plan was established with funds from the U.S. government, the newly created Inter-American Development Bank (IDB), and a consortium of West German mining firms. The plan called for extensive mechanization of the mines, the dismissal of several thousand workers, and the elimination of worker control of the activities of COMIBOL. Not surprisingly, the plan met strong labor opposition.

It is interesting to note a significant change in declared export policy in this second phase, compared with the policies immediately after the Revolution. Mining again received high priority, and hopes for export diversification were reduced to the undertakings of the foreign oil companies. Active policies of import substitution were also largely forsaken.

The second phase coincided with the beginning of the Alliance for Progress, a development program for Latin America created by President John Kennedy. The Bolivian government grasped right away the opportunities offered by this new program and became one of the main beneficiaries. The government undertook extensive infrastructure investment, financed mostly with Alliance for Progress funds.

By 1964 the remnants of the Revolution, including heightened political mobilization, worker participation in the management of public enterprises, and redistributive policies, had been all but abandoned. By the early 1960s, a form of state capitalism developed, controlled and exploited by various competing groups of the middle classes. As we shall note, the state enterprises became a source of enrichment for these private factions, some civilian and some military.

#### 2.4 The Resurgence of the Private Sector, 1964–65

In 1964 President Paz Estenssoro, who was at the beginning of his third term, was deposed in a coup d'état staged by his vice president, General René Barrientos Ortuno. The coup itself reflects the collapse of unity of the governing MNR, which had ruled since the Revolution. The party had by 1964 splintered into a myriad of factions and personalistic cliques, all organized to extract patronage and other spoils from the Treasury and from the state enterprises. When Paz attempted to maintain power for a third administration, many of the splinter groups of the MNR, which felt deprived of their share of the spoils, coalesced in support of the coup.

General Barrientos continued the big push to modernize the public sector which had begun in Paz's second term (1960–64). Significant effort and money were spent on the public sector, much of it financed by the Alliance for Progress. The domestic private sector, which had played a limited role in the economic developments of the previous twelve years, resurged as a result of two strong impulses. First, fresh investment funds were made available, at subsidized interest rates and with a high grant element, to private producers. A new group of producers formed a nascent entrepreneurial class that began to play an important political role in the late 1970s and early 1980s. The investment funds came mostly from international aid, with IDB and the World Bank being the principal sources. Second, many managers and middle-class professionals who had left the country during the MNR reign returned and engaged themselves in industrial and mining activities. As a result of this surge in public and private activity, economic growth was very high, reaching 6.6 percent during 1965–69.

Foreign direct investment flowed into the mining and petroleum sectors. The expansion of petroleum production and exports was largely due to the investments of the Bolivian Gulf Oil Corporation. Very important natural gas deposits were discovered, and the construction of a gas pipeline to Argentina was started. At the same time, investments made in Santa Cruz, in the eastern portion of the country, during the MNR period (1952–64) started to pay off during the Barrientos era. Commercial agriculture increased in output very significantly. More importantly, economic development meant a larger political influence for an emerging class of Santa Cruz businessmen.

It should be underlined that while foreign borrowing was high during the sixties, investment rates were also very high. Unlike during the 1970s, foreign borrowing indeed translated into higher domestic investment, and without a subsequent debt crisis. The nature of the credit sources in the 1960s might help to explain this fact. Official creditors then were both more careful in screening their loans and more generous in their terms than the banks proved to be in the 1970s.

Bolivia joined the Latin American Free Trade Association (LATFA) in 1966 and in 1969 signed the Cartagena Agreement, which created the economic integration scheme of the Andean Pact (to be discussed in detail in chap. 4). The Bolivian government at that time held considerable expectations of the benefits of this association, expectations that failed to materialize.

#### 2.5 The Populist Interlude of 1969–71

Barrientos was killed in a helicopter crash in April 1969, and the civilian vice president, Luis Adolfo Siles Salinas, assumed the presidency. In September 1969 he was overthrown in a coup led by General Alfredo Ovando Candía, who in turn was overthrown by General Juan José Torres in 1970. Ovando and Torres represented the phenomenon of a left-wing,

populist military regime, which mirrored the political developments in Peru at the same time (with the ascension to power of General Juan Velasco).

During the presidency of Ovando Candía, three important economic policy decisions were made: (1) the Bolivian Gulf Oil holdings were nationalized; (2) very costly, and ultimately uneconomical, tin smelters were built; and (3) the very influential Socioeconomic Strategy for National Development (SSND) was prepared. Even today, the reasons for the nationalization of Bolivian Gulf Oil are not very clear, except as a populist measure to garner political support. On the other hand, the construction of the tin smelters was a response to a long-held Bolivian aspiration: the exportation of metallic tin instead of ores. This could indeed have been profitable to the country by saving heavy costs of transportation and charges for processing in foreign smelters, but unfortunately the tin smelters were built very inefficiently.<sup>3</sup> The SSND will be discussed in chapter 3.

## 2.6 The Banzer Era, 1971–78

A coup d'état in August 1971 installed General Hugo Banzer in the presidency. He was supported in the coup by civilians and members of the military discontent with the left-wing course of the Ovando and Torres regimes and afraid of emerging guerrilla threats.<sup>4</sup> Banzer's supporting civilian force reunited the MNR of former president Paz Estenssoro with the far-right party Bolivian Socialist Phalange (FSB). In a turnaround, not uncommon in Bolivia, some party members of the Marxist-Leninist Party of the Revolutionary Left (PIR) entered government. In the military, commanders of the anti-guerrilla units had acquired the upper hand.

Banzer's government lasted seven years. From the end of 1971 until the first half of 1974, he governed with the political parties mentioned above; thereafter he relied essentially on the military and some technocrats and businessmen.<sup>5</sup> During his administration, Banzer faced strong opposition from organized labor, the leftist parties, and the intellectual elites; but he enjoyed, owing in part to great improvements in the economy, a high degree of popularity among the middle classes, small businessmen, and even in some favored "unions," such as that of the railroad workers. Some peasant organizations also gave support to the regime, though on the whole, the peasant community was not favored by the Banzer regime. The emergent Confederation of Private Enterprises (CEPB) generally supported Banzer's economic policies. Prominent businessmen held the key position of Minister of Finance during most of his term.

It is important to realize that support and opposition to Banzer were established also along regional lines. Santa Cruz and, more generally, the eastern part of the country, constituted his strongest political base. Santa Cruz was not only Banzer's home province, but the region also greatly

benefited from his economic policies, including various rent-grabbing opportunities made available by the government.

Economic growth had the highest priority in Banzer's economic policies. Real GDP grew at an average 5.4 percent during his term. But the apparent prosperity had several profound economic weaknesses, a point that was to become painfully evident in the 1980s. First, much of the prosperity in the 1970s was based on a temporary commodity boom and heavy capital inflows. Once the inflows slowed, as was inevitable, the economy faced a sustained period of austerity. Moreover, a persistently overvalued exchange rate during the 1970s prompted investment in the nontradable sectors of the economy and in capital flight, so that there was little basis laid for a more dynamic export sector in the 1980s that would be necessary to service the debts accumulated during the Banzer years.

Second, Banzer pushed growth in part by granting large subsidies to the vested interest groups that supported the regime. Friends of the government, particularly in the military and among the private business community, were frequently favored with property rights over hitherto public lands, with mining concessions, and, most importantly, with highly subsidized credits. The rationale of these policies was that above-normal profits, if saved and reinvested in the country, could be conducive to the desired high rates of growth.

## 2.7 The Years of Political Instability, 1978–82

There was another profound weakness of the Banzer years: the absence of a legitimate succession. In 1977 and 1978, General Banzer faced growing pressure from the Carter administration for a return to democracy. An election was called, and Banzer's handpicked successor, General Juan Pereda, was named president in an election marked by massive fraud. When the results of the election were challenged, Banzer decided to remain in office, but was quickly ousted by Pereda himself. There ensued a period of intense political instability that brought to power no less than eleven heads of state between 1978 and 1982. There were several stalemated elections, which produced interim civilian presidents, and several coups. Just a listing of the heads of state captures the political instability of the period:

- 1979: Pereda (military), Padilla (military), Guevara (civilian), Natusch (military), Gueiler (civilian);
- 1980: Gueiler (civilian), Garcia Meza (military);
- 1981: Garcia Meza (military), Bernal (military), Torrelio (military);
- 1982: Torrelio (military), Vildoso (military), Siles Suazo (civilian).

The events of 1979 deserve some notice. After two brief military governments, new elections were held in the summer of 1979. These elections ended in stalemate, with no candidate receiving 50 percent of the

popular vote and no candidate being able to command a majority in Congress. Walter Guevara, then president of the Senate, was chosen as interim president. He was quickly overthrown in a violent coup by Colonel Natusch Busch, who in turn was forced to resign shortly after. Another interim president came to power, Lidia Gueiler, who was then president of the Chamber of Deputies. She in turn was overthrown the following year, but not before she had launched a tough, coherent stabilization plan that, alas, did not have time to take effect.

An attempt to elect a president failed in 1980 when the elections again ended in stalemate. At that point, the country reached its political nadir, with General Luis Garcia Meza deposing President Gueiler. The Garcia Meza regime was deeply implicated in the burgeoning cocaine industry in the country and, therefore, never received U.S. diplomatic recognition. The regime was nearly universally condemned for massive corruption and violence and was internationally isolated, except from the Argentinian military government which had helped in the coup and provided some financing, leaving behind debts that haunted Bolivia until the late 1980s.

Capital flight reached new heights in the period, with errors and omissions in the balance of payments of 1980 and 1981 totalling \$590 million, or about 10 percent of 1980 GNP, a remarkably high amount that probably understates the full extent of capital flight. The international commercial banks stopped all lending and negotiated an emergency rescheduling agreement in 1980, upon which the regime soon defaulted. The diplomatic isolation also had important financial consequences: the multilateral creditor organizations, including the IMF, the World Bank, and the Inter-American Development Bank, withdrew their support and new lending, leaving the country without any effective access to world capital markets.

Bolivia started in 1980 to build up arrears with the commercial banks, skipping amortization payments. At the same time, the economy was feeling the stress of higher interest rates on the foreign debt. The need to normalize relations with the international commercial banks led to the debt rescheduling agreement of April 1981, but even with debt rescheduling, Bolivia again fell into arrears in 1982.

Short-term Argentinian loans and some swaps provided by Latin American central banks allowed the Garcia Meza government to overcome the most pressing liquidity problems and provided some transitory alleviation of the financial squeeze. The government was also helped by a short-lived export boom in 1980 with important price increases for many nontraditional exports. In addition, Bolivia was able to negotiate better prices on its sales of natural gas to Argentina.

Garcia Meza met enormous difficulties in his exercise of government and faced strong opposition even among members of the military who had conspired with him. His brutal ways alienated him from the business organizations and middle-class constituencies that had originally supported

his coup. By mid-1981, it became clear that he had to step down. In August 1981, he resigned to a junta of commanders of the Armed Forces and, after a short interval, was replaced by General Celso Torrelio.

Torrelio's presidency coincided with the onset of the world recession and of the Bolivian economic crisis. Unable to control the economy, he was deposed in favor of General Guido Vildoso in the second half of 1982. Vildoso lasted only a few weeks, but in the meanwhile he prepared a stabilization plan, trying to make it palatable both to the IMF and to the public. Political fatigue owing to the deterioration of the economy and, especially, the instability of the military governments forced him to reconvene the Congress elected in 1980, which, in turn, acting as an electoral college, named the civilian Hernán Siles Suazo as president.

The political chaos between 1978 and the end of 1982 had a paralyzing effect on the economy. The uncertainties that arose from this situation delayed recognition of the external disturbances that the national economy faced and obstructed the process of decisionmaking needed to take appropriate action. Political antagonists attributed the effects of external shocks to their political foes, instead of looking to the true causes. Quite unfortunately for Bolivia, the internal political chaos overlapped with the onset of high world interest rates and world recession during 1980–82. Had opportune action been taken to redress the external imbalances, it is likely that the toll exacted on Bolivia by the world crisis would have been lighter.

Bolivia remained largely isolated from the ongoing discussion in international academic and official circles about the way to cope with the crisis. Some of the macroeconomic mistakes that were made can be attributed to this isolation. The courageous attempt at stabilization of President Lidia Gueiler in November 1979 stands out as an exception. Her stabilization plan contained the following elements: (1) a 20 percent devaluation of the peso; (2) increases in prices of publicly provided goods and services (e.g., a 36 percent rise in gasoline prices, and a 30 percent increase in electricity rates and railroad fares); (3) a reduction in subsidies on imported staples; (4) a reduction of export taxes that had been created in 1972; and (5) strong regulations on dollar-denominated time and savings deposits in the domestic banking system. The package was completed with a small wage increase.

In January 1980 an Extended Fund Facility loan was agreed upon with the IMF for U.S. \$66.4 million, and in June of that year a Structural Adjustment Loan was obtained from the World Bank for U.S. \$50 million. Both of these programs subsequently fell into abeyance, after the coup which brought Garcia Meza to power. It is worth noting that the agreement with the IMF was reached very rapidly after Gueiler's stabilization plan was announced. This contrasts sharply with what happened in the ensuing years, when negotiations with the Fund would be protracted for several months.



It is difficult to assess the effects of the stabilization plan and the IMF and World Bank loans of those years. The Garcia Meza coup clouded the picture. Had the democratic process continued and the new government followed the economic policies set forth by President Gueiler, results probably would have been better than those observed.

## 2.8 The Return to Democracy and the Outbreak of Hyperinflation, 1982-85

As in other Latin American countries in the early 1980s, economic deterioration prompted the military to retreat to the barracks. In 1982, Hernán Siles Suazo, who had been the president to preside over the IMF stabilization program of 1957 and who had received the plurality of votes in the stalemated 1980 elections, was called on by a newly reconvened Congress to accept a four-year term of office.

It is important to appreciate the political implications of Siles' accession to power. The new administration represented the first elected government in eighteen years, so that pent-up social and economic aspirations were sure to boil over early in the term. Moreover, Siles represented the left wing of the MNR and governed in a coalition that included the Communist party, the left-wing MIR (Movimiento de Izquierda Revolucionario), and for part of the time, the centrist Christian Democrats. In the early phase of the administration, the union movement gave strong support to the new government, but demanded large real wage increases and other political concessions in return. Ultimately, when successive wage increases did not keep ahead of the accelerating inflation and when various political concessions were not granted, the unions turned sharply against the government. Indeed, labor unrest in 1984 and 1985 killed the final two stabilization attempts of the Siles administration.

It is not unusual for inflation to accelerate sharply upon the accession of leftist governments, particularly if the left has been denied power for many years. The same phenomenon occurred, to a lesser extent, in Bolivia in the 1950s, in Chile under Allende (1970-73), and in Portugal in 1974 after the collapse of the right-wing regime in that year. The price explosion is typically due to a rise in government spending in favor of the new government's key constituencies (e.g., real wage increases for trade union members or increases in social spending) and to the inability of the government to achieve a national consensus on raising taxes to cover such spending (with the right wing blocking tax increases). In the case of Bolivia, though, it was not only that the new government forced through large increases of public spending, but also that it was unable to reduce the huge deficit that it had inherited from earlier governments and was unable to attract noninflationary forms of finance. The coalition members of the Siles government were never able to agree on policies to restrain spending (the

Communists, for example, rejected any kind of policy that implied a drop in public sector employment or real wages), while the government's opponents in the Bolivian Congress opposed all tax reform proposals to stabilize or enlarge the shrinking tax base.

Siles was unable to stop the economic decline, and indeed many of his policies (and sometimes his lack of action) aggravated the situation. The inflation rate jumped in the second quarter of 1984 to hyperinflationary levels. The detailed economic analysis of these events is postponed to chapter 4.

A complete understanding of what precluded the necessary policy adjustments would take us deeply into the Bolivian political system and, therefore, is beyond the scope of this study. An excellent political analysis of the period is available, in any event, in Malloy and Gamarra (1988). A few general points can be raised. First, a key condition for the eventual outbreak of hyperinflation was the cutoff in access to foreign borrowing in 1982: only a credit-constrained government would choose to finance current expenditures with a hyperinflation rather than with more foreign borrowing.

Second, interest group politics were crucial in the process. At a fundamental level, an inflation tax is a highly regressive tax that affects a general and poorly organized part of the population, while cuts in government expenditures or increases in other kinds of taxes often affect better organized or more influential interest groups. Third, many well-connected, rent-seeking individuals made considerable fortunes in the course of the hyperinflation. Anybody with access to official foreign exchange from the Central Bank could become wealthy almost instantly during the period by purchasing cheap dollars at the Central Bank and selling them at a several hundred percent profit in the black market. Similarly, commercial bankers, who took deposits at zero interest rates and lent at high nominal rates, shared in the government's seignorage gains during the hyperinflation. Moreover, the government extended a large number of low interest loans during the period, which effectively became grants as a result of the inflation. Price controls on public sector goods, such as on petroleum and even flour, generated opportunities for lucrative smuggling operations. All of these opportunities for gain from the price distortions provided a natural constituency of powerful individuals who wanted to see the hyperinflation process continue.

Fourth, there was a continuing and sometimes profound misunderstanding of the costs of stabilization. One of the most important checks on the stabilization process was the government's political inability to impose real wage "decreases," however transitory, on the union sector. The unions resisted any cuts in measured real wages as part of a stabilization program, despite the fact that the gains in reducing the inflation tax for the workers could have exceeded any direct real income losses from a reduction in public sector pay. The problem is that real wages are measured as a nominal wage,

$W$ , deflated by a consumer price index,  $P$ , that does not include the price (i.e., opportunity cost) of holding money. Thus, while a rise in oil prices that allows the government to eliminate inflationary finance could well leave real wages *net of the inflation tax* higher than under the hyperinflation, the policy will almost surely reduce measured  $W/P$ , and therefore would typically be resisted by the unions.

It should also be noted that much of the union movement's opposition to the Siles government's policies was not limited to narrow calculations about short-run movements in real wages, but rather to a broader agenda to push the country to the extreme left. The main union organization, the COB (Central Obrero Boliviana), pursued a strategy of insisting on co-government, with a goal of pushing the left-wing coalition toward a model of state socialism (see Malloy and Gamarra 1988 for an extensive discussion of this point). This was much farther than most of the other coalition partners, and the president, were willing to go. Therefore, after failing to convince the government from the inside, the COB took to active and vocal external opposition.

### 2.9 Stabilization and the End of the State-Capitalism Model, 1985–88

By November 1984, President Siles admitted defeat in his government's attempts to control inflation, and he called for new elections to be held in July 1985, one year before his term was due to expire. During the last year of the Siles government, inflation reached 24,000 percent (August 1985 compared with August 1984). Former presidents Hugo Banzer and Víctor Paz Estenssoro were the front-runners in the national elections of 1985, but neither of them received a majority of votes. While Banzer had a plurality of votes, Paz Estenssoro was voted in by the newly elected Congress on 4 August 1985, with the support of left-wing representatives who opposed Banzer's attempt to return to power.

Three weeks after Paz's inauguration, on 29 August 1985, the center-right government of Paz Estenssoro unveiled a wide-ranging program, known by its decree number, 21060, which encompassed not only plans for macroeconomic stabilization but also for trade liberalization, administrative and tax reform, and deregulation of domestic markets. The scope of the program is remarkable in that it attempted to address deep and politically sensitive structural issues in the economy at the same time that it battled against the hyperinflation. Hyperinflation was ended shortly after the program was announced. Details of how this was accomplished will be considered in chapter 5.

In the set of structural reforms, announced in the program of 29 August 1985 and implemented during the following year, the most important were: (1) a tax reform that simplified a complicated structure, replacing it with one where valued added and wealth taxes loom large; (2) reform, decentraliza-

tion, and expenditure cutting in the state enterprises, especially in the mining company COMIBOL; (3) reform in the trade regime, aiming at the elimination of most barriers to international trade and the implementation of a flat tariff schedule; and (4) normalization of Bolivia's access to international financial flows from the official creditor community (i.e., the IMF, the World Bank, the IDB, and bilateral creditors).

The political base for implementing this enormous program was established in a crucial Pact for Democracy signed by Paz's MNR and Banzer's party, Acción Democrática Nacionalista (ADN). This agreement established a congressional majority sufficient to put through the Congress the key features of Supreme Decree 21060. The pact allowed the decree to take effect in the context of democracy, a remarkable accomplishment in view of Bolivia's volatile political institutions and its vulnerable position amongst politically unstable neighbors in the region. With the pact, the Paz government reserved important positions in state enterprises for members of Banzer's ADN party. In addition to the political base of the MNR and ADN, Paz also had strong support in the business community. Several prominent businessmen, some who had been head of the CEPB, were given top Cabinet posts.

The structural reforms did away with the state-capitalism model, with its several variants, that had been followed since the Revolution of 1952. The reforms were carried out with a remarkable smoothness. Of course, there was some bitter opposition, particularly in the labor unions and in the parties of the left, as well as lively criticism in the press, but the changes were peaceful and in the framework of democratic institutions. At no point during Paz's administration was the process of reform imperiled.

## 3 State Capitalism and the Operation of the Public Sector

This chapter focuses on the strategy of state capitalism as the model of development in Bolivia during 1952–85 and particularly on the role of public finances, public investment spending, and trade policy in that period. We have already stressed that the Bolivian debt crisis in the 1980s, and the economic crisis more generally, can be traced largely to insufficient domestic savings and to a very weak public sector, despite the central role assigned to the public sector in the development strategy.

The main point that we emphasize is that while the government faced large and politically urgent demands for spending—on, for example, the wages of public sector workers, social objectives (e.g., health and edu-

ation), the military, and foreign debt servicing—the tax base for financing these expenditures had always been extremely fragile. Domestic revenues were generally adequate only during periods of high foreign prices of raw materials. When export prices fell, governments generally tried to maintain spending with funds borrowed from abroad. The real crises arose when neither high export prices nor foreign loans could sustain the level of government spending. Thus, after 1980 and before the stabilization program of 1985, the government was forced to rely heavily on the inflation tax.

As a general point regarding the structure of government revenues, the important thing to notice is that revenues were collected primarily through production taxes and foreign trade taxes, collected from a small number of activities undertaken by a handful of enterprises. Many, but not all, of those enterprises were publicly owned. The tax structure can be seen in table 3.1, from Breuer (1988). In 1976, for example, taxes from trade, state enterprises, and private mining (which is a production tax on an export good) accounted for 49.7 percent of the overall tax revenues. These three sources proved to be highly unstable during the 1980s as real tax revenues fell sharply. Trade taxes fell as a rising share of trade went through the black market; state enterprise taxes fell as profitability of the state sector declined, partly as the result of unrealistic pricing; and private mining profits fell, partly due to terms-of-trade decline and partly due to a failure of collections.

With a tax structure as in Bolivia, the search for tax revenue was easily confounded with the search for investment opportunities for the public sector that could yield those revenues.<sup>1</sup> Nobody was better equipped, it was asserted, than the public sector to seize large investment opportunities, and the public sector needed the revenues in order to finance the balance of its expenditures.

In this setting, the heavy emphasis on public investment projects combined with the allocation of public sector revenues, necessitated a development plan. From 1956 until 1985, the governments emphasized economic development based on public sector planning. The design and implementation of

Table 3.1 Tax Structure in Bolivia, 1972–80

	1972	1974	1976	1978	1980
Direct taxes	25.3	43.4	46.6	45.7	45.5
State enterprises	8.9	28.7	24.8	22.5	23.2
Private mining	.0	7.4	3.8	4.7	4.0
Other	16.5	7.4	18.0	18.6	18.2
Indirect taxes	74.7	56.6	53.4	54.3	54.5
Trade	31.6	18.9	21.1	23.3	20.2
Excise	8.9	4.9	4.5	7.0	6.1
Sales	6.3	3.3	3.8	5.4	6.1
Other	27.8	29.5	24.1	18.6	22.2
Total	100.0	100.0	100.0	100.0	100.0

Sources: Breuer (1988), table 5.1(B), which is based on estimates supplied by UDAPE in the Ministry of Planning, Bolivia.

development plans were considered essential for rapid economic growth in the productive and distributive spheres. The common view on the topic over a long period was that centralized planning should be compulsory for the public sector and indicative for the private sector.

In this chapter substantial space is devoted to the public sector investment projects as they were framed in development plans, the main conceptions of which shed some light on the projects themselves. Indeed, the policy of investing public income and publicly guaranteed loans in huge projects of resource-based industrialization cannot be fully understood without appealing to the main conceptions on development as reflected in the development plans. Unfortunately, failed public investments, together with the narrowness and vulnerability of the tax base, are the main sources of the eventual collapse of the public sector.

### 3.1 The Mature State-Capitalism Model, 1969–84

The most important feature of the state-capitalism model is the degree of intervention of the government in the economy. In 1975, for example, the GDP generated in the public sector accounted for 22 percent of total GDP, while in 1982 this ratio reached a high of 28 percent. The data in table 3.2 are even more telling, as they show the very high share of public sector investment in total investment spending. During 1965–69, the public investment share in total investment was 51 percent; by 1975, the share decreased slightly to 48 percent; during 1976–80, it increased again, reaching an average of 60.4 percent. From 1981 to 1985, the ratio fell sharply because of the deep cuts in public investment spending during the financial crisis. It may be noted that from 1970 on, the years of high *private* investment rates are also associated with strong investment rates of the public sector. This is in part a manifestation of state capitalism, in that

Table 3.2 Public and Private Participation in Gross Fixed Capital Formation (in percentages)

Year	Public	Private	Year	Public	Private
1958	42	58	1970	56	44
1959	40	60	1971	60	40
1960	44	56	1972	59	41
1961	45	55	1973	37	63
1962	54	46	1974	34	66
1963	62	38	1975	41	59
1964	60	40	1976	56	44
1965	43	57	1977	64	36
1966	50	50	1978	66	34
1967	50	50	1979	58	42
1968	52	48	1980	58	42
1969	59	41			

Sources: Ministry of Planning and Central Bank of Bolivia.

private investment spending was often closely tied to specific public sector projects.

It is worth looking at some explicit statements of the state-capitalism model contained in several development plans formulated by various governments. Though the model has roots that go back to the Revolution and even before, we will focus our analysis on the 1969–84 period. In 1969 the left-wing populist government of General Ovando presented to the nation a Socioeconomic Strategy for National Development (SSND). The SSND was more “statist” and nationalistic than the ten-year plan prepared by the MNR regime in 1962.<sup>2</sup> The SSND clearly defined a long-run vision of state-led growth, with many “strategic sectors” of production that were reserved to the public enterprises. The SSND targeted an increase in domestic saving based on the retained surpluses of the enterprises in the public sector; as a counterpart, and consistent with a nationalistic ideology, it called for a *reduction* of foreign savings through cuts in foreign direct investment and public external borrowing.

A very important feature of the SSND was the emphasis given to resource-based industrialization. A key theme was that big operating surpluses can be generated in the state enterprises in the resource sectors, which in turn can be reinvested in other sectors. In addition, the SSND, in a clear case of misjudgment, relied quite heavily for the industrialization program on the market prospects offered by the economic integration scheme of the Andean Group Pact of 1969, formed by Bolivia, Colombia, Ecuador, Peru, and Venezuela (Chile belonged originally, but quit in 1976). With regard to agriculture, the SSND advocated a more communitarian organization of production, with strong emphasis on cooperatives and technological improvements.<sup>3</sup>

The SSND was short-lived, abandoned by President Banzer in 1972. However, the SSND exerted a powerful influence on the formation of ideas in Bolivia that went well beyond 1972. The strongly nationalistic nature of the SSND appealed to the left in the Bolivian political spectrum and, ironically, to many high-ranking officers in the military. In fact, the state-capitalism model reached its peak during the government of General Banzer and, although we can trace the origins of Banzer’s model to the Revolution of 1952, many of the most important concepts came from the SSND.

The expansion of the public sector, especially as a producer of goods and services that could, under appropriate policies, be provided by private enterprises, indeed constitutes the landmark of the Banzer years. But this did not mean a confrontation with the private sector; instead, the policies of the Banzer regime aimed at a symbiotic relationship between the public and private sectors. Moreover, and this needs to be underscored, the public enterprises served frequently as a mechanism to transfer state-owned (or state-guaranteed) resources to privileged groups in the private sector. Access

to government officials and government contracts were considered the most important asset from the viewpoint of many private sector businessmen.

On the basis of research in progress, Ugarteche (1986) and Rivas (1986) claim that the main beneficiaries of the public sector external debt accumulated in the Banzer period were private sector supporters of the Banzer regime. Also, public employment was increased substantially between 1971 and 1978: many new public enterprises were created, and the government asserted its monopoly over the developments in the new mining sectors (especially iron), as well as in the commercialization of tin and metals.

In 1975 Banzer announced a five-year development plan. In the summary of the plan given by Malloy and Borzutzky (1982), the following points stand out: (1) the plan’s aim was export-led growth accompanied by selective import substitution; (2) it gave the preponderant role to the public sector, targeting the public sector for 71 percent of total investment spending; (3) it allocated public investment primarily to the production of hydrocarbons; (4) it divided the nation into three investment zones: a primary zone of La Paz–Cochabamba–Santa Cruz, a secondary zone of Oruro–Potosi–Chuquisaca, and a tertiary zone of Beni and Pando, with the share in total investment of the primary zone to be 63 percent; and (5) it paid relatively scant attention to the peasantry.

Most of Banzer’s five-year plan was never put in place. Two factors accounted for the failure to implement the plan. First, the financing of the plan was heavily dependent on Bolivian petroleum exports which failed to materialize. Second, the public administration did not adhere to the guidelines for the allocation of investment, so that many public investment projects were undertaken without due consideration for the investment allocations outlined in the plan. As this practice became common, the plan became wholly unenforceable.

In the SSND and the five-year plan (as well as in the MNR’s 1962 ten-year plan), traditional exports occupy the center stage. In all of these plans, the expansion of traditional exports was deemed to be the “locomotive” of development, with the rest of the sectors of the economy following along. It has to be emphasized that nowhere was the conception of Bolivia as an export economy abandoned in favor of, for instance, import-substituting activities on a large scale. Planners and government bureaucrats did look on an expansion of a protected light manufacturing sector with some sympathy, but they did not think, given the smallness of the domestic market, that this sector could be the engine of rapid economic growth in the near future. Hopes were always placed on growth led by exports of primary commodities.

The model of export-led growth embodied in the development plans that we have discussed differed significantly from the traditional pattern of growth, as well as from the export-led models in the newly industrialized countries (NICs). In contrast to the traditional pattern, based on the export of

a few primary products, the development plans aimed at a more diversified export basket, with the production of commodity-based goods having more domestic value added (e.g., the export of metals instead of mineral ores, and refined sugars and oils instead of the crude varieties). Unlike in the strategy of the NICs, there was little emphasis on the export of manufactures, except for some belated attempts in the context of the Andean Pact market. With the emphasis on petroleum and mineral exports, policymakers placed little importance on exchange rate management to promote new exports or on the deepening of domestic financial markets, though exchange rate and financial policies had played a crucial role in the successful takeoff of the NICs (cf. Tsiang 1986).

The military successors of Banzer, by and large, tried to continue with the state-capitalism model. The civilian governments of Walter Guevara Arze and Lidia Gueiler attempted to follow a somewhat less "statist" course, but their efforts were curtailed by strong political adversities. In 1984 one more attempt was made to develop a plan, with the "National Development Strategy and Four-Year Plan." Three different versions of the plan were offered to the public. Because of the internal squabbles of the coalition partners in the Unión Democrática Popular (UDP) governments in 1984–85 and the high priority given to the inflation problem, no real importance was attached to any of the versions by the government or the public.

### 3.1.1 Public Investment Spending in the State-Capitalism Model

The deficiencies of planning were nowhere more revealed than in the execution of public investment projects. A full evaluation of investments in the very capital-intensive projects has yet to be made. Ideally, information should be gathered for an *ex ante* and *ex post* evaluation of each major project undertaken in the 1970s and up until 1985. Short of that, we may note the following points. First, many large projects responded more to noneconomic factors (prestige, national security, etc.) than to profitability, measured either in private or social terms. Second, grave mistakes were made in evaluating the endowments of natural resources. For example, overoptimistic assessments of oil and mineral reserves led to overinvestment in these industries. Third, the cost-benefit analyses performed before undertaking the projects were either incomplete or were ignored in the implementation phase. Fourth, the large projects were typically financed with expensive suppliers' credits and foreign bank loans. The conditions of repayment were, from the start, likely to create problems in the cash-flow stream. Fifth, when the projects were financed with official loans, delays in disbursements often disrupted the investment schedules. Sixth, the execution of the projects was extremely poor, with frequent but avoidable long delays in deliveries and construction.

Contrary to what occurred in other debtor countries, public investment was largely directed to sectors producing tradables or to physical infrastructure,

and even in the last case, infrastructure served primarily for the production of tradables. The problem in Bolivia was not an excessive allocation of investment to nontradables, but rather the highly inefficient choice and execution of investment projects within the tradables sector. Political and regional pressures, as well as specific vested interests, held great sway over the selection of investment projects and the procurement of construction and supply contracts. Graft, of course, was a very important factor—kickbacks and unwarranted cost overruns were the order of the day.

Several examples illustrate the assertion of investment mismanagement: the uneconomical expansion of the tin smelters of the ENAF company in Vinto; the huge Karachipampa polymetallurgic smelter in Oruro for which there were no minerals; the expansions in oil-refining capacity in Santa Cruz and Cochabamba when oil production was declining at a rapid rate; the refinery for soya oil built close to the Paraguayan border, so far away from producing and marketing areas that transportation costs made it completely unprofitable; the very modern international airport of Viru-Viru in Santa Cruz, with a traffic load of no more than fifteen planes a day in 1987; the high-cost military-run truck assembly plant of Cochabamba; and so on.

Even when some projects could have been reasonably profitable under the right circumstances, cost overruns and technical misjudgments impaired profitability. For instance, the COMIBOL plant for the treatment of low-grade ores in La Palca was planned to be built in two years, yet after ten years it was still unfinished. Similarly, there is the sugar refining mill of Guabira, the abnormally high costs of which were essentially due to poor financial management that systematically delayed the sugar harvest by its suppliers, therefore causing a strong fall in the saccharose content of the inputs.

It is interesting to note that *private* investment projects financed with foreign resources and public guarantees also showed poor performance, and substantial arrears were quickly built up after the loans were made. Loans to private firms that were guaranteed by the public sector institution, Banco del Estado, were used in white elephant projects and had a very low probability of being repaid. Similarly, the foreign loans channelled through the state-owned agricultural bank, Banco Agrícola Boliviano, to large farmers in the eastern lowlands suffered extensive defaults.

### 3.1.2 State Enterprises in the State-Capitalism Model

The public enterprises were, during 1952–85, the main hope for economic development but also the Achilles' heel of the public sector. As was shown before, the size of the Bolivian public sector relative to GDP has been considerable, far above the average in Latin America. Up to 1983, most of the larger public enterprises were able to generate savings in spite of adverse macroeconomic policies (mainly overvalued exchange rates), poor management, and labor indiscipline. Two exceptions were COMIBOL,

which already showed current account losses in 1980 (and chronic overall deficits, when account is taken of investment spending) and the smelting company, ENAF, which had troubles since its inception. For the other firms, however, the savings were usually insufficient to finance capital investment and debt servicing. As a result, the public enterprises were among the main borrowers internationally, as an increasing share of their capital outlays in the 1970s were financed by foreign savings.

For several reasons, however, it is very difficult to evaluate with any accuracy the performance of individual enterprises. There are simply too many distortions in financing and pricing to make such a retrospective analysis feasible. Complex cross-subsidies among the state-owned enterprises distort the measured profitability of individual firms. A case in point is that of ENAF, which was heavily subsidized by COMIBOL. Also, the National Enterprise of Electricity (ENDE) subsidized all the other public companies through low electricity tariffs.

A further complexity in evaluating the state enterprises is the need to place the enterprises in a macroeconomic context, while also taking careful account of trends in the international economy. The net incomes of the state enterprises are much more sensitive to macroeconomic policies than are the profits of private sector enterprises. The temptation to suppress the symptoms of inflation by manipulating the prices of the public enterprises or by delaying a devaluation of the official exchange rate, for example, is a constant danger. Lags during 1982–85 in raising public sector prices (especially petroleum products) and in devaluing the official exchange rate brought heavy losses to the public enterprises. As we shall note in chapter 5, the complete mismanagement of prices of publicly provided goods was an essential feature of Bolivian policymaking in 1982–85.

To help understand the behavioral choices of the state enterprises in Bolivia, it is relevant to introduce here the concept of the *soft budget constraint*, as introduced by Kornai (1986) to explain the behavior of public sector firms in socialist economies. The essential idea is that normal budgetary constraints on a firm's behavior do not hold in socialist economies since the firm's managers know that in case of trouble, the firm will be bailed out by subsidies or credits from the central government. As Kornai points out, this leads to a nearly insatiable demand for public sector credit, since "sooner or later it can expect to be able to cover its costs on input, and if its proceeds on sales of output are insufficient, it will be able to cover costs from an external financial source" (44). Also, state enterprises facing a soft budget constraint lack incentives and sanctions to stick to their production goals and to limits on use of resources.

This situation characterized most state enterprises in Bolivia during the period up to 1985 (and to some extent afterward). During the 1970s, individual firms could borrow internationally on the full faith and credit of the central government. There were few bureaucratic constraints that re-

strained them from doing so, with the result, as we saw in the previous section, of a series of disastrously inefficient and uneconomical investment projects. The problem of soft budget constraints was especially severe during the high-inflation years of 1982–85. It was relatively easy to find ways to escape the budget constraints, for instance by delaying tax payments of the enterprises to the central government, accumulating liabilities and then shifting them to the Treasury, gaining access to heavily subsidized Central Bank loans, or contracting foreign debt beyond their needs when they could.

Many state enterprises also suffered from a confusion of objectives: they were asked to generate profits to be reinvested, as well as to be shifted to other sectors; to generate employment, frequently as a disguised scheme of unemployment compensation; to provide education and health services to workers plus their families; and to act as a retirement fund and as a means to channel subsidies to the general consumer. This multiplicity of objectives impaired their normal functioning, as might be suspected.

Most perniciously, state enterprises were used as a form of political patronage and spoils to bolster the political power base of the government. For this reason, employment in state enterprises increased remarkably rapidly in the 1970s, far outstripping the growth of population and the economy in general. Between 1970 and 1982, state enterprise employment rose at an annual rate of 4.6 percent. Political pressures played an important role in the expansion of jobs during these years. In fact, a nonnegligible part of the support for the Banzer government and the succeeding military regimes was the willingness to create employment in the public sector. The return to democracy in 1982 was also accompanied by a big spurt in the expansion of jobs in the most important public enterprises, particularly in COMIBOL. The distribution of sectoral ministries and public enterprises among the parties in the UDP coalition led to an unrestrained race of political patronage. The patronage of the Communist Party, through the Ministry of Mines that it controlled, was especially notorious.

In the same vein, Rivas (1986), Ugarteche (1986), and many other Bolivian analysts also claim that it was through the mismanagement of public investment projects that the public foreign debt was diverted to private beneficiaries, often with political goals in mind. In this direct way, the public debt financed consumption and capital flight. While the government of Bolivia retained the commitments, the benefits were privatized.

### 3.1.3 The Public Sector as "Shock Absorber" for External Shocks

The public sector was frequently used to absorb, at least temporarily, external shocks hitting the economy. For instance, while YPFB reaped some important benefits and the Treasury substantial taxes from the oil price increases of the 1970s, each of these could have been greater had the government not pursued a policy of heavily subsidizing domestic oil

consumption. The protection of some consumers from the oil shocks was made at the expense of taxes and profits for the oil enterprises. The opportunity costs of this policy were high. Moreover, as some oil products were smuggled out, the subsidies gave much to the *contrabandistas* (smugglers) in addition to the general consumer.

In some cases, not only opportunity costs were incurred but also heavy Treasury disbursements were spent in subsidies.<sup>4</sup> For instance, when world prices of wheat and other grains climbed during 1974–75 and in 1979, domestic prices of wheat were kept constant, with the Treasury making up the difference between import prices and domestic prices. Moreover, the government established de facto price support schemes for some agricultural staples, like sugar and rice. These price support schemes were very costly in years of low international prices and good harvests.

The essential point is that the fiscal sector was used to isolate the economy from external fluctuations. When the shocks were transitory, this policy did not have important consequences. However, as adverse shocks frequently lasted longer than expected, significant debt accumulation ensued. The domestic price repercussions of those deficits went unnoticed as long as it was possible to finance them by borrowing from abroad. The government deficits that resulted from subsidies was one of the channels that led to the financing of consumption with foreign debt.

In some cases, the “shock absorber” function was used for the protection of a very narrow part of the elite. A good illustration is the case of cotton growers in the Santa Cruz region during the Banzer period. Tens of millions of dollars were loaned by the government’s agricultural bank (Banco Agrícola Boliviano) to a small number of large landowners during an incipient cotton boom. The Bolivian producers sold their crops forward on world markets, but then tried to renegotiate when the spot-market prices rose above the forward contract price. They failed in the renegotiations and, in the end, much of the cotton remained undelivered. The growers quietly defaulted on the agricultural bank loans and the government absorbed the losses with no attempt to collect or to foreclose on any property. To this day, the bad cotton loans have undermined the solvency of Banco Agrícola.

### 3.2 The Chronic Weakness of Public Sector Revenues

In Bolivia, the sources of income for the public sector have suffered from extreme fragmentation since the beginning of the Republic. Before the tax reform measures of 1986, there were many central government taxes with as many collecting agencies; local taxes; and taxes earmarked for regional development corporations, the state universities, and for the social security system. In part because of this extreme fragmentation and in part because of notoriously bad record keeping for tax collections, it is hard to make a precise quantitative assessment of the public revenue system.

The combined accounts of the central administration, the social security system, and the so-called decentralized agencies form the central government accounts. If one adds to the account of the central government the accounts of the local governments, this gives the general government accounts. The general government accounts together with the accounts of the nonfinancial state enterprises form the consolidated nonfinancial public sector. Note that transfers between parts of the system are very important for the consolidated nonfinancial public sector. Public enterprises pay taxes to (and on occasion receive subsidies from) the central administration and some local governments. Central administration transfers to the decentralized agencies and local governments are very substantial.

Finally, the quasi-fiscal activities of the financial public sector (i.e., the Central Bank of Bolivia, together with the state banking system) should be consolidated with the nonfinancial public sector accounts to get a comprehensive view of the fiscal activities of the overall public sector. Because of data limitations, this complete consolidation would be virtually impossible for historical data.

The best recorded data for the public sector are found for the account of the General Treasury of the Nation, TGN (Tesoro General Nacional), which handles the accounts for the central administration and which has traditionally been under the jurisdiction of the Ministry of Finance. We now turn to a look at revenues of the TGN.

#### 3.2.1 The Revenues of the General Administration

From 1961 to 1970, central administration revenues amounted to 8.0 percent of GDP on the average; in the next decade this ratio increased to 10.2 percent, with a slight rise in the second half of the decade compared with the first half. The maximum ratio of revenues to GDP of the TGN occurred in 1976 (12 percent of GDP). Data on revenues, expenditures, and the deficit, from Breuer (1988), are shown in table 3.3 for the years 1970 to 1984.

The rise in revenues as a percentage of GNP from the 1960s to the 1970s was due to a determined effort to improve tax administration and to an increase in the tax base because of the expansion in the value of exports during the 1970s. However, after 1979, inflation started to take its toll on the real value of tax collections, in line with the so-called Olivera-Tanzi effect (see Tanzi 1977), which predicts a negative relation between inflation rates and real tax collections. During the high inflation years, the TGN revenues were as low as 2.8 percent of GDP in 1984 (and fell to only about 1 percent of GDP in the first quarter of 1985!). We shall describe in chapter 5 more precisely how the high inflation made a shambles of the Bolivian tax system.

Changes in the structure of the TGN revenues should also be noted.<sup>5</sup> In the 1970s, taxes collected by the internal revenue service amounted to 34 percent of the TGN revenues, while taxes on the foreign sector, mainly

Table 3.3 Budget Revenues, Expenditures, and the Deficit, 1970-84 (as percentage of GNP)

Year	Revenues	Expenditures	Deficit
1970	8.4	9.8	1.4
1971	7.9	10.0	2.1
1972	7.6	10.0	2.4
1973	9.1	10.6	1.5
1974	11.5	11.9	.4
1975	11.3	12.6	1.3
1976	12.0	14.0	2.1
1977	11.5	13.8	2.2
1978	11.4	14.0	2.7
1979	9.4	14.3	4.9
1980	9.6	16.0	6.4
1981	9.4	15.1	5.6
1982	4.6	26.9	22.3
1983	2.6	20.1	17.5
1984	2.6	33.2	30.6

Sources: Breuer (1988), table 5.5, which is based on estimates supplied by UDAPE in the Ministry of Planning, Bolivia.

import tariffs, represented 31 percent on the average. The remaining sources were production taxes on the mining and petroleum sectors, which averaged 31 percent. Property income and services provided by the central government yielded 4 percent of the TGN revenue. By the end of the hyperinflation, however, tax collections on internal income and on international trade had been sharply eroded. Only the taxes on petroleum production could be easily collected in the short term, even after the hyperinflation stopped. Therefore, in 1985, the year that stabilization began, taxes on petroleum represented no less than 64 percent of TGN revenue. We return to this point in chapter 5.

In regard to the composition of internal taxes (more precisely, taxes collected by the internal revenue service and excise taxes on petroleum products), the most important component during the normal years 1975-78 was taxes on consumption and sales. The share of personal income taxes in total internal taxes has never been above 25 percent. The contribution of corporate income taxes was likewise modest, never going beyond 23 percent of internal taxes.

Until the tax reform of 1986, property and road taxes were local taxes collected and earmarked for the municipalities and did not enter the TGN coffers. It is very hard to locate data of good quality for local governments, so only gross trends can be suggested. As happened with the TGN revenues, there was a slight improvement in tax effort during the 1970s, but in the 1980s, property taxes and vehicle taxes suffered very much with high inflation. Not only did lags in payments affect the real value of collections, but property assessments (which were undervalued to begin with) lagged far

behind inflation, so that real property values for tax purposes fell sharply during the high-inflation period. Some municipalities in dire financial straits asked for, and obtained, frequent direct transfers from the TGN. The financing problems of the regional development corporations, the universities, and the social security system were also acute during the high inflation period.

### 3.3 Management of Public Expenditures

The chronic weakness of public sector revenues and the low profitability of public investment spending explain a large part of the overall fiscal disaster in Bolivia in the 1980s. Also important were the dynamics of public sector spending on the current account of the budget (i.e., other than for capital expenditures). The key point here is that debt-servicing costs rose sharply in the 1980s just as the availability of new financing dried up. The government was squeezed by falling tax revenues (due to rising inflation), higher expenditure charges (due to rising interest payments), and an inability to finance the resulting gap (as well as the deficit levels inherited from the 1970s) through foreign borrowing. The result was a turn to the inflation tax.

Unfortunately, there is a profound difficulty in tracing interest payments carefully through the budget since the interest obligations were at various points charged to the state enterprises, the central administration, and the Central Bank. We will be able to review in chapter 5 some data on overall interest payments made to foreign creditors, but without precisely specifying how the spending was allocated among various parts of the public sector.

As in the preceding section, a detailed analysis of expenditures must focus mainly on the TGN because of a lack of information regarding other parts of the state sector. Precisely because of the shifting of various financial burdens among different parts of the state sector, a focus on the TGN is not only incomplete, but may sometimes even be misleading. TGN expenditures as a percentage of GDP were 9.6 percent on average in the decade of the sixties, 12.2 percent in the seventies, and 16.7 percent from 1981 to 1985. The evolution of overall expenditures was shown in table 3.3. The large increase in overall spending after 1981 is mostly accounted for by a rise in debt-service expenditures and in transfers to financially strapped state enterprises.

The composition of the TGN expenditures for selected years is shown in table 3.4. Note that in the 1970s, personnel expenses were generally about half of the total. In 1982, however, interest costs on the foreign and internal debt rose sharply, and payments to the Central Bank, also apparently related to foreign debt, accounted for about two-thirds of overall expenditures. In 1984, interest costs fell sharply as Bolivia suspended payments on the commercial bank debt.

Was the central government profligate between 1970 and 1985? A key indicator of profligacy is the increase in employment.<sup>6</sup> Employment in the



**Table 3.4** Structure of Expenditures in the Central Government, 1970–84  
(as percentage of total expenditure)

	1970	1976	1980	1982	1984
Personnel	54.1	42.4	46.4	20.8	59.7
Materials	1.4	6.3	7.3	3.0	5.5
Transfers	16.3	16.6	11.6	10.0	19.8
Debt service	13.6	2.1	16.3	26.8	7.6
Payments to Central Bank	.0	.0	.0	40.7	.0
Other	14.6	22.7	18.4	4.1	7.6
Total	100.0	100.0	100.0	100.0	100.0

Sources: Data refer to central government (TGN) and are based on the data given in table 5.4 of Breuer (1988), which in turn were provided by UDAPE in the Ministry of Planning, Bolivia.

central administration increased by 92.4 percent between 1970 and 1982, yielding an average annual rate of growth of 5.6 percent. This rate of growth was well above that of the urban population and of GDP, with the main increases occurring between 1970 and 1976. We know from the political analysis that succeeding administrations used patronage as a way to cement patron-client relations, and thereby build a political base of support. It does indeed seem that the result was a profligate and inefficient overextension of public sector employment.

Expenditures on investment that were on average around 2 percent of GDP during 1976–79 fell to around 0.3 percent during the crisis years of 1981–85. Since central government investment expenditure is mainly on social overhead, the impact of its substantial reduction has important repercussions on income distribution and on growth. The fall in this particular type of investment will have long-lasting effects, the magnitude of which has not yet been fully appreciated.

## 4 Trade Policies, 1970–85

It should be recalled from our overview in chapter 1 that the long-run growth of the Bolivian economy has been critically determined by the exports of primary commodities, mainly tin and natural gas. Bolivia's economy depends crucially on the performance of the export sector. In turn, shifts in indebtedness have coincided, procyclically, with the export cycle. Bolivia's dollar export earnings during 1970–88 are shown in table 4.1.

Export earnings and, by extension, the domestic economy have been greatly affected by the instability of Bolivia's export prices. As a result, policymakers have focused on measures to stabilize and improve Bolivia's

**Table 4.1** Export Earnings, 1970–88 (in millions of U.S. dollars)

	1970	190.4	1980	942.2
1971	181.6	1981	912.4	
1972	201.3	1982	827.7	
1973	260.8	1983	755.1	
1974	556.5	1984	724.5	
1975	444.7	1985	623.4	
1976	563.0	1986	545.5	
1977	634.3	1987	518.7	
1978	627.3	1988	542.5	
1979	759.8			

Source: IMF, *International Financial Statistics*.

terms of trade, particularly with respect to tin. These measures have been pursued mainly by participation in international stabilization agreements on tin and by lobbying to forestall sales of this commodity by the industrial countries. In regard to natural gas, the trade policy has been much more passive.

Many domestic economic policies have affected the development of Bolivia's foreign trade performance in recent years. Some of the policies were particularly harmful and played an important role in the severity of the crisis in the 1980s. In part because of adverse trade policies and in part because of adverse terms-of-trade shocks that were out of Bolivia's control, Bolivia suffered one of the sharpest declines in Latin America in the purchasing power of exports (PPX) between 1981 and 1988, as shown in table 4.2.<sup>1</sup> In this chapter, we review the main trade policies and their effects on trade performance. Particular attention is paid to exchange rate management. The structure of tariffs and the taxation of natural resources are also examined. The important question that underlies the whole chapter is why, despite a high dependency on exports, Bolivia's long-run export performance has been so poor.

### 4.1 Export Policies

Bolivia's export policies during 1961–81 were primarily aimed at strengthening or at least stabilizing Bolivia's terms of trade in the major commodity markets.<sup>2</sup> From 1982 to 1985, little attention was paid to trade policies given the overwhelming problems of internal stabilization.

By far the most important scheme of price stabilization was provided by Bolivia's participation in the International Tin Agreements (ITA). Five agreements were signed—1956, 1961, 1966, 1971, and 1976—but Bolivia did not join in signing the last one in 1976, in protest against price targets that it regarded as too low. In the 1970s, agreements of lesser scope were also signed for tungsten and antimony, other important mineral exports of Bolivia.

Table 4.2 The Purchasing Power of Exports (PPX) in Bolivia and Selected Countries, 1988 (1980 = 100 for all indices)

Country	PPX, 1988	Export Volume	Terms of Trade
Bolivia	57	69	89
Argentina	102	131	79
Brazil	167	197	86
Chile	156	158	101
Colombia	152	174	90
Ecuador	103	159	67
Mexico	139	228	62
Peru	75	71	108
Uruguay	148	130	116
Venezuela	56	106	55

Source: Economic Commission for Latin America and the Caribbean, United Nations (ECLAC), "Preliminary Overview of the Latin American Economy, 1988" (3 January 1989); table 8, export volumes; table 10, terms of trade; and table 12, purchasing power of exports. As explained in endnote 1 to this chapter, the PPX should equal the product of the export volume index and the terms-of-trade index. This is only approximately true for the data shown, apparently because of the differing coverage of goods in the three indices reported by ECLAC.

The ITAs were agreed upon by the main tin producing and consuming countries, with the exception of the United States. The governing body of the ITA is the International Tin Council (ITC). The main, but not the only, instrument for achieving the price stabilization objective was a buffer stock of tin metal financed by the producing members. In negotiations for the five agreements, Bolivia, which had the highest production costs among the producing countries, lobbied systematically for higher floor and ceiling prices than those set by the ITC. Other producers did not follow Bolivia, feeling that a long-run policy of high prices would backfire on them. Time proved them right.

There is considerable controversy over the workings of the ITC and of the buffer stock. For example, there was a problem with the small size of the agreed-upon stock. In fact, the buffer stock became irrelevant in the booming market of the 1970s. Moreover, the buffer stock could hardly cope with the most important destabilizing factor in the tin market, namely, the huge strategic stockpile of tin held by the U.S. General Service Administration (GSA). In the 1980s, the ITC held prices that were much too high instead of allowing a smooth accommodation to the weaker market conditions. High prices induced the entry of new producers in the market and hastened the process of technological substitution with other metals and materials. In addition, the financing of the buffer stock became a problem. This conjunction of an excessively high price with financing problems led to the collapse of the tin agreement in October 1985 and the collapse of tin prices from \$5.60 per pound on the eve of the collapse to \$2.55 per pound in July 1986, nine months later. The October collapse had a stunning effect: the buffer stock declared insolvency and the London Metal Exchange ceased trading in this metal. The

evolution of the real price of tin (relative to the unit value of imports of the developing countries) was shown in figure 1.2 in chapter 1, in which the collapse in October 1985 is plainly evident.

Besides the problem of price stabilization, the production and export activities of the mining sector during the 1970s were adversely affected by onerous tax legislation, which was somewhat eased after 1979. The mining sector was subjected to two main types of taxes: a *regalía*, which was initiated in 1965, and an export tax imposed with the devaluation of 1972. The *regalía* is a tax on presumed income, given that the nominal base of the tax results from the difference between world mineral prices and a presumed cost set by the Bolivian Ministry of Mines. Since presumptive costs changed infrequently, the *regalía* functioned in fact as a tax on the gross value of output. The *regalía* overtaxed the mining sector, and particularly the weakest enterprises, in years of low mineral prices, whereas it failed to fiscally appropriate the rents that were generated in years of rising mineral prices (Gillis 1978). Moreover, tax codes did not encourage investment in mineral exploration and development.

Petroleum was a major export in Bolivia. But after 1973, with the rise in domestic consumption and the progressive depletion of reserves, the amount left for exports decreased substantially, and Bolivia ceased to be a net petroleum exporter in 1977. The systematic domestic underpricing of petroleum products encouraged the demand for both domestic consumption and for contraband exports, which hindered a sensible development of petroleum exports and appropriate tax revenues. In addition, petroleum production and exports have been subjected to punitive taxation and this, too, has had long-run costs in discouraging supply.

Bolivia has important deposits of natural gas. In fact, the export prospects for energy lie mainly in natural gas. Exports of gas to Argentina have been a very important source of foreign exchange. In the 1970s, gas exports were already marred by controversies about price, and these controversies have gained in intensity in the last years. Unfortunately, pricing principles were not clearly established when the gas pipeline to Argentina was put into operation in 1972. A negotiation during the 1970s between Bolivia and Brazil to export natural gas to Brazil did not succeed because of domestic political opposition to sales of the "national patrimony" to Brazil. These negotiations have been resumed under the New Economic Policy begun in 1985.

In 1977 the Bolivian government decided to subsidize nontraditional (or minor) exports, including selected agricultural products and manufactures. The Law of Fiscal Incentives of 1977, and its reform in 1982, for nontraditional exports included exemptions from all export taxes as well as from import duties for inputs into exports and a tax rebate certificate granted to the exporters. The certificate, which amounted to between 10 and 25 percent of the FOB value of exports, could be used to pay taxes on income,

sales, or imports. It could also be sold freely for use by other exporters. The tax certificate was a direct subsidy that partially compensated an increasing overvaluation of the peso.

An *ex post* evaluation of export policies demonstrates that these policies were not always clearly stated, nor were their effects fully appraised. It is clear that with respect to traditional exports, fiscal measures were generally inimical to a long-term increase in supply. The fiscal system focused on expropriating economic rents—a legitimate objective, of course—more than on encouraging the opening of new mines or the drilling of new wells. In regard to the promotion of nontraditional exports, it is possible to make two appraisals. First, the scheme of 1977 (and the reform of 1982) was subject to considerable abuse, without really leading to increased incentives for more exports. Second, the exportable products that benefited from this export promotion policy constituted less than 5 percent of the value of all exports. In fact, the emphasis on fiscal measures obscured the fact that domestic firms and industrialists first had to learn how to improve their production and merchandising methods. Thus, it appears that more effective forms of encouraging nontraditional exports could have been sought.

## 4.2 Import Policies

Major import tariff reforms took place in 1967, 1973, 1982, 1985, and 1986. Before the changes of 1985 and 1986, the most important was the reform in 1973, which had been distorted with piecemeal changes in the tax rates but which nonetheless affected the schedule in significant ways. A very important feature of the tariff structure in place until 1985 was the existence of preferential tariff provisions for (1) commodities, according to the final use to which they were put; (2) goods used in the northwestern regions of the country; and (3) goods coming from countries with which Bolivia had (and has) economic agreements for bilateral reductions in tariffs.

Examples of preferential tariffs of the first type were the special provisions for imports for the mining and petroleum sectors and the exemptions accorded by the Investment Laws of 1972 and 1981. Preferences of the third type included the Bolivian Lists of Tariff Concessions to the member countries of the Latin American Free Trade Association and the Andean Group. These provisions for preferential tariffs affected an important proportion of Bolivian imports. Depending on the year, the value of imports subject to the preferential rates ranged between 25 and 35 percent of total imports.

Considerations of government revenue and exigencies of the balance of payments (i.e., the need to constrain the fall of reserves in the context of a pegged exchange rate) prevailed over the view of using tariffs (and other import policies) as effective tools for guiding industrial policy. The piecemeal changes eroded the original intentions of coherent and limited protection in

the 1973 reform and in subsequent tariff changes. While one could find economic reasons to justify the distinct tariff rates in the reforms on protection and revenue grounds, the piecemeal changes introduced a high degree of dispersion of the tariffs, reflecting *ad hoc* considerations with little economic justification.

Frequent changes were often brought about by the pressures of special interest groups of industrialists and importers. Before 1986, tariff duties, as is to be expected, were high on luxuries and competitive consumer goods and exhibited significant variation. On the other hand, tariff rates for capital goods were very low. Duties on raw materials and intermediate goods, which are necessary for domestic manufacturing and hence could be treated in a manner like that for capital goods, were, however, quite variable.

The effective rate of protection is better than the nominal tariff rate as an indicator of the extent to which a particular set of tariffs protects domestic producers. Table 4.3 shows the effective rates for selected products prevailing in the second half of the 1970s. It is clear that there is considerable variation among the effective rates. Note that effective rates have also been computed for imports subject to quantitative restrictions by finding the implicit tariffs involved, which were calculated as the relative difference between international and domestic prices. This procedure was used as well in the case of prohibited imports.

More specific conclusions can also be drawn from the data in table 4.3. First, the high protection provided by the import bans stands out. Apart from the case of import prohibitions, the most important characteristic that appears in the structure of effective protection is the high effective rates for goods considered luxuries. The effective rates are considerably higher than the already high nominal tariff rates. Second, it is clear that there is high effective protection for domestic production. In the cases of goods subject to import bans there is complete protection, but this is also true in many cases which are only subject to tariffs. Third, most intermediate products for industrial usage have low (or even negative) effective rates, which are generally very close to the nominal rates. Fourth, the effective rates for capital goods are close to the nominal rates; however, in many cases the effective rates are negative.

Quantitative restrictions, including prohibitions, were used along with tariffs to limit imports during 1970–82, but their scope was reduced during the decade. In 1978 less than 2 percent of the Brussels Trade Nomenclature was subject to prohibitions. During the crisis years of 1982–85, many luxury and competitive imports were banned for balance-of-payments purposes (around 10 percent of the items of the Brussels Trade Nomenclature).

Smuggling has greatly limited the application of tariff and quota policies and has substantially hurt government revenues. Once again, the expansion of smuggling was a symptom of the increasing administrative weakness of

**Table 4.3** Bolivian Nominal Tariffs and Effective Rates of Protection by Industry  
(31 December 1977)

	Mean	Standard Deviation
<i>A. Summary statistics for a list of 337 groups of commodities</i>		
Nominal tariff	38.9%	28.0%
Effective rate of protection	74.4%	97.5%
Simple correlation between nominal and effective rates = 0.88		
Rank order correlation between nominal and effective rates = 0.88		
	Nominal Tariff	Effective Rate of Protection
<i>B. Indices for selected items within this list</i>		
Livestock products	.17	.14
Chemical & fertilizer mineral products	.27	.38
Butter	.81	4.83
Cheese	.67	2.33
Canned fruits & vegetables	.62	1.81
Flour mill products	.29	.77
Bakery products	.42	.58
Processed tobacco	.97	4.21
Carpets	1.18	5.83
Lace products	.91	1.88
Jersey fabric	.71	2.15
Carpeting products	1.13	2.33
Premanufactured wooden structures	1.12	2.36
Papers for sanitary use	.67	1.67
Pharmaceutical preparations	.17	.19
Paints, inks, & dyes	.36	.65
Leather	.65	1.72
Soles and other shoe components	.97	1.89
Mining machinery	.07	.05
Steel structures	.32	.49
Hand tools	.24	.30
Farm machinery, except tractors	.11	.09
Textile industry machinery	.09	.01
Industrial furnaces	.10	.05
Business & office machines	.38	.53
Domestic kitchen appliances	.48	1.03
Washers	.79	2.54
Fans & other domestic appliances	.76	2.24
Domestic refrigerators	.37	.61
Trucks	.93	2.82
Household radio & TV sets	.53	.91
Motorcycles, bicycles, & parts	.43	1.30
Wood furniture for homes	.94	1.60

Source: Morales, Ulloa, and Jimenez (1978), table 7.

the public sector. Although there are no good data for this illegal activity, a fair guess for the late 1970s was that contraband imports constituted around 20 percent of legal imports. The expansion in contraband imports after 1978 is also related to the laundering of dollars earned in the drug trade.<sup>3</sup>

### 4.3 Economic Integration

Bolivia has adhered to two main economic integration schemes, the Latin American Free Trade Association (LAFTA), which later became the Latin American Integration Association, and the Andean Group, as well as to a host of other organizations of economic cooperation with less ambitious aims.

Bolivia joined LAFTA in 1966 and was given a relatively less developed country status with preferential treatment that consisted essentially in postponing dates for the implementation of tariff reductions and dismantling nontariff barriers. The direct benefits of Bolivia's association with LAFTA were virtually unnoticeable. Bolivian exports to the countries consisted mainly of petroleum, natural gas, and minerals. These exports, however important, would have taken place anyway, with or without LAFTA membership. Bolivian imports of manufactures from LAFTA grew at a very fast pace, but this expansion can hardly be attributed to its participation in the organization.

The apparent failure of LAFTA, at least from the viewpoint of the relatively more poor Andean member countries, led to the formation of the Andean Group with the signing of the Cartagena Agreement in May 1969. The Andean Group integration scheme had two main instruments: (1) a customs union, and (2) a joint mechanism of investment programming for a list of goods for the Sectorial Industrial Development Program (SIDP). In addition, in order to counteract the adverse effects that these instruments might unintentionally provoke, the Andean Group countries agreed upon a set of measures to harmonize other policies that affected trade and agreed to set common policies for the treatment of foreign private investment.

Bolivia was again given a relatively less developed country status in the group, along with Ecuador, and both were accorded preferential treatment for the two main instruments and subordinate policies. Economic integration within the Andean Group created considerable hope among Bolivian policymakers, who thought that it would provide the big push necessary for Bolivian industrial development with the incentive of a large market for manufactures. Bolivia, therefore, enthusiastically supported the Andean Group at the outset.

By 1978 there was considerable disillusionment with the workings of the Andean Group among government officials and industrialist organizations in Bolivia. From their point of view, the benefits of integration seemed rather scant and the costs were presumed to be high. The fact that the whole

Andean Group entered into a state of crisis contributed to the problem. Chile, with the most healthy of the Andean Group economies, in fact withdrew from the group in the mid-1970s under the policy of the Pinochet regime. The Andean Group has continued in prolonged crisis, a crisis which deepened markedly with the international economic turmoil of the 1980s.

In the aftermath of the hyperinflation, with public policies dominated by the need to consolidate the stabilization, Bolivia's participation in the Andean Group and in all the other integration schemes is almost dead. Notwithstanding this, the collapse of the markets for traditional exports may inspire Bolivian policymakers to seek some fresh approaches to economic integration, especially with Brazil and Argentina, which represent large potential markets for light industrial exports from Bolivia.

#### 4.4 Exchange Rate Policies

Between 1957 and 1982, Bolivia followed a regime of unified pegged official exchange rates. The abundance of credits from 1957 until the late 1970s allowed the government to maintain a fixed exchange rate without the need to resort to explicit foreign exchange rationing, and thus prevented the development of a parallel market with significant premiums. Between 1957 and 1979, the exchange rate showed a surprising stability: only once, in October 1972, was the peso devalued. After the drying up of foreign inflows in the early 1980s and with the resistance of the government to undertake timely devaluations, the economy operated with what was in effect a dual exchange rate: an overvalued and rationed official rate and a floating, parallel (sometimes illegal) rate. After 1985 the exchange rate was again unified and operated as a managed float.

On some occasions during the 1960s and 1970s, foreign exchange reserves fell significantly, prompting policy measures to avoid an outright devaluation through hidden or explicit rationing of foreign exchange. Various temporary trade policy instruments were used for this purpose. On at least two occasions, a uniform increase in import tariff rates was used as a substitute for devaluation from the import side: in 1969, an almost uniform surtax of 10 percent was levied on all imports; in 1975, another surtax of 3 percent was created. Export subsidies for minor exports were also used to compensate for overvaluation in 1977. However, the percentage of trade that benefited from those subsidies was very small.

As mentioned in section 4.2, quantitative restrictions were also used for balance-of-payments purposes. For instance, in 1969 the restoration of external equilibrium was obtained with temporary prohibitions on the imports of automobiles and of luxuries. A new tool in the kit of import controls was introduced in 1976 in the form of prior import deposits.<sup>4</sup> It is important to note that these deposits were both a monetary measure and a tariff-like regulation raising the cost of imports. Because of both features,

they were initially very effective in curtailing imports. However, to the extent that importers could roll over their deposits, the monetary contraction aspect was lost, except when there were increases in the level of imports.

Thus fiscal and, to a lesser extent, monetary measures were used to avoid open devaluations of the peso in the 1960s and the 1970s. In accordance with the spirit of the times, devaluation was viewed as a declaration of failure in economic policymaking. General Banzer, who had to go through a devaluation in 1972, paid the costs, political and otherwise, of very painful adjustments in the economy distributed over more than a year after the devaluation. Although never publicly declared, a widely held opinion in government circles at the time was that the boom in export prices in 1973-74 saved Bolivia from a string of further devaluations.

The devaluation of 1972 deserves some additional attention. Since the end of 1969 when the assets of the Bolivian Gulf Oil Corporation were nationalized, pressures on the peso had been building up. In 1970 the government decided to impose some mild administrative regulations on the convertibility of the peso; for instance, requiring a full registration in the Central Bank of demanders of foreign exchange.<sup>5</sup> These regulations were not sufficient to avoid the drain on foreign exchange reserves of the Central Bank. By the end of 1972, it became clear that a devaluation was unavoidable. The IMF was called for consultations, and Bolivia applied for a standby loan. The peso was devalued by 40 percent, and some public sector prices, as well as interest rates on savings deposits, were increased. Workers obtained a uniform compensation of \$b 135, equivalent to U.S. \$7 (1972 dollars), at the new rate of exchange. After the devaluation, many prices were subject to controls and fixed at their pre-devaluation levels. Some of the prices were revised upward only in October 1973 and the rest in January 1974. Strong excess demand conditions made the revisions unavoidable.

In table 4.4 we show how the peso incurred a significant real appreciation vis-à-vis the U.S. dollar during 1973-84. The relatively long period of overvaluation had important implications for resource allocation. In the mining sector, the combination of overvaluation plus punitive taxation shifted resources from there to the nontradable manufacturing sector and the service sector. Overvaluation also encouraged the expansion of the very capital-intensive activities of tin smelting and oil refining. Traditional exports and nontraditional ones, such as commercial agriculture, suffered.

If overvaluation hurt exports, one may wonder why the issue was not debated more fully at the time or why there was not a significant lobby to push for a devaluation. The following reasons may be hypothesized. First, oil and mineral exporters can usually live with overvalued exchange rates until the rates are severely misaligned. Given their cost structure, exporters usually place more emphasis on lessening the weight of direct taxation than on the exchange rate to maintain their after-tax profitability. Second, the high

Table 4.4 The Real Exchange Rate in Bolivia, 1970-84

Year	Index (1970=100)
1970	100.0
1971	95.9
1972	88.3
1973	75.7
1974	110.3
1975	110.6
1976	109.2
1977	109.0
1978	113.0
1979	121.2
1980	125.6
1981	146.9
1982	125.7
1983	125.0
1984	164.6

Source: IMF data. Note: The index is constructed as  $P/EP$ , where  $P$  is the Bolivian consumer price index,  $E$  is the exchange rate (pesos per dollar), and  $P$  is the U.S. CPI. For each year, annual averages are used for the three indexes. Note that  $E$  is the official exchange rate; in the 1980s there was a large and persistent gap between the official exchange rate and the parallel market exchange rate.

prices for the main exports, well above previous trend, concealed the need to correct the exchange rates. Although profit margins in the exporting sector decreased with overvaluation, they were still very high in mineral, oil, and gas exports.

It was not fully realized that overvaluation hindered the expansion of *potential exports*. Since no significant actual exports were greatly damaged by overvaluation, no political lobby was established to gain a better price for the dollar earned in the exporting activities. Also, hopes for exports of manufactures were riding on the Andean Group market, and little attention was paid to the development of other markets. Markets in the Andean Group were protected by a relatively high common external tariff, while trade liberalization within the group benefited mainly noncompetitive imports from the partner countries. In those circumstances, overvaluation, if not severe, was not the major hindrance for export promotion of manufactures to the protected market. In the event, however, that market turned out to be much too limited to support much manufacturing export activity in Bolivia.

The hypothesis that overvaluation constituted a fiscal measure to extract resources from the hard-to-tax public enterprises also has to be taken into account. The weakness of the central government *vis-à-vis the public enterprises*, and especially the inability of the central government to tax the state enterprises directly, may explain one attraction to overvalued exchange rates. Such rates permitted the transfer of resources from the exporting sector, formed mainly by public enterprises, to the nonexporting public sector, formed mainly by the central government.<sup>6</sup>

The abrupt reduction in net foreign reserve flows in 1982, combined with the underlying budgetary disequilibrium, at first caused a rapid loss of

reserves and a collapse of the fixed exchange rate regime in March of that year. The collapse was followed by a dual market with a fixed official rate for a handful of transactions and a floating rate for all other transactions, either of current account or capital account. Unexpectedly for the public authorities, the exchange rate depreciated very rapidly in the parallel market, causing an upsurge of inflation. The difficulties of managing the exchange rate during the high-inflation period and the unification of rates at a realistic level with the stabilization program of August 1985 are discussed more completely in chapter 5.

#### 4.5 Capital Flight

The overvalued exchange rate and lax management of the public sector contributed to widespread capital flight in the 1970s and 1980s. Ugarteche (1986) and the World Bank (1985) give some estimates of capital flight based on the "errors and omissions" account in the balance of payments.<sup>7</sup> The average annual capital flight is estimated to have been as follows (in millions of U.S. dollars): 1971-75, \$77.3 (4 percent of the 1975 GDP); 1976-81, \$216.9, (6 percent of the 1981 GDP); and 1982-83, \$106.2 (3 percent of the 1983 GDP). Bank deposits held by Bolivians in banks in the United States were estimated to be on the order of \$400 million in 1985, amounting to around 10 percent of GDP. This is an extremely conservative estimate of offshore bank accounts, especially in view of the fact that it is easy to hide foreign ownership of bank accounts and since many accounts are held in non-U.S. banks.

What were the forces behind capital flight? We have already mentioned that overvaluation coupled with expectations of devaluation is an important explanatory factor. In addition, three other factors deserve to be mentioned. First, illegal transfers to private individuals resulting from the mismanagement of public sector investments were likely to be exported to safe havens abroad. Similarly, subsidized loans, diverted from their intended uses, were placed in assets abroad where they could not be seized by the debt collectors. Second, fears of expropriation or of controls on the free movements of capital have motivated a substantial portion of capital flight. In this regard, one of the most negative effects of the dedollarization measure of 1982 was its impact on capital flight, since individual savers were left with an unsatisfied demand for deposits in the domestic banking system and had to look abroad for a safe vehicle for their savings.<sup>8</sup> Third, earnings from the coca trade have surely generated extensive capital flight, largely for non-macroeconomic reasons.

#### 4.6 Conclusions on Poor Export Performance

It is clear from our survey of trade policies in Bolivia that relatively little careful policy attention was given to the promotion of Bolivia's export

potential. Traditional exports were seen as offering rents that could be distributed to other parts of the economy. Nontraditional exports were hindered severely by an inadequate exchange rate policy and by a range of fiscal incentives which really did not have much effect on the margin in the incentives to produce nontraditional exportables. Public investments in the tradable sector, as discussed in the previous chapter, generally were unprofitable and socially costly. They were motivated more by political considerations and easy foreign credit, rather than by a careful cost-benefit analysis. Finally, unwarranted policy hopes were held for export promotion within the context of regional integration schemes, particularly the Andean Pact. These regional schemes proved to be superfluous for Bolivia, not only because the target market remained very small even after integration, but also because the Andean countries almost all descended into deep crisis in the 1980s.

## 5 Aspects of Foreign Debt Accumulation, 1952–85

As was shown in table 1.8, Bolivia has depended significantly on foreign savings to finance gross capital formation since the late 1950s. The bulk of that foreign financing has come in the form of medium- and long-term (MLT) loans to the public sector, which is the category of capital inflow that we will examine in this chapter. Unfortunately, it is difficult to study the foreign debt of the Bolivian private sector because of a lack of adequate data, though available information suggests that the debt of the public sector is indeed by far the dominant form of external indebtedness.<sup>1</sup> It should be mentioned, however, that private nonguaranteed debt increased very rapidly in the crucial subperiod 1978–82, just preceding the extreme macroeconomic crisis. The measured short-term debt remained fairly constant over time, but the quality of the data on this type of debt prevents us from drawing any firm conclusions. The frequent shifts in the classification of the debt because of reschedulings, arrears, and the assumption of the debt of one sector by another during the past several years makes the analysis even more difficult.

An historical view of Bolivia's borrowing can help to discriminate among the different factors responsible for the debt crisis. Bolivia had access to loans from official multilateral sources and from governments since the final years of the 1950s. These credits had a concessional element, the size of which decreased significantly over time. Already by the first half of the

1960s, Bolivia had a debt-GNP ratio in excess of 30 percent and by 1970, a debt-GNP ratio of over 40 percent, as we see in table 5.1. The innovation in the 1970s was Bolivia's renewed access to financial markets from which it had been cut off after defaulting on its public sector bond debt in 1931. This led to a marked shift in the structure of the debt, as is shown in table 5.2, from official sources to private sources, particularly to banks. The share of bank debt soared from 2.3 percent of the total to 38.9 percent in 1981.

The first incursion of the commercial banks into lending to Bolivia in recent history occurred in 1972 when the government received credits from Citibank, Swiss Bank Corporation, and the Bank of America to compensate foreign owners of those firms nationalized by President Torres (see Ugarteche 1986, 150, and the references therein). Other credits with very expensive borrowing terms followed. There was also a significant rise in suppliers' credits.

In 1977 Bolivia was still in good standing with the international banks, but the spillover effects of problems elsewhere in the developing world had negative repercussions on borrowing terms, resulting in shorter-term loans and higher-risk premiums. By 1980 Bolivia faced a severe debt problem that had not yet been resolved by the end of the 1980s. The problems with the commercial banks are the gravest, but are not the only critical aspect of the debt crisis. In the early 1980s, the military regimes in Argentina and Brazil gave short-term financing to the generals in Bolivia. In 1983 this short-term debt was refinanced into a longer maturity, thereby sharply increasing the MLT public debt. This explains why, while net capital flows were negative in 1983, there was a sharp increase in measured MLT debt.

If one looks at the conventional measures of overall indebtedness (see table 5.1), MLT public debt relative to GDP was already high in the 1960s. Indeed, the ratio of MLT public debt to exports in the 1960s and early 1970s was actually above the average ratio between 1974 and 1977. But, as we should like to stress, this observation neglects the fact that the nature of

Table 5.1 Debt Indicators, 1970–87 (public and publicly guaranteed debt)

Year	Debt-GNP Ratio	Debt-Export Ratio
1970	48.2	231.9
1975	48.6	166.6
1980	77.0	214.5
1981	88.0	272.1
1982	93.8	313.4
1983	111.8	367.0
1984	111.9	401.8
1985	107.7	478.7
1986	105.1	596.1
1987	110.8	743.4

Source: *World Bank Debt Tables*, (New York: Oxford University Press), 1988–89 edition.

Table 5.2 Structure of Medium- and Long-Term Debt, 1970-85 (proportion of total debt outstanding and disbursed)

	1970	1975	1980	1985
Official creditors	56.7	60.0	51.5	59.9
of which:				
Multilateral	5.4	13.8	22.1	21.7
Bilateral	51.3	46.1	29.4	38.2
Private creditors	43.3	40.0	49.5	40.1
of which:				
Commercial banks*	17.3	25.6	42.1	37.3
Suppliers	9.8	8.4	6.4	2.8
Other	16.2	6.0	1.0	.0
Total	100.0	100.0	100.0	100.0

Source: World Bank Debt Tables, 1988-89 edition.

\*This category is "private financial markets," and includes a small amount of bond debt not held by commercial banks.

Bolivia's debt had changed decisively, with a sharp increase in the share of debt owed to foreign commercial banks, a point that can be seen clearly in table 5.2.

In part because of this change, the indicators of debt servicing (as opposed to indicators based on the stock of debt) suffered a persistent deterioration over time, as can be observed in table 5.3. It should be noted that the figures on interest service understate the contractual debt burden because they are based on *actual payments* and not on *payments due*, and since the portion of interest in arrears is very important, especially in the 1982-85 subperiod. The increasing debt-service ratios reflect the change in the nature of indebtedness and, more precisely, the shift from debt with a large concessional element toward debt on market terms, in a situation in which market interest rates were rising sharply. The debt-service indicators relative to export of goods and services worsened progressively in the 1970s, compared to the values at the very beginning of the decade.

In sum, Bolivia's creditworthiness improved very significantly in the first half of the 1970s, if creditworthiness is defined as access to market lending. The extraordinary upsurge of exports (and its effects on real GDP) in the 1970s created an illusion in regard to the long-run economic prospects of a country that had been, before this event, very dependent on foreign aid and loans with highly concessional terms. By 1980, however, that illusion had been shattered. Bolivia's creditworthiness disappeared once again, and Bolivia found itself in a debt-rescheduling exercise with the banks, two years before the outbreak of the global debt crisis.

### 5.1 The Nature of Borrowing by the Public Sector in the 1970s

The big push for debt accumulation appeared between 1975 and 1980, as can be seen in table 5.4. Who were the beneficiaries of the growing external

Table 5.3 Debt-Service Indicators, 1970-87 (public and publicly guaranteed debt)

Year	Debt Service-Export Ratio	Debt Service-GNP Ratio
1970	11.3	2.3
1975	15.3	4.5
1980	27.9	10.0
1981	27.7	8.9
1982	31.5	9.4
1983	32.2	9.8
1984	36.4	10.1
1985	34.2	7.7
1986	23.7	4.2
1987	22.1	3.3

Source: World Bank Debt Tables, 1988-89 edition.

Note: The data refer to total debt servicing on medium- and long-term public and publicly guaranteed debt.

Table 5.4 Debt Outstanding and Disbursed, Medium and Long Term, 1970-85 (in millions of U.S. dollars)

Year	Debt Outstanding and Disbursed (in millions of U.S. dollars)
1970	480
1975	824
1980	2,228
1981	2,765
1982	2,861
1983	3,279
1984	3,386
1985	3,484

Source: World Bank Debt Tables, 1988-89 edition.

debt? Among the public enterprises, the state oil company, YPF, was probably the major recipient, followed by the smelting company, CMK (Complejo Minero Karachipampa), and the state mining company, COMIBOL. Loans contracted by the specialized state banks, with public sector guarantees, were channelled to the private sector producers. The stock of debt owed by the central government also grew very rapidly between 1975 and 1979. The big increase between 1979 and 1981 was caused essentially by a transfer of a debt from COMIBOL (and other less important enterprises) to the TGN.

The important question, of course, is why the Bolivian government increased its indebtedness so rapidly at the end of the 1970s. As was discussed in earlier chapters, the data suggest that most of the debt was related to the rapid growth of public investment projects, which in turn were linked to a complex of political and economic factors. We have identified several of those factors at length in earlier chapters, including (1) the very short time horizon of Bolivian governments; (2) the use of state enterprises as a vehicle for political control; (3) the use of state enterprises as a conduit for channelling public money to favored parts of the private sectors; (4) the soft budget constraint of the state enterprises, which reduced the incentives



to monitor investment projects; (5) the overvaluation of the exchange rate, which led to a misallocation of investment spending into highly capital-intensive projects and which increased the budget deficits of the public enterprises; (6) the use of state enterprises as buffers for macroeconomic shocks; and so forth. And as we have seen, the mega-investment projects of the public sector in the end failed to pay the necessary returns.

In addition, there was certainly a misjudgment about the country's true macroeconomic situation, as well as a failure to predict (along with the rest of the world!) the sharp swings that were to take place in the international economy at the end of the 1970s and the early 1980s. One part of the misjudgment came from the fact that Bolivia's strong economic performance in the 1970s reflected a temporary terms-of-trade improvement and the effects of the foreign loans themselves, rather than a true underlying improvement in the economy. The annual average terms of trade of 1976–80 was 22 percent higher than the average in 1971–75. This meant a positive real income effect of terms-of-trade change of 6.2 percent of GDP for the second half relative to the first one. This improvement turned out to be temporary, though the borrowing behavior implicitly assumed that it was permanent.

With respect to the international environment, the low real interest rates on international loans were perceived to be permanent, when of course they turned out to be temporary. As stressed by Morales and Sachs (1989), this change in the interest rate environment helps to account for the fact that overborrowing (and overlending by the banks) was a common feature of the entire world at the end of the 1970s.

## 5.2 Private Nonguaranteed Debt

In 1985 the private nonguaranteed debt was 8 percent of the total external debt (\$314 million, or approximately 8 percent of GDP). While the amount is modest, it grew very rapidly in the late 1970s and early 1980s. Several channels were used by the private sector to contract nonguaranteed debt. Credits were given directly by the international commercial banks to the debtors, or they were intermediated by their local subsidiaries or by the domestic banks. A significant fraction of the nonguaranteed debt is actually suppliers' credit from foreign manufacturers to their authorized domestic agents in Bolivia.

The participation of the domestic banks in the marketing of foreign credits increased, somewhat surprisingly, when a hardening in the borrowing terms occurred and the international banks and their subsidiaries were reducing their direct exposure. The implicit assumption on the part of the Bolivian banks may have been that there were *de facto* public sector guarantees on the private sector debt.

Unfortunately, there is no available information on the final users of the loans granted by the banks. We can, however, make a strong presumption

that a high percentage of the loans were used in the service sector and in other nontradable sectors. The presumption is based on the fact that when depreciation of the peso accelerated, the delinquency rates in the banks increased considerably. In October 1982 it was reported that 40 percent of the banks' portfolios were technically in default (World Bank 1985, 528). In fact, the debt situation is at least partially behind the measure of "dedollarization," to be mentioned in chapter 6, which allowed the private sector to repay at a highly favorable interest rate the dollar-denominated debts incurred by the domestic banking system.<sup>2</sup> Dedollarization and exchange controls also erased the effective distinction between private and public debt after 1982, since the foreign debts of the private banks were to be repaid in pesos to the Central Bank, with the Central Bank then required to honor the international obligations. The foreign debt of the domestic private banks with the international banks continues to be a thorny issue because of several legal and financial disputes between the banks and the government.

No information is available on the service burden of the private nonguaranteed debt.

## 5.3 Short-Term Debt

The data on short-term debt are particularly poor. With the scant information available, we can obtain only a rough picture of what has happened since 1978. In view of the increasing difficulties of the economy after 1978 and the hardening of terms on long-term bank lending, the governments have increasingly resorted to short-term loans from other central banks in the region and from commercial banks. Balance-of-payments problems (i.e., dwindling reserves as a result of fixed exchange rates, domestic inflation, and large budget deficits) prompted the appeal for swap credits from foreign central banks, while the state-owned Banco del Estado contracted commercial debts to channel them to the private sector.

The worsening of the situation in 1980 caused a delay in payments of short-term commercial credits. This led to a refinancing agreement in April 1981, to which we refer below, that converted about one-third of the public sector's short-term loans into medium-term loans. Unfortunately, the refinancing did not substantially reduce the outstanding short-term debt, since the government made appeals to other sources for more short-term loans: Central Bank swaps and reciprocal trade credits in the context of the economic integration scheme of ALADI. In 1983 a large part of short-term loans owed to Argentina and Brazil were converted to medium-term credits.

In spite of the conversions to MLT debts, the stock of short-term debt continued increasing on account of arrearages. In 1980, short-term debt was 11.1 percent of the total external debt; in 1982, it reached a low of 5.8 percent; and in 1985, the percentage was 8.7 percent. Short-term debt was \$347 million in 1985, or almost 9 percent of GDP.

#### 5.4 The Hidden Costs of Easy Credit Availability

Since the early 1960s, the prime focus of official policy had been to increase economic growth. The emphasis on this objective grew even more from 1973 to 1978, both as a product of design and as a result of very favorable external circumstances. The greater availability of foreign credits coincided with, and was in addition spurred by, a substantial increase in export earnings. Any source of financing for capital expansion was welcomed at that point. The government had long tried to cater to foreign direct investors with generous fiscal incentives, but the response was weak outside of the petroleum sector. Thus, as a substitute, it started to court foreign lenders, who obliged as part of the world credit expansion of the 1970s. Banzer's government assured political and monetary stability, and the government offered, after some hesitation, exchange rate guarantees. This, and an ample supply of development projects, however poor in design or implementation, sufficed to induce a very significant flow of external resources. The increase in the contribution of foreign loans to financing domestic investment, had, however, the cost of further impairing the administration of the public sector. The easy recourse to indebtedness weakened the budget constraints and indeed allowed the government more leniency in fiscal policies and on the exchange rate than there would have been otherwise. Moreover, the undemanding fiscal attitude was aggravated when access was gained to commercial bank credits that were not tied to specific projects, in contrast to the case of official loans which almost always were based on specific projects.

The access to loans on relatively easy terms also impeded the design of needed reforms in the financial sector, particularly in the banks. The intermediation of foreign loans, contracted by the government or with its guarantee, was a more important source of profits to the private banks than the lending out of deposits made by domestic wealthholders. The neglect by the financial intermediaries of the local demand for deposits in the banking system likely had a negative longer-term effect on the mobilization of domestic savings.

The foreign loans were channelled to public investment projects and to the private sector through "refinancing" mechanisms. We have noted at length in the previous chapter that poor project design and, especially, poor implementation, led in many cases to results incommensurate with the resources that had been put out. A significant share of the increase in public indebtedness was due to these factors. Loans that were channelled to the private sector did not fare better in regard to results, as they were diverted to speculative uses and, frequently, never repaid. In many notorious cases, private lenders simply defaulted to the state banks that had channelled the external credits, and the government made no attempt to collect on the bad debts. This increased the demand for loans and, ironically, there was a ready supply to match.

A special mention needs to be made regarding exchange rate policies. Overvaluation coupled with punitive taxation in the natural resources sector hampered investment in minerals, hence reducing the future supply of foreign exchange to honor the foreign debt obligations. In addition, overvaluation led to an expansion of imports of consumer durables that was again financed directly and indirectly with foreign debt. Lastly, as the reserves of foreign exchange became precariously low, partly because of the currency overvaluation and the looming budget deficit, there was an increase in capital flight.

Because of the absence of sound macroeconomic policies and the poor administration of the loans intended for investment, many loans simply became consumption loans in 1978–81. Their servicing would later require a drop in consumption, as indeed happened. In the transition, however, more indebtedness was accumulated to refinance old loans and their interest charges.

By 1980 Bolivia was already a highly indebted country, as indicated, for instance, by a debt-to-GDP ratio of 76 percent. It was then subjected to the sharp international interest rate shock. Arrears on amortizations of loans granted by private creditors started to build up. In spite of a debt rescheduling in 1981, the debt situation became aggravated. As seen in table 5.5, from 1982 on, the net foreign resource transfers (net new lending minus interest payments) turned negative and a shift from external sources of finance to internal sources occurred, throwing the country onto the path of hyperinflation.

#### 5.5 Debt Management, 1970–85

In this section, some of the more important institutional features of the debt management are presented. One interesting feature is Article 56 of the

Table 5.5 Net Foreign Transfers on Medium- and Long-Term Public and Publicly Guaranteed Debt, 1970–87

Year	Net Resource Transfers (\$ million)	NRT as Percentage of GNP
1970	31	3.1
1975	90	5.3
1980	178	6.2
1981	92	2.9
1982	-61	-2.0
1983	-135	-4.6
1984	-102	-3.3
1985	-116	-3.6
1986	184	4.8
1987	72	1.7

Source: World Bank Debt Tables, 1988–89 edition.

Note: Net resource transfers are defined as new lending minus total debt servicing (amortization plus interest). All are measured on a cash-flow basis.

Constitution of the Republic of Bolivia, which requires congressional approval of all loans contracted by the government of Bolivia, the public enterprises, and all public institutions, or on their behalf. Strictly speaking, the loans contracted by unconstitutional governments are also unconstitutional. It should be recalled that during most of the period 1964–82, Bolivia had only de facto governments.<sup>3</sup>

Until 1974, government agencies and public enterprises negotiated foreign credits, which were furnished principally by official lenders and by suppliers of capital equipment. Central government agencies, municipalities, regional development corporations, and committees for public works themselves engaged in the search for foreign credits. The grant element in the official foreign loans was usually so important that the higher levels of the government, cognizant of this, approved and included them in the fiscal budget. In contrast, suppliers' credits were systematically seen as too expensive and frowned upon, but the purchasers of goods with suppliers' credits were usually in a position to overcome the objections of the Ministry of Finance and the Central Bank. In fact, the growth of suppliers' credits led to increasing regulation in the mid-seventies.

The haphazard way in which the borrowing took place before 1974 was such that there are no good records on the state of the public debt and, a fortiori, there was no policy on indebtedness, except the weak objections to suppliers' credits, mainly under the advice of foreign agencies of international cooperation.

This situation, and the large expansion in international credit between 1973 and 1978, led to two important regulatory measures. First, the National Institute for External Financing (INDEF) was created in 1974 as a decentralized government agency to keep track of all indebtedness incurred in the public sector through its financial and nonfinancial institutions, to negotiate new loans, and in specific cases to refinance old loans. INDEF was to be especially active in obtaining general balance-of-payments support loans.

In 1974 a decree was passed establishing the National System of Projects. The objective was to create a set of agencies, in a hierarchical structure, to help in the generation of investment projects, to perform social cost-benefit analysis of them, and to oversee their implementation. The search for sources of financing of the projects was also included among the functions of the system. Large investment projects and their financing required final approval by the National Council of Economic Planning (CONEPLAN), composed of several cabinet members and undersecretaries. Before projects arrived at CONEPLAN, they were to be screened by the National Committee of Projects and its technical secretariats.<sup>4</sup>

Very few investment projects followed the steps spelled out in the 1974 decree. The process of approval was slow and cumbersome, and the technical secretariats lacked competent personnel. Managers of government

agencies frequently ignored the guidelines of the National System of Projects. More importantly, vested interests were able to circumvent the procedures and get their projects to CONEPLAN directly. Several reforms of the National System of Projects were proposed between 1976 and 1986, but to no important effect.

INDEF ceased to exist in 1979, and its functions were transferred to the Central Bank, where a division on external finance (FINEX) was created. The general objectives of FINEX were very similar to those of INDEF. FINEX had the advantage of being part of the Central Bank where it could enjoy better information support. Unfortunately, FINEX objectives were not met, as it suffered from acute political interference. The Ministries of Finance and Planning frequently intervened in FINEX negotiations. Very often, debt negotiating committees were formed by making appeals to private Bolivian bankers with international connections and neglecting FINEX (a case in point is the debt rescheduling of April 1981, discussed in sec. 5.6).

The situation worsened during Siles Suazo's administration, when almost everybody in the Cabinet felt obliged to intervene in debt negotiations. For instance, crucial debt reschedulings with Argentina and Brazil were carried out by the Ministers of Defense and Foreign Affairs. A very personalistic and ad hoc style of debt negotiations developed, with a significant loss of institutional memory of past negotiations, which was important since many agreements were verbal. Bolivia, as well as its partners, suffered considerably from the rapid turnover in negotiators.

The need to redress the confusion in the external debt accounts of Bolivia, as well as the need to have updated information on debt negotiations carried out by other countries in the same predicament, called for foreign expertise. Several debt consulting firms and personal consultants were hired.<sup>5</sup> The consultants were, however, less helpful than expected, although it must be said in their behalf that they were contacted at a point when no solution was really in sight.

If the determination of the correct size of the public external debt was a formidable task, keeping track of the foreign debt of the Bolivian private sector was even more difficult. It is worth underscoring that a good knowledge of the size and structure of the private debt was essential for the design of policies aimed at the restoration of external equilibrium. Moreover, although this was not presumed at that time, most of the private debt eventually became "nationalized" with the dedollarization measure of November 1982.

In 1979, ceilings on the stock of short-term debts, both private and public, were set. The obligation to register the debts of the private sector in the Central Bank was also established, but unfortunately this obligation was not tightly fulfilled. The lack of adequate information on the debt of the private sector created needless problems after dedollarization.

### 5.6 Debt Reschedulings, 1980–85

The debt crisis of the 1980s commenced with a small crisis in 1980, during the government of Luis Garcia Meza. Arrears in amortizations to the commercial banks eventually led to a restructuring of the debt in April 1981, which was crucial for triggering further developments. The eventful years of 1980–81 had also led to an abnormal growth of short-term credit to the generals in Bolivia from the generals in Brazil and especially Argentina. Arrears on those debts were also refinanced in 1983 with important implications.

The chronology of events that led to the April 1981 agreement has been described by Baptista (1985) and Rivas (1986). Bolivia had ceased to make amortization payments after the Garcia Meza coup in July 1980. Because of this, the creditor banks gathered in Caracas in August, formed a consortium, and elected the Bank of America as the leader of a Coordinating Committee formed by the Bank of America, Bankers Trust, Deutsche Südamerikanische Bank, American Express, Crocker National Bank, Libra Bank, Manufacturers Hanover Trust, Texas Commerce Bank, Bank of Nova Scotia, and Irving Trust. The Coordinating Committee represented 128 creditor banks. In the same Caracas meeting, an agreement was reached to reschedule debts with repayments due between 28 August 1980 and 5 January 1981. In January 1981, the government of Bolivia was to meet again with the Coordinating Committee. No agreement was reached in January except on the need to meet again in April 1981. Notwithstanding, Bolivia made some bona fide payments.

After all these postponements, the April 1981 meeting took place in New York. Debts to the consortium amounted to U.S.\$722 million (or 19 percent of GDP), of which U.S.\$457.3 million were to be rescheduled in four tranches. The April agreement consisted essentially of a conversion of short-term loans in arrears to a medium-term loan and a reprogramming of medium-term loans.<sup>6</sup> The rescheduling called for a 10 percent down payment of the refinanced loans according to the original schedule of maturities.

The April 29th refinancing has been very much criticized within Bolivia. The thrust of the argument is that Bolivia was overcharged, with its costs and conditions well above what other countries obtained at that moment or shortly after. A more telling point is that it was extremely unrealistic that Bolivia would be able to come close to achieving the terms of the agreement. It should also be noted that the agreement called for Bolivia to sign an IMF program which never occurred. The Coordinating Committee routinely asked for the fulfillment of this clause and, as routinely, waived it.

Bolivia was unable to meet the terms of the April 1981 agreement and fell in arrears by September 1982. Several meetings took place to normalize the situation, but to no avail. A semblance of normality prevailed, however, during the term of Minister of Finance Flavio Machicado in 1983, when debt

servicing was resumed. Bolivia finally declared a moratorium to the commercial banks in mid-1984.

Bolivia was able to get some debt alleviation more easily with two bilateral creditors: Brazil and Argentina. A total of U.S.\$716 million of short-term debt and principal on medium-term debt was refinanced with those countries in 1983 on relatively easy terms: a fixed interest rate of 8 percent, maturities between 8 and 10 years, and grace periods of 3 years. This scheme of refinancing was found acceptable by the Bolivian public and did not provoke the kind of criticism that the rescheduling with the commercial banks had received. The international organizations, on the contrary, objected to the status of "preferred creditor" that Argentina received because it was able to use the natural gas exports of Bolivia as collateral.

### 5.7 Developments After 1985

In chapter 8 we provide a detailed analysis of Bolivia's debt renegotiations after 1985. The main point that can be mentioned here is that the government under President Paz took a very different approach to negotiations. Having inherited a unilateral suspension of payments on the bank debt from the Siles government, the Paz administration maintained the suspension and began negotiations with the banks addressed to a long-term solution to the crisis instead of another rescheduling. Some results were achieved in 1988 when Bolivia was able to retire approximately one-half of its commercial bank debt at a price of 11 cents per dollar. In 1989, more debt was retired and negotiations continued on the remaining debt that had not yet been repurchased.

## 6 The Emergence of Hyperinflation, 1982–85

The inflation in Bolivia in 1984 and 1985 was the most rapid in Latin American history up to that date and one of the highest in world history.<sup>1</sup> During the first half of 1985, the inflation surged to an annual rate of about 26,000 percent (approximately 60 percent per month), and it reached an annual rate of 60,000 percent during May–August 1985. As shown in table 6.1, the inflation was brought under control in the second half of 1985, and then after a sharp jump in prices in January 1986, inflation was kept at low

Table 6.1 Monthly Inflation Rates, 1984-87

	1984	1985	1986	1987
January	9.6	68.9	33.0	2.5
February	23.0	182.8	8.0	1.2
March	21.2	24.9	.1	.7
April	63.0	11.8	3.6	1.6
May	47.2	35.7	1.0	.4
June	4.1	78.5	4.3	-.2
July	5.2	66.3	1.8	.0
August	15.0	16.5	.7	1.0
September	37.4	56.5*	2.3	.6
October	59.3	-1.9	.6	2.1
November	31.6	3.2	-.1	-.3
December	61.1	16.8	.6	.8

Sources: 1/84-9/86, from national statistics; 10/86-12/87, from IMF, *International Financial Statistics*.

\*Note that prices actually stop rising by September 9, though because of rapid inflation in August and the first week of September, September's average price level is 56.5 percent higher than in August.

double-digit rates for the next three years. Since the Bolivian inflation is one of the only cases since 1950 of a "true" hyperinflation (by Cagan's classic definition of monthly inflation exceeding 50 percent), it provides an important testing ground for alternative views of the dynamics of hyperinflation and of the design of anti-inflation programs.<sup>2</sup>

## 6.1 Origins of the Hyperinflation

The proximate cause of the hyperinflation is the government's loss of international creditworthiness in the early 1980s. We have noted that during the period 1975-81, various Bolivian governments relied heavily on foreign borrowing to finance government expenditures. The combination of a large buildup of international debt with domestic political instability, poor macroeconomic management, a weak tax system, and poor export prospects, precluded the Bolivian government from obtaining new international loans after 1981. When foreign capital inflows dried up in early 1982, the government did not raise taxes or cut expenditures, but rather substituted domestic credit expansion for capital inflows as the source of finance for the government. The rapid expansion of the money supply then set off the inflationary process. Thus the balance of payments played a critical role in the origin of the hyperinflation, but only insofar as it affected the rate of money creation. More evidence in support of this position is that after the beginning of stabilization, a massive deterioration of the Bolivian international terms of trade in 1986 did *not* reignite the hyperinflation since under the new policy rules, the terms-of-trade decline did not feed into the rate of domestic credit expansion to the public sector.

The substitution of domestic credit expansion for capital inflows and the jump in real seignorage collection took place in the first half of 1982, almost

nine months before the Siles government took office. But there is no evidence that the *intensification* of the inflation process involved a rise in seignorage collection after the beginning of 1982. (The simple correlation of inflation with the level of seignorage as a percentage of GDP is  $r^2 = -0.001$  for the quarterly interval 1982:1 to 1985:3.)

The time path of seignorage relative to GDP is shown in figure 6.1. The figure records the quarterly seignorage collection, measured relative to annual GDP. Therefore, to obtain the annual seignorage collection relative to GDP it is necessary to add the quarterly rates for a year. Seignorage is measured for each month as  $(M_t - M_{t-1})$ , where  $M$  is base money, and is then divided by an estimate of nominal GDP for the month. This ratio is then added for the months of the quarter, with the results shown in the figure.

Surprisingly, it is difficult even many years later to uncover precisely the causes for the jump in money creation in early 1982, though the main culprit is almost surely a shift in the environment for foreign borrowing. The problem with nailing down a culprit lies with the disarray of Bolivian fiscal data during this period, a problem we have already encountered in chapters 4 and 5. We noted three kinds of problems inhibiting a clear assessment of the fiscal situation. First, most of the available data cover only the central government (the TGN) and not the consolidated public sector, including state enterprises, regional corporations, local government, state development banks, etc. This limited coverage is especially problematic for the

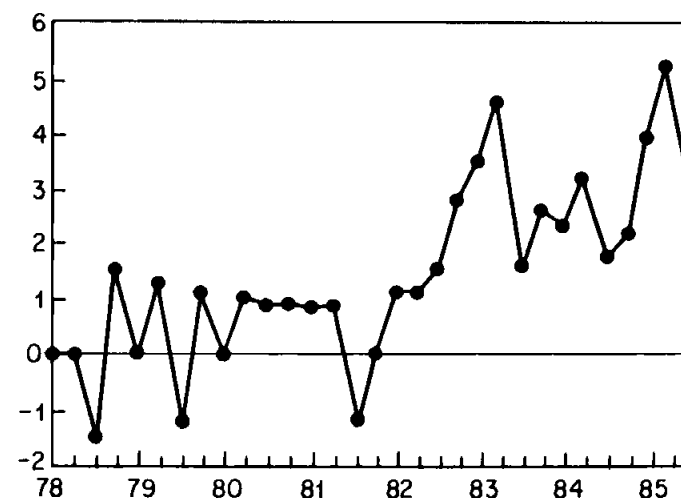


Fig. 6.1 Seignorage (per quarter, as percentage of annual GDP)

Note: Annual seignorage earnings are the sum of quarterly earnings.

Source: IMF, *International Financial Statistics*.

hyperinflation period, since there were large ad hoc transfers among the various parts of the government at that time. Second, there is great difficulty in interpreting on an ex post basis the accounting of arrears on debt repayments during this period. Third, there were (and remain) significant disagreements among the various parts of the government about the responsibility for portions of the foreign debt. At some points, for example, the Central Bank repaid foreign debts on behalf of the TGN, which the TGN refused to recognize.

With these limitations in mind, it is still possible to piece together a rough interpretation of the rise in seignorage in 1982. Key fiscal data for the central administration for 1981–84 are shown in table 6.2. Notice the important fact that the TGN deficit rises from an estimated 5.7 percent of GNP in 1981 to an estimated 22.3 percent of GNP in 1982. This increase just barely exceeds in magnitude the rise in expenditures on “internal and external debt.” Most or all of the “internal debt” category in this period reflects Central Bank repayments of foreign debt on behalf of the TGN, so that the jump in debt repayments is almost exclusively related to foreign debt. At the same time that debt servicing jumps up, inflation starts to accelerate, with the result that real tax collections fall sharply, from approximately 9.4 percent of GNP in 1981 to 4.6 percent of GNP in 1982. This revenue shortfall is partially balanced by a simultaneous cut in the current and capital expenditures of the TGN. Notice that the combined expenditures on personnel, other services, materials, and fixed assets fall by 3.0 percent of GNP between 1981 and 1982.

The importance of enlarged net debt-service payments for the burgeoning deficit in 1982 is also evident from the balance-of-payments data, which

Table 6.2 The Evolution of Revenues and Expenditures, 1981–84 (as percentage of GNP)

	1981	1982	1983	1984
Revenues	9.4	4.6	2.6	2.6
Internal taxes	3.0	1.8	1.4	.7
Taxes on petroleum	2.1	.9	.4	.6
Other	2.6	.8	.3	1.1
Expenditures	15.1	26.9	20.1	33.2
Personnel	7.2	5.6	5.2	8.0
Other services	.7	.4	.3	.5
Materials	1.5	1.0	.7	.8
Fixed assets	1.0	.4	.4	.5
Internal debt	1.8	10.4	.3	.4
External debt	1.3	7.7	10.8	2.2
Others	1.6	1.4	2.4	20.8*
Deficit	5.7	22.3	17.5	30.6

Source: Ministry of Planning, Bolivia.

\*Mainly central government transfers to state enterprises.

unfortunately cannot be matched exactly with the budget data. We saw in table 5.5 for 1980 and 1981 that net resource transfers to Bolivia were positive, meaning that net new borrowing by the public sector exceeded the level of interest payments on the public debt. In 1982, *net new* lending plummeted, so that the resource transfer to Bolivia (new loans minus interest payments) turned negative. As a percentage of GNP, net resource transfers toward Bolivia shifted from 6.2 percent in 1980 to 2.9 percent in 1981, –2.0 percent in 1982, and –4.6 percent in 1983. Were we to include the data on short-term debt, which is not collected by the World Bank in the case of Bolivia, the shift in net transfers would be even more dramatic, since an inflow of short-term credits in 1980 and 1981 dried up in 1982.

As it turns out, real seignorage collection from 1982 to mid-1985 remains roughly constant, averaging about 12 percent of GNP each year. This does not reflect a stable path of government spending, taxes, and monetary emission during this period. Instead, the roughly constant seignorage collections hide a process of adjustment in which tax revenue collections all but collapse, while government spending is cut back sharply over time in the vain attempt to compensate for the falling tax collections. Once again, data problems at this point preclude a comprehensive account of this process. As we have mentioned, while there are reasonably acceptable accounts for the central government, data on the consolidated public sector is sparse.

Nonetheless, relying on the central administration accounts, we can see much of the process at work. The government depended on three main forms of taxes during the period: internal taxes (mainly sales and income taxes), taxes on petroleum, and taxes on trade. Each of these taxes fell sharply in real terms during the period. Figure 6.2 records the collections from taxes during 1981–84 as a percentage of GNP (the category “other” includes trade taxes). Overall, revenues of the central administration fell from more than 9 percent of GNP in 1979 and 1980 to just 1.3 percent of GNP in the first nine months of 1985, before the new stabilization program went into effect (the preprogram period in 1985 is indicated by 85.1 in the figure). Upon institution of the stabilization program, tax revenues of the central administration jumped almost immediately to more than 10 percent of GNP (shown as period 85.2 in the figure), mainly through an increase in tax payments by the state oil company, YPF. In view of the sharp decline in tax revenues, an increasing proportion of the central administration deficit was financed through fiscal credits from the Central Bank. The proportion of TGN expenditures covered by TGN revenues fell from 65.6 percent in 1979 to just 6.9 percent in the first nine months of 1985:

1979	66%	1983	13%
1980	60%	1984	8%
1981	62%	1985.1	7%
1982	17%	1985.2	134%

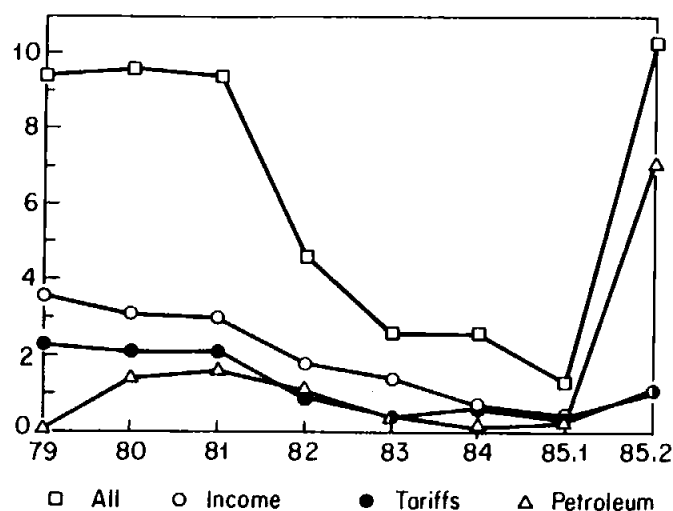


Fig. 6.2 Tax revenues as a percentage of GNP (by category of tax)

Note that the steep drop in revenues relative to expenditures in 1982 reflects the *rise* in expenditures on debt servicing in that year as well as the falling revenue collection.

The reasons differ for the declines in the various kinds of taxes, and these reasons are worth stressing, since they help to explain the nature of the stabilization policies finally undertaken in August 1985. The drop in internal taxes (mostly income and sales taxes) is most readily explained. Indexation of the income tax system was not even attempted until an administrative change in March 1985, so that lags in collection combined with high inflation reduced the real value of tax collections substantially, in the way familiar from Tanzi (1977) and others. Many sales taxes were set at specific, rather than ad valorem rates, and the specific rates were adjusted with very long lags, if at all, and certainly not fast enough to keep up with accelerating prices under a hyperinflation. The decline in tariff revenues introduces some less conventional effects. Throughout the entire hyperinflation period, the official exchange rate was pegged by the Central Bank and was adjusted in steps with long lags to the underlying inflation. As the government resorted increasingly to fiscal credit creation by the Central Bank in order to fund expenditures, there was a constant pressure on foreign exchange reserves at the official exchange rate. Rather than maintaining a steadily depreciating but unified price of foreign exchange, the government maintained the official parity for long intervals and rationed foreign exchange. The persistent excess demand for foreign exchange at the official exchange rate of course resulted in an enormous premium for foreign exchange in an unofficial, illegal, but semi-tolerated black market. Table 6.3 shows the average premium on the

Table 6.3 Percentage Gap Between Official and Black-Market Exchange Rate, 1980-86. III (quarterly average)

1980: I	.0	1984: I	327.4
II	.0	II	69.8
III	.0	III	309.7
IV	.0	IV	302.7
1981: I	.0	1985: I	330.9
II	.0	II	321.0
III	45.5	III	798.1
IV	68.3	IV	8.0
1982: I	57.0	1986: I	5.8
II	3.5	II	2.1
III	4.8	III	.5
IV	22.0		
1983: I	116.3		
II	105.1		
III	241.8		
IV	225.4		

Source: Ministry of Planning, Bolivia.

black market relative to the official rate on a quarterly basis for 1980:1 through 1986:3. In the month before the stabilization program, the premium was on the order of 1,400 percent! Since the stabilization program began, the exchange rate has been unified, with a small and declining deviation (which remains because of minor legal and administrative factors) between the official rate and the now-legal parallel market rate.

With foreign exchange rationing at the Central Bank, progressively fewer import transactions went through legal channels and more imports came into the country via smuggling, outside of tariff control altogether. Under Bolivian law, all exporters are required to sell the foreign exchange from export earnings to the Central Bank at the official exchange rate. In sectors where smuggling was possible, the sharp divergence between the official effective rate for exporters and the black-market exchange rate made smuggling a highly attractive option (the smuggler converts the foreign exchange earnings from exports in the black market, where the number of pesos per dollar is much greater than at the official effective rate). A trenchant illustration is provided by the example of Peru, which, despite the absence of tin mines, became a tin exporter in 1983-85 on the basis of Bolivia's smuggled tin. As dollar export earnings sold to the Central Bank at the official rate shrank markedly, the Central Bank had a diminished supply of dollars to sell to importers, who progressively turned to the black market in order to pay for their imports. The overall result was that a very high and apparently growing proportion of imports in the economy went unrecorded, and therefore largely untaxed, during the hyperinflation period.

The story of YPFB tax collections is related. Just as the official price of foreign exchange lagged the domestic price inflation, so too the government altered the domestic price of petroleum products with a significant lag.

Indeed, petroleum prices were typically changed at the same time that the official exchange rate was devalued. As an example, consider the domestic price of a liter of gasoline, converted to U.S. dollars using the black-market exchange rate (the rate earned, incidentally, by smugglers who carried cheap petroleum from Bolivia to Peru across Lake Titicaca). During this period, the world market price was between \$0.25 and \$0.28 per liter, but the domestic price was as shown in table 6.4.

Thus, on the eve of the stabilization program (which raised the internal petroleum prices to world levels), the internal price of petroleum was about one-sixth to one-seventh of the world market price. YPFB was obligated throughout the hyperinflation period to pay taxes to the central government on a percentage of its revenues from internal sales and external sales. With internal prices so depressed, the taxes on internal sales were also severely depressed. Moreover, because its profits on internal sales were so limited by the price ceilings on its output, YPFB also refused to pay taxes on its external sales, arguing that the revenues were necessary to meet operating expenses.

It is much more difficult to offer a comprehensive account of expenditure behavior during the hyperinflation, for reasons to which we have already alluded. As a rough estimate, however, it seems that as government revenues diminished, real expenditures fell more or less in tandem to preserve a large but fairly constant deficit, since we know that the inflation tax, which was financing almost 100 percent of the cash-flow deficit, did not rise markedly above 12 percent of GDP from 1982 to mid-1985. It appears that the main casualties of the reduction in real spending were capital investment by the public sector and current central government expenditures on personnel and nonpersonnel services and materials. After mid-1984, interest payments on the foreign debt also diminished sharply as the government built up large interest arrears. Public investment spending fell, according to the IMF, in the manner shown in table 6.5.

Table 6.4 Domestic Price of Gasoline (\$/liter), March–December 1986

Month	Price (\$/liter)
March	.09
April	.07
May	.06
June	.05
July	.03
August	.04
September	.28
October	.27
November	.23
December	.23

Source: UDAPE, Bolivian Ministry of Planning.

Note: The price is calculated by dividing the peso price per liter by the black-market exchange rate (pesos/\$).

Table 6.5 Public Investment (percentage of GNP), 1980–85

	1980	1981	1982	1983	1984	1985
Central administration	2.9	3.1	1.9	1.8	1.5	1.8
State enterprises			4.6	3.0	2.6	1.4
Total			6.5	4.8	4.1	3.2

Source: Unpublished IMF memorandum on Bolivia, 1985.

Current spending by the TGN evolved in a similar way, with overall spending on services and materials falling from 9.4 percent of GNP in 1980 to 6.8 percent in the first part of 1985.

## 6.2 The Dynamics of the Hyperinflation

This section is devoted to a closer look at the dynamics of the hyperinflation. To organize the discussion, we begin with the simple and classic Cagan (1956) model. Real money balances ( $M_t/P_t$ ) are written as an exponential function of expected inflation  $\pi^e$ , and inflation expectations adjust adaptively:

$$(1) \quad m_t = M_t/P_t = A \exp[-b\pi^e(t)]$$

$$\dot{\pi}_t^e = \lambda(\pi_t - \pi_t^e)$$

The government's reliance on seignorage taxation is denoted by  $s \equiv \dot{M}/P$ , which may also be written as  $\dot{m} + \pi m(\pi^e)$ , with  $m = M/P$ , and  $\pi = \dot{P}/P$ . In the steady state,  $s = \pi m(\pi)$ , which as is well known can be satisfied by two inflation rates, a low inflation rate  $\pi^{\min} = \pi^{\min}(s)$  and a high inflation rate  $\pi^{\max} = \pi^{\max}(s)$  for all  $s \leq s^{\max}$ , the maximal seignorage rate. The maximal rate is achieved at the inflation rate  $\pi = 1/b$ , with  $s^{\max} = m(1/b)/b$ . Given the relations in (1) and that  $M/P = s \leq s^{\max}$ , an economy starting at  $t = 0$  will converge to  $\pi^{\min}(s)$  assuming that  $\pi^e(0) \leq \pi^{\max}(s)$  and that  $1 > b\lambda$ .

In the important case in which  $s > s^{\max}$  and in which the stability condition  $1 > b\lambda$  is satisfied, then starting from a finite expected inflation rate, actual inflation will rise steadily without bound. At any given moment, the actual seignorage  $s$  can be financed through a surprise inflation, in which actual inflation exceeds the expected inflation rate. But this continuing gap between actual and expected inflation continues to drive up the expected inflation rate, which in turn increases the actual inflation rate necessary to achieve the given level of seignorage. Inflation proceeds to increase explosively and without bound.

One key property of the Cagan model should be stressed: starting from a steady state with  $\pi_0 = \pi^{\min}(s_0)$ , a permanent rise from  $s_0$  to  $s_1$  will lead to a jump in  $\pi$  on impact, and then to a steadily rising inflation rate. If  $s_1$  is less



than  $s^{\max}$ , then a new higher steady state,  $\pi^{\min}(s_1)$ , is reached. If instead  $s_1$  is greater than  $s^{\max}$ , then inflation jumps up on impact and continues to rise without bound. In either case, a period in which inflation is rising need not signify a rising financing need (i.e., a continuing rise in  $s$ ), but rather a lagged adjustment of the inflation rate to an earlier once-and-for-all increase in  $s$ .

This essential aspect of the model characterizes the Bolivian experience, as we have already seen in figure 6.1. Aside from seasonal spikes in seignorage in the fourth quarter of most of the years (for budgetary reasons associated with a Christmas wage bonus), there is basically one permanent step increase in the seignorage collection in 1982, which persists until the third quarter of 1985.

This model can easily be extended to the open economy by postulating a law-of-one-price (or purchasing-power-parity) relation between domestic prices, foreign prices, and the exchange rate. Specifically, we can assume  $P_t = P_t^* \cdot E_t$ , where  $P_t^*$  is foreign (dollar) prices and  $E$  is the exchange rate in units of pesos per dollar. Given the path of foreign prices and seignorage demands, we can solve for domestic prices and the nominal exchange rate.

This simple extension model of monetary and price dynamics introduced earlier must be modified in one important respect in the case of Bolivia. We have seen that throughout the hyperinflation period, foreign exchange was rationed at the official exchange rate, so that a large black-market premium was present throughout the period. In order to understand the dynamics of prices with a black-market exchange rate, it is necessary to alter the purchasing-power-parity relation to reflect the fact that the black-market exchange rate, rather than the official rate, best reflects the marginal cost of foreign exchanges for most imports during the period. For a limited subset of "necessary" imports, official foreign exchange was available from the Central Bank without rationing. The official exchange rate applied, for most of the period, to newsprint and pharmaceutical imports, for example. For all other goods, limited amounts of imports were purchased at the official exchange rate, but on the margin the cost of foreign exchange was dictated by the black-market price rather than by the official price. As a result, we should expect that the price level would be a weighted average of the official exchange rate ( $E$ ) and the black market exchange rate ( $\bar{E}$ ) price of foreign exchange, so that

$$(2) \quad P_t = E_t^\gamma \bar{E}_t^{(1-\gamma)} P_t^*$$

As before, monetary equilibrium requires  $M/P = m(\pi^e)$ . Using the convenient Cagan form for money demand used earlier, assuming adaptive expectations for inflation in a discrete-time setting,  $\pi_t^e = \pi_{t-1}^e + (1-\lambda)(\pi_t - \pi_{t-1}^e)$ , and taking the logs of (2), we can write:

$$(3) \quad \begin{aligned} \mu_t - \gamma e_t - (1-\gamma)\bar{e}_t &= \lambda a - b\lambda\pi_t \\ &+ (1-\lambda)(\mu_{t-1} - p_{t-1}), \end{aligned}$$

where  $a = \log A$ ,  $\mu = \log M$ ,  $e = \log E$ ,  $p = \log P$ , and  $\log P^* = 0$ . By rearranging, we get an estimable equation for the black-market premium ( $\bar{e} - e$ ) as an increasing function of  $(\mu - e)$ , as well as a rising function of inflation and a negative function of (log) real balances lagged one period:

$$(4) \quad \begin{aligned} (\bar{e}_t - e_t) &= -\lambda a/(1-\gamma) + [1/(1-\gamma)](\mu_t - e_t) \\ &+ [b\lambda/(1-\gamma)]\pi_t \\ &- [(1-\lambda)/(1-\gamma)](\mu_{t-1} - p_{t-1}) \end{aligned}$$

An estimate of equation (4) using monthly data for January 1982 to September 1985 is strongly supportive of this monetary interpretation of the black-market premium. The estimated equation is:<sup>3</sup>

$$(5) \quad \begin{aligned} (\bar{e}_t - e_t) &= 3.03 + 1.10(\mu - e) \\ &(0.24) \quad (0.08) \\ &+ 0.57 \pi_t - 0.58(\mu_{-1} - p_{-1}) \\ &(0.17) \quad (0.10) \end{aligned}$$

$$R^2 = 0.84; D.W. = 1.26; s.e. = 0.27.$$

The point estimate on  $(\mu - e)$  of 1.10 suggests that the black-market exchange rate gets a weight  $\gamma$  of 0.9 in determining the price level. This high weight is broadly consistent with direct estimates for prices, to which we now turn.

### 6.2.1 Price and Exchange Rate Dynamics

The microdynamics of wages, prices, and exchange rates changed markedly over the course of the inflation. During the early 1980s, nominal wages were changed only a few times a year, and the presence of staggered nominal wage settlements gave inertia to the wage-price process. As inflation accelerated, wage contracts were renegotiated on a more frequent basis until, by the end of the hyperinflation, nominal wages were being reset on a weekly or biweekly schedule. As for prices, an increasing proportion of transactions became dollar linked in the sense that traders quoted prices in dollars, converting into pesos (at the parallel exchange rate) at the time of the transactions. It was illegal during this period to use dollars for transactions or even to quote items in dollars, so that in most parts of the country (with the important exception of the Santa Cruz region), dollarization stopped short of actual transactions in U.S. dollars.

A precise specification of price-exchange rate linkages would open up a number of econometric and conceptual issues better left to another study.

Here, the process of encroaching "dollarization" is shown more simply in an equation linking monthly inflation to a one-month lag of inflation, the change in the black-market exchange rate, and the change in the official exchange rate. The equation to be estimated is:

$$(6) \quad (p_t - p_{t-1}) = a_0 + a_1(p_{t-1} - p_{t-2}) + a_2(\bar{e}_t - \bar{e}_{t-1}) + a_3(e_t - e_{t-1})$$

All variables are expressed as monthly averages, where the monthly average exchange rates for month  $t$  are proxied by the geometric weighted averages of end-of-month rates for months  $t-1$  and  $t$ .

There are two maintained hypotheses: (1) as inflation accelerates, the weight of the exchange rates in the price equations increases relative to the weight of the previous month's inflation; and (2) as inflation accelerates and as the black-market premium increases (see table 6.3), the black-market exchange rate increases in importance relative to the official exchange rate. Thus, we expect that  $a_1/(a_1 + a_2 + a_3)$  and  $a_2/(a_2 + a_3)$  will both fall as the hyperinflation intensifies.

Estimates of (6) are shown in table 6.6, first under an unrestricted estimation of the parameters, and then under the restriction  $a_1 + a_2 + a_3 = 1$ . The hypotheses are supported in each case. The average monthly inflation rates for the three intervals are: 1983, 13.2; 1984, 31.4; 1985, 66.9. We see clearly that as we move from 1983 to 1985 the weight of lagged inflation (even at a one-month lag!) disappears, while the weight of the black-market exchange rate grows in importance. In the final eight months of the hyperinflation, price change is basically equiproportional to change of the black-market exchange rate.

The combination of equations (5) and (6) illustrates the utter futility of the government's policy of maintaining an overvalued official exchange rate under conditions of rapid money creation. The government's resistance to devaluation was ostensibly owing to the fear of provoking even higher inflation, but it is clear that money creation fed into prices even in the absence of devaluation, through the mechanism of depreciation of the black-market exchange rate. The maintenance of an overvalued official exchange rate did nothing to stop inflation. On the contrary, it not only created large distortions in the economy (particularly by acting as a tax on legal exports), but almost surely raised inflation by increasing the government deficit via its negative effects on tariff collections and other revenues.

### 6.3 Failed Attempts to End the Hyperinflation

As with many other hyperinflations, the end did not come on the first try, but only after several attempts at stabilization had failed. Stabilization programs were launched in November 1982, November 1983, April 1984,

Table 6.6 Price Inflation Equations

$$(p_t - p_{t-1}) = a_0 + a_1(p_{t-1} - p_{t-2}) + a_2(e_t - e_{t-1}) + a_3(\bar{e}_t - \bar{e}_{t-1})$$

	$a_1$	$a_2$	$a_3$	$a_1/(a_1 + a_2 + a_3)$	$a_2/(a_2 + a_3)$
1. Unconstrained estimation (monthly)					
1983:1-1983:12	.33 (.27)	.18 (.11)	.20 (.15)	.46	.47
	$R^2 = .42$		D.W. = 1.76		
1984:1-1984:12	.13 (.52)	.32 (.11)	.52 (.19)	.13	.38
	$R^2 = .58$		D.W. = 2.80		
1985:1-1985:9	-.18 (.17)	.17 (.13)	1.04 (.16)	-.17	.14
	$R^2 = .87$		D.W. = 2.20		
2. Constrained Estimation					
1983:1-1983:12	.57	.16 (.11)	.27 (.13)	.57	.37
	$R^2 = .42$		D.W. = 1.97		
1984:1-1984:12	.16	.31 (.10)	.53 (.11)	.16	.37
	$R^2 = .71$		D.W. = 2.83		
1985:1-1985:8	-.20	.17 (.11)	1.03 (.10)	-.20	.14
	$R^2 = .94$		D.W. = 2.18		

August 1984, November 1984, and February 1985. The most ambitious programs were those of November 1982 and April 1984. Notably, the April 1984 package represented a fairly orthodox approach to stabilization that included some of the measures that later proved successful in August 1985. The package included a very large devaluation of the official exchange rate, an announcement of tax reform, and a major increase in public sector debt. In the event, the trade unions exploded in furious opposition to the program, and a month later, the government acceded to demands for a large wage increase to compensate for the devaluation. At the same time, the government reversed its debt policy under the pressure of the trade unions and entered into a unilateral moratorium on further servicing of the external commercial banks debt. The Siles government gave up further attempts to negotiate a package of debt rescheduling.

The complete breakdown of the April 1984 package eliminated any remaining hopes of the public that the Siles government would prove able to stabilize the economy. It should be recalled that in November 1984,

President Siles was compelled to announce elections for July 1985, one year ahead of schedule. A final attempt at stabilization came in February 1985, with a program that prompted a domestic march to La Paz and a month-long sit-in by 10,000 miners. Again the government capitulated to popular demands, after which it gave up even the pretense of attempting to stabilize before the arrival of a new government in August.

## 7 Ending the Hyperinflation, 1985–88

The end of the hyperinflation came swiftly, just three weeks after the new government of Victor Paz Estenssoro took office. A comprehensive stabilization program, labelled the New Economic Policy, was unveiled on 29 August 1985, and within days, the hyperinflation ended. Later in 1985, after several weeks of low inflation, there was another sharp run-up in prices associated with a large emission of money at the end of the year, but this blip in inflation was quickly brought under control in mid-January 1986.

### 7.1 The New Economic Policy

The main features of the New Economic Policy are shown in table 7.1. Note the program embraced widespread liberalization of trade and finance, as well as fiscal austerity. In principle, the stabilization measures are “short-term” measures, while the liberalization measures are oriented toward “long-run” growth. In fact, as we discuss later, the Bolivian government believes, with considerable reason, that the liberalization measures played a key role in permitting the stabilization policies to take hold.

The key stabilization measures (putting aside, for the moment, the question of liberalization policies) had four basic elements, two of which were to be implemented immediately and two of which were slated for implementation in the months following the beginning of the program. First, the government committed itself to a policy of a unified exchange rate, without capital controls or exchange controls. The exchange rate was initially floated, though with a maximum value of the peso beyond which peso appreciation would not be permitted, and then was managed in a dirty float during the following year. Second, the fiscal deficit was immediately reduced through a combination of (a) public sector price increases, especially for petroleum products; (b) a public sector wage freeze; (c) further

Table 7.1 Outline of Major Policy Initiatives in First Year of New Economic Policy

Policy Area	Key Policy Initiatives	Implementation
Exchange rate	Unification of exchange rate on current and capital account; free convertibility of foreign exchange	Completed 1985
Public sector pricing	Public sector prices (most importantly, energy and food) raised to world levels	Completed 1985
Consolidated public sector budget	Target deficit of 6.3 percent GNP, of which 5.3 percent to be externally financed	Budget approved by Congress, May 1986
Import regulations	Unification of tariffs to flat 20 percent rate; elimination of trade quotas and nontariff barriers	Quotas eliminated immediately; tariff reform, August 1986
Private sector salaries and employment	Elimination of government restrictions covering private wages, except for national minimum wage; removal of restrictions on hiring and firing	Completed 1985
Private sector pricing	Elimination of all price controls, except for public transportation and public utilities; elimination of previous monopolies in intercity transport	Completed 1985
Public sector salaries and employment	Successive wage freezes (with one-step increases between freeze periods) during August–December 1985, December–June 1986, June–December 1986	Implemented
Public enterprises	Employment reductions in state enterprises and central administration Decentralization of major state enterprises	Partial implementation Most actions not taken
Taxation	Increases in taxes paid by YPFB Major consolidation and reform of internal taxes; establishment of VAT, patrimony taxes, and uniform income taxes	In effect Approved by Congress, May 1986
International financial organization	Negotiation of IMF standby agreement Reestablishment of creditworthiness with World Bank and IDB	Approved by IMF, June 1986 Current on all obligations
Foreign creditors	Negotiation of Paris Club rescheduling Commercial bank debt	Terms of agreement approved, June 1986 Negotiations extended beyond 1986
Interest rates	Elimination of restrictions on commercial bank interest rates	Completed 1985

reduction in spending on public investment; and (d) budget austerities in other areas, such as subsidized credits to the private sector. Third, the program called for a tax reform to reestablish and broaden the tax base. The reform was enacted by Congress nine months after the start of the program, and implementation began one year after. Fourth, the government announced its intentions of reestablishing the country's creditworthiness with international financial institutions (official and private), especially the IMF, the World Bank, and the Inter-American Development Bank, while maintaining a suspension of payments to the commercial banks. Renewed creditworthiness required the government to eliminate arrears on its debt-servicing obligations to the international institutions and to negotiate an IMF standby agreement, which it did by June 1986. In June 1986, a Paris Club re-scheduling was obtained. As described in chapter 8, Bolivia entered into a novel debt repurchase agreement with its commercial bank creditors in 1988.

To appreciate the drama of the end of the hyperinflation, consider the situation on the eve of the new program. During August 1985, the official exchange rate stood at 67,000 pesos per dollar, while the black-market exchange rate was approximately 1.1 million pesos per dollar, for a percentage gap of some 1,600 percent (in fact, after averaging 1.1 million for most of the month, the black-market rate shot up to 1.5 million pesos on the eve of the program announcement). The internal price of petroleum was about 3 cents per liter, compared with a world price of 28 cents per liter. Inflation in the weeks leading up to the program was (at weekly rates):

August 5–11:	18.4
August 12–18:	8.6
August 19–25:	6.1
August 26–September 1:	19.9

As the program began, the exchange rate was allowed to depreciate freely, before a new de facto peg was set. The market set the new unified rate at an opening level of about 1.1 million, giving a one-day depreciation of 1,600 percent relative to the previous official rate. Internal oil prices were immediately raised to 28 cents per liter, or by 833 percent. All other price controls in the economy were lifted by the decree of 29 August 1985.

These enormous changes took *only ten days* to work through the price system. Prices jumped immediately following the devaluation and increase in internal energy prices, but then inflation abruptly ended:

September 2–8:	36.8
September 9–15:	-4.6
September 16–22:	-.8
September 23–29:	-2.5
September 30–October 6:	.7

These data are reproduced in figure 7.1, where the remarkable break in the inflation from the second week of the program onward is clearly evident.

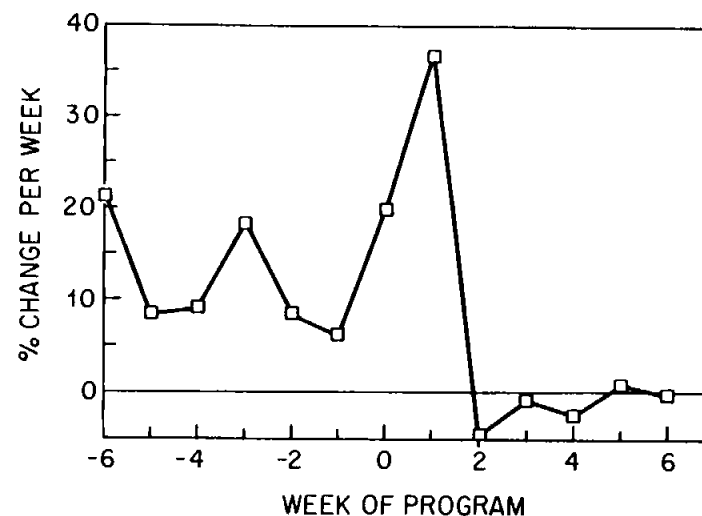


Fig. 7.1 Weekly inflation rates (week 0 = 8/26–9/1)

The inflation rate remained at relatively low levels during the following year, with the exception of a jump in prices during December 1985 and January 1986, following policy mistakes in monetary management at the end of 1985 (which resulted in a cabinet reshuffling and the reinforcement of fiscal austerity measures).

The leading trade union organization, the COB, which had opposed and mobilized against similar—indeed less dramatic—policy packages in the past, called for a general strike in opposition to the program. But after three years of accelerating inflation and the near chaos of early 1985, the new government clearly had the upper hand. A state of siege was declared (as a temporary and constitutional emergency procedure), and the strike was quickly disbanded, after which the state of siege was cancelled.

The stabilization of the exchange rate at the new depreciated level of 1.1 million pesos per dollar caused a gradual rebuilding of the public's real money balances. One of the central policy issues at the end of a hyperinflation is how that increase in real money demand should be accommodated—through domestic credit expansion to the public sector or to the private sector (e.g., via rediscounting of private paper), or through foreign reserve inflows through the balance of payments (i.e., Central Bank purchases of foreign exchange at a pegged rate or in a dirty float). The Bolivian government chose the third, and clearly most conservative, strategy of relying on the balance of payments. It was felt that with large Bolivian hoards of U.S. dollars, both in Bolivia and abroad, there was sufficient availability of foreign exchange holdings in the private sector to provide the

basis for the needed expansion of the domestic money supply. Moreover, with confidence in the peso likely to be a rising function of the extent of foreign reserve backing of the domestic money base, the conservative approach was felt to be the most consistent with a restoration of confidence in the new exchange rate and monetary regime. Net reserves climbed from approximately \$63 million at the end of August 1985 to about \$150 million by the end of December, exceeding the rise in the money base from \$64 million in August to \$112 million at the end of the year.

We have already noted the sharp rise in government revenue collection as soon as the program started (see fig. 6.1). The rise in domestic oil prices plus the renewed YPF tax payments on export earnings alone raised the rate of central government tax collection by about 7 percent of GNP. Adding in a small recovery of internal taxes and tariff collections, government revenues rose from about 1.3 percent of GNP during January–September 1985 to 10.3 percent of GNP during the remainder of the year. Overall, the central administration moved into a cash-flow surplus during October–December 1985. With a virtual elimination of domestic credit expansion to the fiscal sector, seignorage dropped off sharply after the program began (as was evident in fig. 6.1). Expressed as a percentage of GNP, the evolution of seignorage on a quarterly basis is:

1985:1	2.9%	1985:4	1.9%
1985:2	3.6%	1986:1	.1%
1985:3	3.4%	1986:2	.8%

Shortly after the stabilization program was announced, Bolivia faced the strong challenge of shocks to the external sector. Bolivian exports had depended heavily on three items in recent years. Tin and natural gas constituted about 90 percent of Bolivia's measured and legal exports, while processed coca leaf, to become cocaine, represented the third (illegal and unrecorded) export. The rough estimates for Bolivian exports in 1985 are:

Tin	\$ 150 million
Other metals	\$ 81 million
Natural gas	\$ 377 million
Others	\$ 22 million
Coca based	\$ 600 million
Total	\$1,230 million
	(approx. 31% of GNP)

Once the stabilization program got started, there were profound disruptions in all three of the major markets. The price of tin collapsed by 60 percent at the end of October 1985, as the worldwide tin cartel crumbled in financial distress. Three months later, hydrocarbon prices collapsed, forcing a renegotiation of Bolivia's natural gas contracts with Argentina and resulting in a loss of dollar earnings on the order of \$75–100 million (the exact value is difficult

to compute because of a complicated barter arrangement between the two countries as part of the gas agreement). Finally, the Bolivian government began an interdiction effort against narcotics trafficking in the summer of 1986, disrupting the smuggling of coca-based products from the country; and, at the same time, the world price for coca paste fell sharply. A conservative estimate would put the terms-of-trade loss on the order of 10 percent of GDP.

The shortfall in export earnings threatened the stabilization program in several ways. Most importantly, the export shortfall resulted in a sharp contraction in living standards, which is attributed to a significant extent within Bolivia to the effects of the stabilization program itself. With great weakness in the domestic demand for nontradable goods as a result of the decline in national income, there was enormous political pressure to revive government spending, increase public wages, and "reactivate" the economy. Second, each episode of export shortfall provoked public expectations of a devaluation and helped to maintain high short-term nominal peso interest rates as a result of continued speculation against the exchange rate. After the tin price collapse in October 1985, the exchange rate was, in fact, allowed to depreciate by almost 50 percent over a period of two months. After the collapse of world petroleum prices, the authorities pegged the peso exchange rate, despite skepticism of the public, who speculated heavily on a depreciation. Similarly, after the start of the drug interdiction effort in the summer of 1986, the public again speculated heavily against the peso, pushing up short-term peso interest rates once more and converting domestic currency holdings into dollars at the rate pegged by the Central Bank. Once again, the authorities resisted a currency devaluation, but at the cost of further months of high ex post real interest rates.

## 7.2 Interpreting the Rapid Success at Price Stabilization

In his rightly celebrated and influential analysis of the ends of four hyperinflations, Sargent (1982) stressed that hyperinflations end when governments "change the rules of the game" regarding budget deficits and money creation. Sargent argues:

In each case that we have studied, once it became widely understood that the government would not rely on the central bank for its finances, the inflation terminated and the exchanges stabilized. . . . [t]he changes that ended the hyperinflations were not isolated restrictive actions within a given set of rules of the game or general policy. Earlier attempts to stabilize the exchanges in Hungary under Hegedus, and also in Germany, failed precisely because they did not change the rules of the game under which fiscal policy had to be conducted. (89–90)

How does the Bolivian experience fit into this schema?

At a trivial level, Sargent is certainly correct that without a change in budget practices, no noninflationary exchange rate management would have been successful for long in Bolivia. Sargent's real assertion is much deeper, however, in suggesting that the end of the hyperinflation occurs suddenly not just because the inflationary budget or monetary practices change, but also because the public expects and understands that these changes will persist. In other words, the rapid end of the hyperinflation is a signal of a restoration of confidence. At this level, we believe that the Bolivian experience is not strongly supportive of Sargent's view, in that the evidence suggests that stabilization proceeded well ahead of a complete restoration of public confidence.

In our interpretation, fixing the exchange rate was nearly a sufficient condition for a short-run stabilization because so much of pricing was tied to the nominal exchange rate. Moreover, it was possible to fix the exchange rate in the short run *despite the fact that the public lacked confidence in the ability of the government to fix the rate in the long run*. A temporary stabilization of the exchange rate was feasible because the Central Bank was willing to commit at least some international reserves (e.g., Bolivia's gold reserves) to pegging the exchange rate in the short term and because the emergency measures allowed the government to temporarily not have to resort to money creation.

Almost at the moment of stabilization, Central Bank credits to the public sector stopped rising, as revenues jumped in response to the higher domestic prices of petroleum products. During October and November 1985, increases in the money supply were due to increases in Central Bank holdings of foreign exchange reserves. The exchange rate stabilized at 1.1 million pesos per dollar, leading almost immediately to price stabilization. (Actually, the government did not peg the exchange rate, but rather intervened to prevent the rate from *appreciating* above the 1.1 million level. Given the pressures toward appreciation as households started to rebuild real money balances, the one-sided peg of the exchange rate worked as if the government were actually pegging the rate.)

Before showing the evidence that inflationary expectations were slow to decline, let us consider some reasons why we should not be surprised that expectations did not shift dramatically upon the announcement of the program. First, the stabilization program was the seventh attempt in four years and was being carried out by a president without a majority in Congress and with a direct electoral mandate of less than 30 percent of the voters. Second, the program promised many reforms that would take a considerable amount of time to negotiate and implement. Third, the program reflected a radical change from the past policies of the president's own party (which, as the vanguard of the Revolution of 1952, did not have a tradition of *laissez-faire* economics), and so could not be counted on to win the support of the governing party itself.

Fourth, there were profound unknowns at the time of stabilization. The overhang of foreign debt remained crushing, and the stabilization in the intermediate run would remain possible only with new foreign funds from the official creditors. But would the IMF consent to a program without the immediate resumption of interest payments to the commercial banks? Would the Paris Club respond with generous debt rescheduling terms? Internally, the situation was as murky. Under Siles, the central administration had reneged on many financial commitments to regional governments. Would those claims by the regional entities now be honored, thereby threatening the solvency of the central government? Would tax reform measures be implemented? Would the unions be able to crush this stabilization program as they had, in part, the early ones? As of 9 September 1985, there were no budget accounts, reliable tax forecasts, or even statistics on Bolivia's international reserve holdings (the data were in a mass of confusion because of several complications with bilateral payments arrangements with Argentina). There was simply no basis for an informed opinion about the longer-term prospects of stabilization.

### 7.2.1 Inflation Expectations in the Wake of the Stabilization

We have suggested that the hyperinflation ended immediately because of the stability and unification of the exchange rate, even though inflationary expectations, at least regarding the intermediate run, did not drop instantaneously. In other words, the program was successful even though the measures were not immediately credible. The key to this seemingly paradoxical view, we have suggested, is the fact that it is possible to peg an exchange rate in the short run, even if there are widespread expectations that the exchange rate will collapse in the future. There is one excellent source of evidence on exchange rate expectations, and that is from nominal interest rates on peso- and dollar-denominated assets in La Paz in the aftermath of the stabilization. Nominal peso interest rates remained extraordinarily high during much of the year after the beginning of stabilization. Nominal interest rates fell after the stabilization program began, but only gradually and with a long lag in response to the end of currency depreciation. Some data on nominal lending rates are shown in table 7.2.

Under the deregulated financial system in place since the stabilization program began, loans could be contracted in either dollars or pesos, at unregulated interest rates. The spread between peso- and dollar-denominated borrowing reflects mainly the *expected rate of depreciation* of the peso vis-à-vis the U.S. dollar. Note that despite the sudden cessation of price increases in September 1985, nominal interest rates in pesos remained on the order of 20 percent per month from October 1985 to March 1986, compared with dollar-denominated interest rates of 1½ to 2 percent per month. The expectations of continued currency depreciation proved to be appropriate during December 1985 and January 1986, when policy mistakes led to a

Table 7.2 Peso- and Dollar-Denominated Thirty-day Loan Rates, April 1985–October 1986 (beginning of month)

	Peso	Dollar	Ex Post Dollar Rate on Peso Loan	Excess Cost of Peso Loan
1985				
April	34			
May	35			
June	44			
July	50			
August	45			
September (stabilization begins)	45			
October	31			
November	22	1.4	10.2	8.8
December	21	1.6	-6.7	-8.3
1986				
January	19	1.6	-8.1	-9.7
February	20	1.7	34.5	32.8
March	20	1.7	16.8	15.1
April	19	1.7	17.5	15.8
May	13	1.8	13.0	11.2
June	8	1.9	8.4	6.5
July	8	1.9	8.0	6.1
August	8	1.9	7.5	5.6
September	7	1.9	6.8	4.9
October	7	1.8	6.8	5.0
November *	3	1.8		

Note: The ex post dollar rate on a peso loan is calculated at  $(1+i_t)E_t/E_{t+1}$ , where  $E_t$  is the beginning-of-month exchange rate (pesos per dollar) and  $i_t$  is the beginning-of-month  $t$  interest rate.

\*Last week of October.

sharp depreciation of the peso. However, from February to September 1986, the interest rates remained extraordinarily high (see table 7.2), despite the absence of any further currency depreciation. Thus, it is clear from the data that there was *not* a decisive restoration of confidence in the peso at the beginning of the program, despite the fact that ex post, the stabilization succeeded.

Similar evidence against an instantaneous recovery of confidence is offered by the time path of real money balances in the wake of the stabilization program. Holdings of real balances increased only gradually during 1986 and remained significantly below historical levels throughout the year.

### 7.3 Was the Stabilization Recessionary?

The evidence on the recessionary effect of the program is ambiguous, since during the year of the stabilization program the economy was hit remarkably hard by a series of external shocks, whose overall effect was a loss of export earnings on the order of 10 percent of GNP. Such an enormous

loss of export earnings would normally be enough to create a deep recession, even in an economy starting from a position of macroeconomic stability. Moreover, during 1981–85, measured real GDP had declined every year, by 2.9 percent on average, so that the continuing economic stagnation and falling GNP in 1986 could not in any event be attributed easily to the stabilization program.

In the event, GDP fell by 2.9 percent in 1986, but then began rising in 1987 and 1988 (by an estimated 2.3 and 3.0 percent, respectively), despite the sharp fall in the terms of trade. There is absolutely no evidence, therefore, that the effects of stabilization were in any way contractionary—if at all—for more than a very brief period.

It should be stressed in any event that the “austerity” fiscal actions undertaken in ending a hyperinflation are not necessarily contractionary on balance, since the contractionary effects of a rise in tax revenues are balanced by the expansionary effects of the elimination of the inflation tax. Basically, the stabilization program does not involve a rise in overall taxes, but rather a shift from one tax (the inflation tax) to other, more efficient taxes. In addition, the reduction in uncertainty and the elimination of price distortions brought about by the stabilization program should have important supply-side effects.

Moreover, the stabilization program made possible a restoration of net inflows of financial assistance from the rest of the world. Thus, the stabilization measures significantly eased the national budget constraint, if account is taken of the hundreds of millions of dollars of financial assistance that were made available by the IMF, the World Bank, the Inter-American Development Bank, and the bilateral creditors as a result of the success of the stabilization program. We have noted in chapter 1 that as a result of stabilization, the net resource transfer shifted from a significant negative amount (approximately 6 percent of GNP net outflow in 1983) to a large positive amount in 1987 (approximately 5 percent of GNP net inflow).

One possible source of contractionary impulses from the stabilization program has been the high real interest rates in Bolivia since the beginning of the stabilization. As noted by Dornbusch and Fischer (1986), high ex post real rates have been present in the aftermath of most hyperinflations because of a scarcity of money as the demand for money rises sharply following stabilization. We have suggested that the high interest rates reflect lingering inflationary expectations, and so do not necessarily signal high ex ante real interest rates.

### 7.3 Further Lessons from the Hyperinflation

We conclude our discussion of the hyperinflation by discussing some of the central issues that have been debated in the design of stabilization programs and in the interpretation of their success or failure. We turn to two

topics in particular: the case for an "orthodox" versus "heterodox" shock program, and the linkages of short-run macroeconomic policy and long-run structural policies.

### 7.3.1 Orthodox versus Heterodox Anti-Inflation Programs

Much of the debate in Latin America in recent years has centered on the question of the appropriateness of "orthodox" policies in ending a high inflation. Advocates of the "heterodox" shock approach have argued that tight monetary and fiscal policies alone are insufficient to end a high inflation. They suggest that incomes policies, wage and price controls, and even monetary reform should play a central role in a stabilization program.<sup>1</sup> Extreme advocates of heterodoxy go even further: they suggest that orthodox policies have no role to play in inflation stabilization. In this view, inflation is an "inertial" process, in which prices and wages rise because of self-fulfilling expectations. The goal of policy, in that view, is to break those expectations through wage and price controls.

The Bolivian experience sheds some light on this debate, although the lessons from Bolivia must be read with care. The most obvious point is that Bolivia was successful in stabilizing inflation without recourse to any elements of heterodox wage or price policies. There were no wage or price controls, and no monetary reform. Indeed, at the beginning of the program, virtually all existing price controls were removed, with the goal of liberalizing the price system.

In this sense, it is clear that orthodox policies were sufficient to end the hyperinflation. And as already indicated, the end of the inflation was virtually instantaneous, with the runaway inflation being eliminated in a matter of a couple of weeks and remaining low for several years. This success stands in sharp contrast to the failed "heterodox" plans in Argentina, Brazil, and Peru. In those countries, inflation was held down by the stabilization programs for a few months, only to explode at very high rates after a short period of time.

The long-term success of the Bolivian program compared with the failures elsewhere is clearly related to the greater fiscal stabilization achieved in Bolivia, and thereby in the lesser recourse to money financing of budget deficits. The links between the budget deficits and inflation in all of the countries mentioned is clear enough. Large deficits are financed by money printing, which in turn causes a downward pressure on the foreign exchange rate. If the exchange rate is allowed to depreciate, then the domestic prices of tradable goods (importables and exportables) rise in line with the exchange rate depreciation. If the exchange rate is pegged in order to avoid the inflationary consequences of depreciation, the central government loses reserves over time, which eventually forces it to devalue the exchange rate, but at a later date.<sup>2</sup>

Typically, as happened in Argentina, Brazil, Peru, and Bolivia during 1982-85, the government tries to avoid outright depreciation or devaluation of the exchange rate, even as it runs out of reserves. Rather than devalue the official rate, the government rations foreign exchange, thereby creating a spread between the official exchange rate and the "market" (black or parallel) rate. In the end, the inflationary consequences are the same as if an official devaluation had occurred. *On the margin*, imports are purchased at the highly depreciated black-market rate, so that the internal prices of importables rise in step with the depreciated black-market rate, rather than the official exchange rate. Eventually, the gap between the official and the depreciated black-market rate becomes so large and produces so much cheating and corruption (in the form of overinvoicing of imports and underinvoicing of exports, bribes to get Central Bank allocations of foreign exchange, etc.) that the official exchange rate is grudgingly devalued.<sup>3</sup>

Of all of the high-inflation countries in Latin America in the 1980s, only Bolivia after 1985 was able to break this circle of budget deficits, depreciating currency, and high inflation. The orthodox tight monetary policies in Bolivia, made possible by a major reduction in the budget deficit, was the key that allowed Bolivia to maintain a stable and unified exchange rate vis-à-vis the dollar. In other countries, the large budget deficits that continued after the stabilization programs were put in place prevented the establishment of a stable and unified exchange rate for any period longer than a few months.

While the Bolivian case illustrates powerfully the need for significant budgetary adjustment, it does not really settle the case for or against wage and price policies *in addition to* the more orthodox budgetary policies. In Bolivia, inflation stopped immediately without any additional "heterodox" pricing policies, but we should not make overly strong inferences from this. Part of the Bolivian experience reflects the special characteristics of a hyperinflation rather than a mere high inflation.

In Bolivia, the inflation ended as soon as the exchange rate was stabilized because the preceding hyperinflation had eliminated all long-term price contracts from the Bolivian economy. By August 1985, most prices in Bolivia were set on a spot-market basis. Often, the prices were quoted in dollars, with the Bolivian peso price being determined by the dollar price multiplied by the black-market exchange rate at the moment. In these circumstances, inflation is basically equal to the rate of depreciation of the black-market exchange rate. If the exchange rate can be stabilized, inflation will immediately revert to the rate of increase of *dollar* prices. Indeed, in early September 1985, the exchange rate stopped depreciating and the Bolivian inflation was over.

In other countries, however, it may happen that the exchange rate is stabilized but that domestic prices continue to rise. Such was the case of



Chile during 1979–81.<sup>4</sup> The difference between Bolivia and these other cases seems to lie in the nature of hyperinflation, in which all vestiges of long-term pricing in the domestic currency disappear. For less rapid inflations, staggered price contracts denominated in the domestic currency, or backward-looking indexation to the domestic CPI, can break the tight link between inflation and the exchange rate. Thus, countries with high inflations but not hyperinflations might be wise to combine exchange rate stabilization with other pricing measures in order to achieve a rapid return to price stability.

The 1985 Israeli stabilization is a clear example of the combination of orthodox stabilization policies combined with elements of “heterodoxy” in order to achieve a rapid disinflation. As in Bolivia, the key to Israel’s stabilization program was a dramatic and sudden cut in the budget deficit. And as in Bolivia, the stabilization of the exchange rate provided the “nominal anchor” in the stabilization, that is, the key price whose fixity was central to price stability throughout the economy. But in Israel, as opposed to Bolivia, the government also negotiated an agreement with the Histadrut, the national trade union movement, which called for a short-term freeze of wages and prices. Notably, the union agreed to this freeze *conditional on the continued stability of the nominal exchange rate*. Thus, as in Bolivia, the Israeli stabilization was, at the core, built upon nominal exchange rate stability.

### 7.3.2 Stabilization and Structural Adjustment Policies

One of the continuing debates among economists and policymakers is the appropriate mix of “stabilization” policies (budget cutting, tight monetary policy, etc.) with “structural” policies (trade liberalization, privatization, etc.). Some argue that stabilization should precede structural adjustment policies, while others say that the stabilization and structural adjustment policies should be pursued in parallel. Once again, the Bolivian case sheds some light on these arguments.

The Bolivian stabilization program began with the remarkable presidential Supreme Decree 21060, which instituted a wide-ranging liberalization program in conjunction with the short-run stabilization measures. It is important to understand the motivations for this joint action. To a significant extent, to be sure, the designers of the stabilization program were aware that Bolivia needed to undergo major structural adjustments, especially to develop new export markets, in order to compensate for the long-term secular decline of Bolivia’s major export, tin. But the motivations for the liberalization went beyond the textbook arguments for outward trade orientation and an efficient allocation of resources.

The designers of the stabilization program were aware of the enormous administrative overload that Bolivia’s model of state capitalism had created.

The state sector was not only financially bankrupt but administratively bankrupt as well. There was little administrative capacity to carry out the most basic functions of government, much less to implement a refined program of industrial policy based on an elaborate scheme of price controls, transfers, and subsidies. Price controls that were in place were haphazardly enforced, subject to enormous corruption, and often had bizarre and unintended consequences. Grain subsidies, for example, resulted in enormous smuggling of flour to neighboring countries and the enrichment of millers, rather than any significant benefit to the poor.<sup>5</sup> Significant amounts of cheap gasoline were being smuggled in tanker trucks across the border with Peru. Cheap credits to agriculture were simply fueling the black market, rather than creating any additional agricultural output. Under these circumstances, much of the economy was already de facto liberalized, with many prices—even those under formal controls—effectively being determined by world market conditions. Price controls often had bizarre and regressive effects, with powerful or clever middlemen able to arbitrage the gaps between official prices and world prices.

For these reasons, the liberalization of prices was viewed as a basic part of the *short-term* stabilization strategy, as well as a part of the long-term development strategy. By freeing up prices and withdrawing from the business of setting a wide range of quotas and prices, the government therefore hoped to accomplish many things: to free top government officials to focus on the crucial fiscal measures in need of immediate implementation; to eliminate many of the costly and distributionally perverse income transfers implicit in the existing system of price regulation; to reduce the need to monitor government policies, so that the scarce administrative machinery could focus on tax collection and budget cutting rather than on the administration of a complicated system of wage and price controls; and finally, to send the right price signals needed to encourage the movement of resources into new tradable sectors.

As discussed below, the long-term structural adjustment to the liberalization policies is still in the early phases, despite several years of stabilization. While there has been some rise in nontraditional exports, there have still not developed major new export sectors that can compensate for the collapse of tin exports. Bolivia has still not generated the needed internal savings to finance the development of a major new export sector, and external savings are unlikely to make up the difference in view of Bolivia’s enormously high country risk. At the same time, Bolivia remains stuck without its most obvious new market: Brazil. It is only very recently that Brazil has shown an interest in easing its heavily protectionist policies to allow an increase in imports from Bolivia.

## 8 Bolivian Debt Management, 1985–88

We saw in the previous chapter that the cutoff in foreign lending to Bolivia in the early 1980s, combined with heavy debt-service payments during 1982–84, was a key factor in provoking the Bolivian hyperinflation. The commercial bank debt payments were unilaterally suspended in May 1984 by the Siles government at the insistence of the COB, the trade union organization. When President Paz came to office, the key intention with respect to the foreign debt was to avoid a resurgence of inflation that could be caused by a return to heavy debt-service payments.

The Paz government began negotiations with its various creditors on a differentiated package of debt relief. With respect to the IMF and the World Bank, there was no prospect of debt relief via reschedulings, since those institutions do not reschedule their debts. Thus, the government attempted to arrange new credits that would offset the debt servicing, thereby leading to a net resource inflow from these institutions. With respect to the bilateral creditors, the intention was to get a fully negotiated postponement of interest and principal payments through a settlement in the Paris Club and to arrange for net new credits from friendly governments.

Finally, with respect to the commercial creditors, the goal was essentially to get a new kind of settlement on the debt that would eliminate Bolivia's debt overhang and obviate the need to make economically and politically destabilizing net transfers to the bank creditors. In the event, Bolivia has maintained a suspension of interest servicing to the bank creditors since 1985 and negotiated a novel "debt buyback," which eliminated approximately one-half of Bolivia's commercial bank debt by the end of 1988.

In this chapter we analyze both the conceptual underpinnings and the nature of negotiations that led to the Bolivian buyback, as well as discuss briefly the nature of Bolivia's settlement with the other creditors.

The chapter continues in three sections. In the next section, we explain why a comprehensive debt reduction mechanism, such as a debt buyback, can be highly desirable for the creditors as well as the debtor. Then, we describe the negotiations and implementation of the Bolivian buyback and argue that, indeed, the arrangement has been of benefit to the creditor banks as well as to Bolivia. Finally, we briefly describe the favorable debt relief that has been achieved by Bolivia in negotiations with its other creditors.

### 8.1 The General Theory of Debt Reduction Operations

If a country owes \$1 billion on which it can only pay an expected \$50 million, the country may suffer enormous costs from being unable to pay the

full amount due. It will face a great difficulty in new borrowing, even for highly productive investments.<sup>1</sup> It will face high bargaining costs in handling the \$1 billion of bad debt.<sup>2</sup> And, it will face sanctions from disgruntled creditors (e.g., a withdrawal of trade credits) that will hinder its future economic performance.<sup>3</sup> In addition, there will be a major internal disincentive to economic reforms which increase the debt-service capacity of the country, since the costs of reform are borne by the country, while many of the benefits of reform will be appropriated by the creditors (who receive higher repayments in the event of reform).<sup>4</sup>

For these reasons, it may well be beneficial for the country to pay an amount even more than the \$50 million (in present value terms), in order to cancel the overhang of \$1 billion of mostly bad debt. It will also be generally advantageous for the creditors to accept a partial payment on the debt, as long as it is in excess of the \$50 million expected payments. The partial payments could come in the form of a direct cash buyback (especially if the country can borrow the funds for the buyback from friendly governments) or some other arrangement where future debt payments of over \$50 million are guaranteed by the debtor country. A cash-starved country would obviously prefer to find ways to make the present value of payments in the future, rather than with current cash.<sup>5</sup> By eliminating the overhang, the country would avoid the costs of default and regain the incentives for internal reform.

In practice, even mutually advantageous debt reduction schemes (in which the debtor clears the debt overhang and the creditors raise the total value of payments that they receive) are hard to negotiate under the current debt management strategy of the IMF and the creditor governments. There are several decisive reasons why even mutually beneficial deals have not taken place. First, the few very heavily exposed banks have an inherent incentive to reject buyback deals, even when they are efficient from the point of view of the banks as a whole (i.e., when they raise the market value of overall debt repayments).<sup>6</sup> Second, the U.S. government is the main arbiter of the kind of deals that take place, and it has vetoed almost all comprehensive debt reduction schemes, on behalf of the most-heavily exposed money center banks. Third, for the smaller countries, the debt negotiations are guided by the creditors' concerns over precedent for the large debtors, rather than for the efficiency of the outcome for the small debtor. It is generally best to "strangle" a little country, even at the expense of the country's debt servicing, if it sends a convincing signal to Brazil and Mexico to keep paying their debt.

### 8.2 The Bolivian Buyback

The Bolivian buyback must be understood against the following background. Bolivia was the only case up to 1988 in which the U.S. government actually supported a policy of debt relief, though it came to that

position only after long and difficult negotiations with the Bolivian government.<sup>7</sup> The strategy has been highly beneficial for all parties, according to the theory of the "debt overhang" outlined earlier. Bolivia, alone of the high-inflation countries in the Southern Cone, has been able to stabilize and to resume growth because it has not been trapped by excessive debt repayments. There has also been a restoration of political stability in the country after the chaos and virtual anarchy of hyperinflation during 1984–85.

After the Paz government came to power in mid-1985 and undertook remarkable stabilization efforts to halt the hyperinflation, it remained official U.S. and IMF policy in the spring of 1986 that Bolivia should *resume* interest payments on its foreign bank debt. Indeed, in March 1986, only two months after price stability had been restored to the country, the IMF was urging a large devaluation in Bolivia in order to facilitate increased interest payments to the commercial banks. The Bolivian government was convinced that such a move, in addition to destroying the economic and political basis of the stabilization program itself, would cause a collapse of the government.

Instead, the Bolivian government urged a different approach in discussions with the U.S. government and the IMF.<sup>8</sup> Ultimately, the IMF agreed to treat the Bolivian case on its own merits and acknowledged that Bolivia's foreign bank debt could not be paid (at least, not without undermining economic and political stability in the country).<sup>9</sup> The IMF also agreed to grant Bolivia a program based on its successful stabilization efforts, despite the fact that the Bolivian government had not reached any understanding with the commercial bank creditors. This was the first time that the IMF loaned money to a debtor country that did *not* plan to make interest payments to the commercial banks (or even to clear the arrears on back payments).

In late 1986, the banks began to discuss with Bolivia a longer-term solution to Bolivia's debt overhang, once they saw that the U.S. government and the IMF were not going to defend the banks' position vis-à-vis Bolivia. Moreover, for several years, the U.S. regulators had been forcing writedowns of Bolivian debt in the banks' books, thereby eliminating any important incentives that the banks might have had to hold on to the debt. After two years of complicated discussions and legal work, the buyback was arranged. Note that during the entire period of discussions, Bolivia did not pay any interest to the commercial banks. At the same time, Bolivia received large net resource transfers (on the order of about 5 percent of GNP per year) from the official creditors.

As mentioned earlier, Bolivia repurchased with the buyback about one-half of its debt at 11 cents per dollar of face value. The money used for this purpose was donated from foreign governments. While some of the money might otherwise have come to Bolivia as foreign aid in other forms, much of

it would not (of the \$34 million spent on the buyback, Bolivia might have been able to get \$15–20 million of the money in other forms of aid).

It might appear that the buyback could not have had much of a beneficial efficiency effect on Bolivia, since the country only repurchased one-half of the debt and the remainder still sells for 11 cents (indicating that most of the remaining debt also will not be paid, thus leaving Bolivia in a situation of default). But this abstract analysis misses the real point of Bolivia's situation post-buyback. Under current U.S. and IMF policy, Bolivia is not being pressed on the remaining part of the debt, except to settle that remainder on a similar basis to the buyback.<sup>10</sup> In effect, the official community is recommending a gradual process in which Bolivia will clear *all* of its commercial bank debts at a price of about 11 percent of face value, and the process seems to be occurring: after the buyback, Bolivia has continued to repurchase debt at the buyback price, through individual deals with creditor banks. Meanwhile, as this process goes forward, the official community has agreed not to impose sanctions on Bolivia for nonpayment on the remaining bank debt.

Was the debt strategy of the IMF and U.S. government successful in the case of Bolivia? The answer is a resounding yes, for *all of the parties concerned*. In effect, in 1986 the official community recognized the futility of trying to press Bolivia to pay unpayable debt. As a result, the Bolivian government got the time and international support to put in place a remarkably strong and effective stabilization program that has ended a hyperinflation and restored growth to the country for the first time in almost a decade. Bolivia's political stability has been enhanced, as have its democratic institutions. The creditors as a whole benefited as well, as shown by the fact that Bolivia's debt rose in value from 5 to 11 cents per dollar. This increase in the price of debt was not a giveaway by Bolivia.<sup>11</sup> It reflects, instead, the creditors' share of the remarkable turnaround of the Bolivian economy, from the worst in the world during the early 1980s (with the world's highest inflation in forty years) to one of stability and incipient recovery in 1988.

Bolivia's success story depended strongly on the supportive actions of the U.S. government and the IMF in providing a framework in which Bolivia could successfully negotiate with its bank creditors. Effective progress for other debtor countries will require similar *official* forbearance. As the Bolivian case has demonstrated, the debtor as well as the creditors (at least taken as a group) can benefit strongly from a realistic approach to comprehensive debt reduction.

### 8.3 Bolivia's Relations with the Official Creditors

The key to Bolivia's debt strategy has been to maintain good financial relations with official creditors while at the same time pursuing debt reduction with the banks. To this end, Bolivia has kept current in payments

to the IMF, World Bank, and Inter-American Development Bank; negotiated two standby programs with the IMF for 1986–87 and 1987–88, and a three-year Structural Adjustment Facility with the IMF for 1988–90; negotiated several loans with the World Bank on concessional terms (from the International Development Association fund); and renegotiated the debt with the Paris Club on highly favorable terms in 1986 and 1988.

The result has been a *positive* net resource transfer from the official creditor community at the same time that Bolivia has had essentially a zero net resource transfer to the banks. The relevant data are shown in table 8.1, where we see that after the stabilization program went into effect in 1985, Bolivia succeeded in *reversing* the overall net resource transfer by an elimination of net outflows to the banks and a reversal from outflows to inflows from the official community.

Table 8.1 Net Resource Transfers on Medium- and Long-Term Debt, 1982–87 (\$ million)

Type of Creditor	1982	1983	1984	1985	1986	1987
Official	71	14	-53	-86	195	81
Multilateral	56	45	1	-41	142	69
Bilateral	15	-31	-54	-45	54	33
Private	-132	-149	-49	-30	-11	-9
Suppliers	-7	-17	-2	-4	-3	-1
Financial markets	-125	-132	-47	-26	-8	-8
Total	-61	-135	-102	-116	184	72
Net transfer as % of GNP	-2.0	-4.6	-3.4	-3.6	4.8	1.7

Source: World Bank Debt Tables, 1988–89 edition.

## 9 Beyond Stabilization to Economic Growth and Development

The Bolivian stabilization has eliminated much of the panic conditions that surrounded the hyperinflation in 1984 and 1985. Also, significant progress has been made in easing the external debt overhang. Virtually complete price stability has been reestablished in Bolivia during 1987 and 1988. It is evident, however, that many of the deeper problems in the Bolivian economy and society that helped to cause the hyperinflation remain in place, and in

some cases have deepened. We now mention some of the challenges that remain in converting the current stabilization period into the first phase of sustained economic development.

The end of the hyperinflation did not bring a sudden rejuvenation of the economy. Real growth during 1987 and 1988, while positive, was not even enough to maintain real living standards. Indeed, it is fair to say that once the hyperinflation was lifted, Bolivia's desperate underlying situation became even more apparent.

We noted in the introduction that Bolivia has survived for hundreds of years on the exports of a few commodities: silver until the nineteenth century, tin during the twentieth century, and natural gas and (illicit) coca paste in the 1980s. None of these commodities can continue to act as the engine of growth of the Bolivian economy. Silver and tin deposits have been heavily mined, and remaining exploitation of these minerals will have to be on a smaller and much more technologically advanced basis. Tin mining in Bolivia had already become unprofitable at \$5.60 per pound, the price that prevailed before the collapse of the world tin market in October 1985. At the post-collapse price of about \$3.00 per pound, the Bolivian government was forced to lay off most of the tin miners, and Bolivia now stands little chance of maintaining significant amounts of tin exports.

Natural gas is almost as problematical. The price on Bolivia's natural gas exports to Argentina was slashed sharply after the collapse of world petroleum prices in early 1986. What is more, Bolivia's export contract with Argentina expires in 1992. In view of Argentina's recent large discoveries of natural gas deposits, it is quite possible that the gas contract with Bolivia will be suspended after 1992 or at least renegotiated on a much smaller scale.

Coca paste is the most problematical and ironical case of all. As mentioned in chapter 1, starting in the early 1980s, when U.S. demand for cocaine soared, Bolivia was pulled into the extensive cultivation of coca leaf, the raw material input of cocaine. The coca leaf is processed into coca paste, a precursor of pure cocaine, and is then smuggled to Colombia. In the mid-1980s, it was estimated by the U.S. Drug Enforcement Authority (DEA) that Bolivian foreign earnings on coca paste exports roughly matched the sum total of all legal Bolivian exports.

Bolivia has demonstrated a natural comparative advantage in coca cultivation. The climate of the Yungas and Chapare regions of the country are well suited to coca cultivation, and coca leaf has played an important role in the Andean culture for centuries. Illegal narcotics traffickers have demonstrated an enormous entrepreneurial activity in mobilizing resources into the sector, developing transportation and communications lines, etc.

And yet, of course, the industry has been a disaster for the country from almost all points of view. It has encouraged the development of an internal mafia, linked with an international mafia of traffickers. This internal mafia

poses life-and-death risks for Bolivia's democratic institutions and civil society. Coca cultivation has jeopardized Bolivia's foreign relations with the United States and other industrialized countries.<sup>1</sup> It has thereby created enormous uncertainties, as the U.S. government has repeatedly threatened to suspend foreign aid and international support to Bolivia.

Coca production has also drained economic vitality from other economic sectors à la the "Dutch disease."<sup>2</sup> It has debilitated the tax system, since a "leading sector" is outside of normal tax collection.<sup>3</sup> Hundreds of thousands of well-organized (and in many cases well-armed) peasants now derive their meager livelihood from the cultivation of coca leaf, meaning that any plan for limiting coca cultivation must confront an enormous political and economic challenge from a large part of the population. Despite all of this, the Bolivian government has devoted a large share of its scarce resources and political capital to reducing coca cultivation and trafficking.<sup>4</sup>

For these reasons, Bolivia must now develop a new export base, indeed a completely new economic orientation, one that is a radical departure from its entire past history. As the planning minister, Gonzalo Sanchez de Losada, has said many times, "Bolivia must reinvent itself." The basic strategy is to follow the lead of the outward-oriented developing countries: make the environment fertile for new exports, and then wait to see which industries respond to the incentives. Few observers could foresee that Chile's brisk growth in recent years would be based on kiwi exports or that Korea's export surge in the 1960s would be initiated with the export of wigs to the U.S. market! The key policies for promoting the new export base in Bolivia are a realistic exchange rate, an open trading system, and—budget permitting—fiscal incentives for nontraditional exports. Bolivian export potential seems to be greatest in three broad areas. First, there is obvious potential in agricultural exports. The Bolivian lowlands in the East offer a vast and fertile area for grains (e.g., soybeans), tropical fruits, cut flowers, timber, etc. Bolivia has already begun to make soybean exports to world markets since the mid-1980s. Second, there is the potential for light manufacturing (e.g., yarns, textiles, furniture), especially for export to the Brazilian market. In July 1988, Brazil and Bolivia signed a new trade accord to open up some of the Brazilian market to new Bolivian goods. Third, there is the remaining potential in the mining and petroleum sectors. With new technologies for secondary recovery, some old silver and tin mines might once again become profitable. There also remains the potential, long under discussion, for a natural gas pipeline to Brazil.

All of these new industries will require time, learning, and, above all, heavy investment expenditure. In turn, the investments must be predicated on a long period of social peace and political stability. Whether that stability can be achieved is certainly Bolivia's most important question. There remain

three sociopolitical cleavages that are serious obstacles to economic stability and long-term growth: income distribution, ideology, and region.

The income distributional cleavage remains profound and is the source of considerable political conflict. The key political problem is to moderate the nearly continuous confrontation between powerful social groups, such as organized labor and private capital, and the various regional forces. The state-capitalism model attempted to finesse the income distribution problem through a combination of the inflation tax, heavy foreign borrowing, or internal repression of the lower classes. None of these alternatives is workable for a long-term development strategy.

A key to a more equitable distribution of income in Bolivia is an increased tax burden on the higher income individuals. Rather than balancing the budget by eliminating the basic services of the state, such as health and education, considerations of equity and stability require that the government make increased efforts to secure an adequate tax base on the higher incomes. This might include a tax on land holdings and higher taxes on luxury consumption goods. A second key to a more equitable distribution of income would be greater public spending on education in the rural sector, where most of Bolivia's poorest citizens live. Investment in the human capital of the rural peasantry is essential for long-term economic development.

The second division to overcome is ideological, involving competing conceptions of the role of government. With the evident failures of state capitalism in the past two decades, there is a temptation on one side for a strict laissez-faire economic approach and, on the other side, for a fortified socialism. A more modulated approach is more likely to succeed. Such an approach would recognize the government's responsibilities for infrastructure and social investments in health and education, but also recognize the limitations to the role of the state in the productive sector. Part of the push toward laissez faire in Bolivia is a frank acknowledgement of the limited capacity for honest, capable public administration in the country. But this limitation could be lessened by a concerted effort to raise the standards and capacity of the state bureaucracy. A determined effort at improved training of civil servants is vital in this regard.

The third division is sectoral and regional. As we have noted, export diversification will require a change in emphasis to agriculture and light manufacturing, which in turn will surely entail some geographical shift in the locus of economic activity from the highlands to the lowlands. This kind of shift can be politically bruising and destructive if not handled with foresight and planning. The government will have to tread carefully between goals of allocating investment expenditures heavily toward the new sectors and regions, and the need to distribute the burdens and benefits of public spending in an equitable manner.

## Notes

### Chapter 1

1. The hyperinflations in Peru (beginning in 1988) and in Argentina (1989) are the only other hyperinflations that did not occur following a war or revolution.

2. The inflation rate for the hyperinflation is measured as the twelve-month change for August 1985 over August 1984. The 1986 measure is December 1986 over December 1985.

3. See Malloy 1970 for an authoritative account of twentieth century Bolivian history before the Revolution, with an emphasis on the secular decline of the tin sector starting in the late 1920s.

4. There are several questions about the quality of the Bolivian National Accounts. Reported figures by the Central Bank of Bolivia differ, substantially in some cases, from those published by the IMF and the World Bank. Even more surprising, there are significant differences between the IMF and World Bank data. In the book, National Accounts data up to 1979 are sourced in Central Bank data because they are more complete. The discrepancies with other sources are relatively minor. We have preferred, in general, World Bank data for the period after 1980. It should be mentioned that the Central Bank substantially changed its methodology of national accounting after 1980. The new data seem to invite a thorough revision.

5. Coca production and consumption by Indian peasants in the Bolivian highlands have a secular tradition. Coca is used to fight hunger and the effects of physical stress in populations with very low standards of nutrition. Curative properties of coca leaves have also been known in the urban centers of Bolivia for centuries: brewed coca leaves are used regularly to cope with minor ailments as diverse as high-altitude sickness and toothaches. Many Bolivians, even in the cities, consider coca a miraculous plant. It must also be added that coca plants have a natural habitat in altitudes ranging between 1,000 and 2,000 meters. Bolivia has great extensions of land on those altitudes. Productivity there is very high, and little capital investment and labor are needed to grow the coca shrubs. Cropping and marketing are, however, very labor intensive, and most of the costs are incurred in those phases. High prices for the end-product coca usually mean high revenues for everybody in the chain, from middlemen to hitherto impoverished peasants. This partially explains why eradication is so unpopular, especially with poor peasants.

6. Bolivia briefly exported oil in the 1970s, but rising internal demand and falling reserves eventually led to an elimination of oil exports. Bolivia has continued to be a natural gas exporter to Argentina, but financial relations with Argentina have been unsettled since the mid-1980s, with continuing disputes between the countries over prices, volumes, and repayments schedules. In 1987 and 1988, Argentina went into arrears on payments to Bolivia, resulting in a serious loss of public sector revenues for Bolivia.

### Chapter 2

1. The Bolivian Revolution is a complex event that defies easy summary. It has been the object of excellent studies both in the United States (e.g., Malloy 1970; Malloy and Borzutsky 1982) and Bolivia.

2. In addition, the key political development of universal suffrage was also established.

3. From the very beginning there was technical and managerial trouble, adding a heavy burden to the fiscal budget and penalizing the mining sector, which was obliged to sell all of its ores to ENAF, the state enterprise that controlled the tin smelters. It should be noted that the construction of the tin smelters had been envisaged for decades, but private cost-benefit analysis had suggested the unprofitability of the operation. In the long run, it is possible that improvements in technology and especially in management could lower the costs of operation sufficiently to justify the project, but this has yet to happen.

4. In 1967, guerrilla units commanded by Ernesto "Che" Guevara were defeated by the Bolivian Armed Forces, supported by U.S. intelligence and combat units. In the following years, there were several attempts, most of them by university students, to reorganize the guerrillas.

At the time of the coup d'état of August 1971, there were rumors of a strong Brazilian influence and even intervention among the military. This in itself would not be surprising in view of the place of Brazil in the geopolitics of the region. What is more important is the fact that the Brazilian model of development was regarded as the paradigm in economic matters by the new authorities.

5. Paz Estenssoro broke away from the government in 1973 because of the small (and diminishing) role given to him and his party in the bureaucracy and in policymaking. FSB was a junior party in the coalition and it was dropped noiselessly after one of its leaders tried to stage a coup d'état in the eastern city of Santa Cruz. In spite of the rupture with the MNR and the FSB, Banzer retained in his bureaucracy some of the technocrats of both parties. Many of them would later join Banzer's new party, the Acción Democrática Nacionalista (ADN).

### Chapter 3

1. A good rationalization of this point can be found in the Estrategia Nacional de Desarrollo y Plan Cuatrienal (Ministry of Planning, Bolivia, 1984), 45-52.

2. Planning and a high degree of government intervention in the economy have a relatively long history in Bolivia. The extreme dependency on tin and the vagaries of that market in the 1930s led already in 1942 (in the so-called Bohan Plan) to a recommendation for government-induced production diversification and the opening of the eastern lowlands to modern agriculture and oil exploration. A United Nations mission in 1950 similarly recommended more planning and a more active governmental role in the economy and in the provision of social services. The MNR tried to implement this and Bohan's advice after the Revolution of 1952. When President Kennedy created the Alliance for Progress program, one of the conditions to have access to the development funds provided therein was to have a national development plan. In 1962 the Paz Estenssoro administration announced a ten-year plan of economic development. At the core of this plan, there was a set of policies to promote an orderly recovery of tin exports to their pre-1952 levels. Some lip service was also paid to import substitution. One of the most important features of the ten-year plan resides in its investment program. Investment was to be oriented to the provision of social overhead to support production. With the exception of the needed funds for COMIBOL, little else was allocated for the direct involvement of government in production. The plan was also innovative in its basic needs approach to alleviate extreme poverty. In regard to the sources of financing, the plan emphasized the need to increase domestic savings. However, no specific measures

were included. Also in the plan there is an underlying two-gap model with a clear recognition of foreign exchange bottlenecks.

3. In contrast, the 1962 ten-year plan insisted more on social overhead investments for the peasantry holding individual plots of land.

4. In some other cases, such as the one with gasoline and other fuels, the public enterprises directly provided the subsidies to the consumer public. Those subsidies were not, however, deducted from the tax liabilities to the Treasury.

5. This discussion is based on F. Machicado (1987).

6. This discussion is also based on F. Machicado (1987).

#### Chapter 4

1. PPX measures the real volume of imports that can be purchased using the proceeds of export sales. The index is constructed as follows:

$$PPX_t = [P_{xt} * X_t / P_{mt}] / [P_x * X / P_m]_0 * 100,$$

where year zero is the baseline year (1980) in table 4.1,  $P_x$  is the price of exports,  $P_m$  is the price of imports, and  $X$  is the volume of exports. Note that movements in PPX can be decomposed into movements in the terms of trade and movements in the volume of exports:

$$PPX_t = [(P_x/P_{mt}) / (P_{x0}/P_{m0})] * (X_t/X_0).$$

Bolivia in fact suffered large declines in the volume of exports (which fell by 31 percent between 1980 and 1988) and in the terms of trade (which fell by 11 percent between 1980 and 1988), according to the 1988 data of ECLAC, tables 8 and 10.

2. The foreign trade policies between 1964 and 1978 are discussed in detail in Morales (1982).

3. Contraband color television sets, personal computers, stereos, and even automobiles have been sold in the open market in the most important Bolivian cities at below international prices since the mid-1970s. Allegedly, this is possible because those contraband imports serve to launder drug money (or "coca-dollars").

4. The system of prior import deposits consisted of a 120-day deposit in Bolivian pesos in the domestic banking system to which the private importers were liable. The deposit had to be equal to a given percentage, with a ceiling of 25 percent, of the CIF value of the imported goods. These deposits did not earn interest and were subject to a 100 percent reserve requirement.

5. The government tried, in doing so, to avoid a confrontation with the IMF, since most forms of administrative allocation of foreign exchange could have been judged a violation of Article VIII of the Articles of Agreement of the IMF. Registration of the demands for foreign exchange had a mild deterrent effect on capital flight.

6. The use of the foreign exchange system for several functions other than equilibrium in the foreign exchange market has been very clearly stated by Cooper (1971, 10-13).

7. Errors and omissions picks up capital flight that corresponds to measured exports and imports (i.e., when measured exports do not contribute to a rise in foreign exchange reserves or other measured foreign assets, the discrepancy appears in errors and omissions). However, underinvoiced exports or wholly uncounted exports (e.g., cocaine) will contribute to capital flight that is unmeasured by errors

and omissions. It is true that understatement of imports may lead to an overstatement of capital flight, but in the Bolivian context, the understatement of exports (particularly drug-related ones) is likely to exceed the understatement of imports.

8. When the UDP government took office in the fall of 1982, one of the first measures taken was to eliminate the use of dollar-denominated contracts in the financial system. All deposits and liabilities that had been dollar-denominated were obliged to be converted into peso-denominated assets at a stated exchange rate. This led to a massive disintermediation of the banking system and to a flight for safer assets, particularly foreign exchange and other foreign assets.

#### Chapter 5

1. In 1982, according to the *World Bank Debt Tables*, the MLT public debt constituted 87 percent of the total external debt of Bolivia. The same ratio in 1985 was 82 percent. These data suggest that the MLT public debt is by far the most important component of total external debt.

2. To some extent, the effective subsidy to debtors was paid for by an effective tax on depositors. Specifically, depositors with dollar-denominated claims on the banks had their claims converted into pesos at a disadvantageously low exchange rate. This helped the banks to absorb the costs of converting their claims on private sector debtors from dollars to pesos at the same disadvantageous exchange rate.

3. This legal argument has frequently been employed in the internal political discussions on the debt, particularly by advocates of unilateral debt suspension.

4. A complete evaluation of the National System of Projects appears in JUNAC (1985).

5. Among them was the investment banking firm of Salomon Brothers.

6. The four tranches and the terms of the refinancing were as follows:

Tranche IA: Short-term debts past due between August 1980 and April 1981. Maturity of 3½ years and a grace period of 1 year. Interest charges at LIBOR + 2 percent.

Tranche IB: Medium- and long-term debts having reached maturity between April 1980 and April 1981. Maturity of 6 years and a grace period of 2 years. Interest charges at LIBOR + 2¼ percent.

Tranche II: Medium- and long-term debts reaching maturity between April 1981 and April 1982. Maturity of 5 years and a grace period of 4 years. Interest charges at LIBOR + 2¼ percent.

Tranche III: Medium- and long-run debts reaching maturity between April 1982 and May 1983. No agreement was reached on maturity or grace period. Interest charges at LIBOR + 2¼ percent.

In addition to these terms, Bolivia was charged a myriad of fees and organization costs: a once-and-for-all flat fee of 1 percent of the rescheduled debt for the coordinator bank; an annual fee of U.S.\$49,000 for the coordinator bank; a fee of 0.375 percent on tranche IA and 1.125 percent on tranches IB and II; and all organizational and legal expenses.

#### Chapter 6

1. If hyperinflations are ranked by their maximal inflation rates over half-year calendar intervals (January-June, July-December), the Bolivian hyperinflation ranks

seventh in the twentieth century, following: Hungary (1946:1), Greece (1944:2), Germany (1923:2), China (1949:1), the Soviet Union (1922:1), and Poland (1923:1).

2. Cagan defined the beginning of hyperinflation as the month in which inflation exceeds 50 percent, and the end of hyperinflation as the month in which inflation last exceeds 50 percent and is then followed by twelve months of less than 50 percent inflation.

3. In this case,  $m$ ,  $e$ ,  $\bar{e}$  are measured at the end of the month;  $\pi_t$  is the change in the monthly price level. Ideally,  $p_t$  should be an end-of-month price, with  $\pi_t = P_t - P_{t-1}$ . Since prices are available only on a monthly average basis, end-of-month prices for month  $t-1$  are proxied by a geometric average of average-period  $t$  and  $t-1$  prices.

### Chapter 7

1. Monetary reform refers to the switch from one currency to another as part of the stabilization program. Argentina switched from the peso to the austral in June 1985 under the Austral Plan; Brazil switched from the cruzeiro to the cruzado in March 1986; and Peru adopted the inti in place of the peso in September 1985. The precise economic content of such a shift in currency depends on several factors, including: (1) whether there is a tax on old money balances as part of the conversion process, and (2) the terms under which long-term contracts in the old currency are to be settled in the new currency.

2. This paragraph, of course, describes a highly schematic view of the linkages between the budget and inflation. The point is not to be comprehensive, but to emphasize the crucial link in the Latin American context between budget deficits and the exchange rate, and between the exchange rate and the domestic price level.

3. As a formal matter, an overvalued exchange rate combined with a black-market exchange rate acts as a tariff. Marginal imports are priced according to the depreciated black market rate, while exports (to the extent that they are not smuggled) receive the lower official exchange rate. Thus, the gap between the official and the black-market rate acts as a tax on exportables by reducing their price relative to importables. As the gap widens, the resource misallocations caused by the overvaluation of the official rate eventually become so enormous as to force an official devaluation.

4. In a famous policy debacle, Chile fixed the peso-dollar exchange rate in the midst of a 35 percent annual inflation during 1979. While tradable goods prices soon stopped rising in Chile, nontradables prices continued to rise for two more years, in part because of a formal system of backward-looking wage indexation. The exchange rate fixing, combined with a huge inflow of short-term capital upon a liberalization of the financial system, led to an enormous squeeze of the tradable goods sectors in the country. Eventually the exchange rate had to be sharply devalued. The inadvisable fixing of the exchange rate is probably one factor that contributed to the severe recession in Chile in 1982 (the other factors include a reversal of the short-term capital inflow, a terms-of-trade decline, and the rise in world interest rates).

5. At the time of the stabilization program, official bread prices were set at a tiny fraction of world market prices. There was, however, very little bread available at the ridiculously low official prices. Rather, flour and bread were smuggled to Peru, effectively setting the *internal* bread price in Bolivia at the level of the border price, net of the costs of transport and smuggling. Most bread available on the streets of La

Paz was sold at many times the official price. The middlemen, rather than the consumers of bread, were apparently the largest beneficiary of the subsidized grain prices.

### Chapter 8

1. No bank will lend to the Argentine government, for example, even for a highly profitable public investment, for fear that the loan will simply become part of Argentina's overall bad debt. It is dangerous to lend even if the individual project has a good return.

2. Negotiations may break down repeatedly, at high cost (e.g., with disruptions of normal trade financing), because the various parties have a continuing incentive to posture, to act tough, etc. For theoretical analyses, see Fernandez and Kaaret (1988) and Rotemberg (1988).

3. Even if the banks *know* that the debt cannot be paid, they may still impose sanctions for nonpayment, in order to impress other debtors with whom they are negotiating.

4. Consider a case in which a wonderful economic reform is identified, which would cost \$100 million of current consumption in order to raise the debtor's future income and its debt-servicing capacity by \$200 million in present value. Suppose also that all of this incremental debt-servicing capacity would be squeezed out of the country by the foreign creditors in the course of future negotiations. The debtor has no incentive to undertake the reform, even though it has a very high return, because the benefits accrue to the foreign creditors. However, if the country first entered into a buyback in which it paid \$60 million for the \$1 billion in debt, *thereby cancelling the debt overhang*, the debtor would then be free to undertake the investment and to reap the large returns.

Note that this incentive effect could work by incentives on a given government (by leading the government officials to a rejection of specific public investments or public sector reforms) or through the electoral process (by contributing to the election of governments that oppose the reform efforts).

5. As an example, the country could negotiate with creditors to use the receipts of future export earnings as collateral for future debt-service payments, in cases where it would be administratively possible to arrange for future export earnings to accumulate in an escrow account out of reach of the country.

6. There are probably only four or five such banks in the United States. They are, however, among the biggest banks. Examples include Citicorp, Bank of America, Chemical Bank, Chase Manhattan, and Manufacturers Hanover.

7. I have been closely involved in the Bolivian debt negotiations as the government's main outside economic advisor.

8. There were no working meetings with the banks during this crucial period, as it was the official negotiations with the IMF and discussions with the U.S. government that were of most importance.

9. There are several complex reasons for this change of position. Most important was the ferocity of the crisis in Bolivia (with real per capita GNP having declined by almost 30 percent, with the terms of trade having collapsed, and with a virulent hyperinflation during 1984-85), combined with the strength of Bolivia's adjustment program (which eliminated tens of thousands of jobs in state enterprises and closed the budget deficit by more than 10 percent of GNP almost overnight). Also, the



United States had important foreign policy interests in stabilizing democracy in the country, since Bolivia borders most of the large countries of South America and has often been feared as a focal point of unrest (Che Guevara died in the Bolivian jungles in 1967). Moreover, the United States was interested in pursuing an anti-cocaine policy in the region, which could only be accomplished with a friendly, stable government.

10. In 1988, Bolivia signed a three-year Enhanced Structural Adjustment Facility with the IMF, based on a program of balance of payments that presumes that Bolivia's remaining debt will be settled on terms similar to the buyback.

11. The financial "costs" to Bolivia of the debt strategy have been minimal. If we judge the net cash costs of the buyback to Bolivia at \$20 million, the country has paid in total over three years less than 1 percent of one year's GNP (\$20 million/\$3 billion) to its commercial bank creditors. At the same time, Bolivia has received large net resource inflows from the official creditor community. Thus, in contrast to Bolivia's net resource inflow, all of the other countries in the region have been making large net resource transfers to the foreign creditors (as Bolivia did during 1982-84).

### Chapter 9

1. Bolivia has already experienced the disaster of governance in conjunction with the coca mafia under the dictatorship of General Luis García Meza. García Meza's brutal role led to the worldwide diplomatic isolation of Bolivia, which in turn contributed importantly to Bolivia's financial rupture with the rest of the world.

2. In other words, the export of coca paste has caused a secular appreciation of the Bolivian real exchange rate, thereby squeezing the profitability of legal export sectors.

3. Taxation of coca production and exports is virtually impossible from an administrative point of view and is strenuously opposed by the international community. It is judged that normal taxation of the sector would effectively lead to its legalization.

4. In 1986, for example, the Bolivian government undertook joint military operations with the U.S. government to interdict coca paste exports and to drive down the internal price of coca leaf. The President faced impeachment proceedings for his actions at the hands of nationalist elements in the Bolivian Congress. The action provoked a run on the peso and a nationwide banking crisis, as individuals sought to remove local deposits in anticipation of a currency devaluation. In the end, the peso was successfully defended.

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### III The Macroeconomics of the Brazilian External Debt

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