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After making due allowance for capital flight, the splurge in government consumption, and inefficient investments by the parastatal sector, it is difficult to escape the conclusion that Mexico obtained remarkably little for the \$59.7 billion of foreign loans taken out during the Lopez Portillo years. Perhaps the best evidence in support of this conclusion is provided by the extreme hardship the economy has subsequently suffered in servicing the debt. This is the topic of the next chapter.

## 5 The De La Madrid Administration and the Present Crisis

The De La Madrid administration began with a two-year respite from large-scale debt service payments. On 10 December 1982, an agreement was reached with the commercial banks to reschedule \$23 billion of capital payments on the public sector debt coming due between 23 August 1982 and 31 December 1984. The maturity of the debt was extended to eight years and allowed for a four-year grace period. The price for lengthening the repayment period was a 1 percent restructuring fee and an increase in the interest rate of approximately one percentage point. Whereas the previously contracted debt involved spreads of 0.83 and 0.66 percentage points over the U.S. prime rate and LIBOR, respectively, the restructured debt gave lenders the option of a rate 1.75 percentage points over the prime rate or 1.875 percentage points over LIBOR. The new (public sector) debt service schedule involved minimal amortization until the end of 1984 and then called for \$61.4 billion of capital payments from 1985 to 1990.

The debt restructuring at the end of 1982 was followed in 1983 by two additional, smaller reschedulings. Private firms able to convert their short-term debt into long-term debt according to government guidelines became eligible for a program of insurance against exchange rate risk (covering both principal and interest) offered by FICORCA (see sec. 8.3 below for a detailed description of the program). By the end of October, some \$12 billion of private sector liabilities were tentatively covered by the FICORCA facility; almost all of this debt was renegotiated to mature at eight or more years and included a four-year grace period. Earlier, in June, \$2 billion in export credits had also been rescheduled.

These reschedulings were supplemented by \$5 billion in new loans to the public sector. The new loans carried even harder terms than the restructured

debt: for a six-year loan with a three-year grace period, a 1.25 percent commitment fee was charged and the interest rate was fixed at either (according to the lender's choice) 2.125 points over the U.S. prime rate or 2.25 points over LIBOR.

During the same period in which the restructuring of the external debt was negotiated, a wide-ranging stabilization-cum-structural reform program was agreed upon with the IMF. Sizable increases in the value-added tax, upper-bracket income tax rates, and public enterprise prices were to be combined with large expenditure cuts in an ambitious attempt to lower the public sector budget deficit to 8.5 percent of GDP in 1983. As in 1970 and 1976, along with fiscal retrenchment came trade liberalization and a whole host of measures aimed at reform of the financial system. Growth in the monetary base was to be limited to the rate consistent with the target for the fiscal deficit, and nominal interest rates were increased sharply in an effort to raise real rates and promote financial intermediation. The prevailing system of exchange controls was replaced by a dual exchange system in which most merchandise imports and all merchandise exports and debt payments were carried out at a controlled rate, while all other transactions took place at a higher, free market rate. The controlled rate was adjusted by a daily crawl and initially set at a value above that judged to be the equilibrium purchasing power parity (PPP) rate. Trade liberalization consisted of replacing import licenses by tariffs, rationalization of the tariff structure, and a gradual reduction in the overall level of protection.

Contrary to widespread expectations, fiscal discipline was rigidly enforced and the ambitious goal of halving the public sector deficit relative to GDP was attained (table 5.1). The consolidated deficit declined from 17.6 to 8.9 percent, with the public sector's expenditure share falling and its revenue

**Table 5.1** Public Sector Revenues and Expenditures (% of GNP)

	1982	1983	1984	1985	1986 <sup>P</sup>
Expenditure	46.4	42.8	40.3	40.9	45.7
Current	35.8	35.0	33.4	34.6	40.1
Interest on foreign debt	5.1	5.1	3.0	2.6	4.4
Other	30.7	29.9	30.4	32.0	35.7
Capital	10.6	7.8	6.9	6.3	5.6
Revenues	30.1	34.3	33.0	32.6	31.0
Economic deficit	16.3	8.5	7.3	8.4	15.2 <sup>a</sup>
Deficit on financial intermediation <sup>b</sup>	1.4	.5	1.4	1.6	1.1
Monetary deficit	17.6	8.9	8.7	10.0	16.3

Sources: Data for 1982-85 are from SHCP. The 1986 figure for capital expenditure is from *Informe Anual*. All other data for 1986 are from *Indicadores Economicos* (Bank of Mexico). Current expenditure is calculated residually by subtracting capital expenditure from total expenditure.

<sup>P</sup>Preliminary figures.

<sup>a</sup>There is an inexplicable discrepancy of 474.2 billion pesos between the revenue and expenditure calculation of the deficit and the sources of funds measure of the economic deficit.

<sup>b</sup>Deficit of La Banca de Desarrollo.

share increasing by four percentage points apiece. It is important to observe, however, that the adjustment in both revenues and expenditures was highly uneven. As is clear from the breakdown of the deficit in table 5.2 and from table 5.3, greater revenue generation of PEMEX through higher internal and external sales accounted for over 100 percent of the increase in total public sector income; the revenue share of the non-PEMEX public sector actually fell (relative to GDP) by 1.7 percentage points due to a 18.6 percent decline in real income taxes and a 8.7 percent decrease in the real revenue take of the non-PEMEX parastatals. Expenditure reductions were achieved mostly through huge cuts in real public sector wages and investment spending of PEMEX and the federal government. While total real capital expenditures were cut by a third and the real wage bill was lowered by almost a quarter, real investment spending by the non-PEMEX parastatal sector increased slightly and public sector employment rose 7.5 percent.

Stringent monetary policy accompanied fiscal austerity. The real monetary base fell 12.5 percent, and real credit extended to the public sector declined by 15.3 percent. Although the real return on longer term deposits increased

**Table 5.2** Breakdown of the Fiscal Deficit (% of GDP)

	1982	1983	1984	1985	1986 <sup>a</sup>
<b>PEMEX</b>					
Expenditure	7.5	6.2	5.7	5.1	5.4
Current	4.5	4.2	4.0	3.8	4.2
Capital	3.0	2.0	1.6	1.3	1.2
Revenues	15.8	21.5	19.3	18.1	13.0
Deficit	-8.3	-15.3	-13.6	-13.0	-7.6
<b>Non-PEMEX parastatals<sup>a</sup></b>					
Expenditure	12.5	14.1	13.8	14.4	13.6
Current	9.9	11.2	10.9	11.7	11.0
Capital	2.7	2.9	2.9	2.7	2.6
Revenues	8.1	7.8	8.5	9.1	9.4
Deficit	4.4	6.3	5.3	5.3	4.2
<b>Other<sup>b</sup></b>					
Expenditure	26.5	22.5	20.8	21.4	26.8
Current	21.5	19.6	18.4	19.1	25.0
Capital	5.0	2.9	2.4	2.3	1.8
Revenues	6.2	5.0	5.2	5.4	8.6
Deficit	20.2	17.5	15.6	16.1	18.2

*Sources:* Figures for 1982 and 1983-86 are not fully comparable. For 1982, data are from *Estadísticas Hacendarias del Sector Público: Cifras Anuales, 1965-1982* (SHCP). For the parastatal sector, current expenditure is calculated as operating expenditures plus *ajenas de gasto* (outside account expenditure), and total revenue is the sum of current income, capital income, taxes paid, and *ajenas de ingreso* (outside account income). Data for 1983-86 are from *Indicadores Economicos* (Bank of Mexico). Current expenditure is operating expenditure plus *variación de cuentas ajenas* (change in outside accounts). Total revenue is income (net of transfers) plus taxes paid.

<sup>a</sup>Preliminary figures.

<sup>a</sup>Includes expenditures and revenues of DDF (Department of the Federal District) after 1982. In 1982, DDF expenditures and revenues are in "other."

<sup>b</sup>Does not include DDF expenditures and revenues after 1982. The "out-of-budget" deficit is treated as part of current expenditures.

Table 5.3 Real Internal Energy Prices (1980 = 100)

Year	Firm Input Price <sup>a</sup>	Consumer Price <sup>b</sup>
1960	148.0	
1961	147.2	
1962	149.2	
1963	148.5	
1964	142.1	
1965	139.4	
1966	137.6	
1967	138.0	
1968	144.1	
1969	140.0	
1970	141.3	128.5
1971	143.1	123.0
1972	134.7	119.5
1973	124.6	113.8
1974	133.1	159.1
1975	123.8	179.6
1976	119.9	165.2
1977	145.7	164.9
1978	130.8	142.2
1979	117.5	121.5
1980	100.0	100.0
1981	92.1	86.8
1982	129.4	128.7
1983	196.1	175.8
1984	237.3	164.8
1985		161.1

Sources: Firm input price are from the series "Combustible y Energia" in table 20.8, *Estadísticas Historicas de México* (México, D.F.: INEGI, 1985). Consumer prices are from the series "Petroleo y Derivados" in the decomposition of the consumer price index found in *Indicadores Economicos* (Bank of Mexico).

<sup>a</sup>Period average input price deflated by the GDP deflator.

<sup>b</sup>Period average price deflated by the period average CPI.

sharply, the average real interest rate paid on bank deposits remained highly negative. The low real returns together with uncertainty about the exchange rate provoked further financial disintermediation. Capital flight diminished in 1983 but still totalled approximately \$8 billion; and while there was a noticeable shift toward longer-term bank deposits, all measures of financial intermediation exhibited large real declines (table 5.4). Consequently, the private sector was subjected to a sharp reduction in credit, with real loans to agriculture and industry each declining by roughly 15 percent.

With debt service claiming 50 percent of total current account income and over 10 percent of national income (table 5.5), it was necessary to delay trade liberalization. Stringent import controls were employed to force a 43 percent reduction in the volume of total imports (table 5.6). The private sector bore the brunt of the adjustment: the ratio of private to public sector imports fell from 1.67 to 0.99, exceeding the previous post-World War II low (which occurred in 1981) by some sixty-six percentage points. Even after making allowance for the unusually high level of imports in 1981, this

Table 5.4 Monetary Aggregates and Real Interest Rates

	1982	1983	1984	1985	1986
Real growth rates <sup>a</sup>					
Monetary base	-4.3	-12.5	-3.2	-28.3 (-11.2) <sup>b</sup>	-28.2 (-11.7) <sup>b</sup>
M2	-22.4	-21.8	2.0	-6.1	-16.3
M3	-10.6	-18.0	46.2	-18.4	-21.2
M4	-14.6	-11.6	6.0	-12.9	-10.9
Total stock of bank funds <sup>c</sup>	-15.3	-9.1	4.9	-12.9	-10.4
Total credit of the financial system <sup>d</sup>	14.1	-14.6	-6.7	9.5	4.8
Credit to the private sector <sup>e</sup>	-23.8	-12.9	12.5	-4	-9.6
Percentage of GNP <sup>f</sup>					
Monetary base	16.1	14.9	13.9	11.6 (13.1) <sup>b</sup>	9.0 (12.7) <sup>b</sup>
M2	8.8	7.1	6.5	6.5	6.2
M3	14.9	13.0	15.5	16.0	14.0
M4	28.2	25.3	24.9	24.0	23.4
Total stock of bank funds	24.0	21.9	21.6	20.8	20.3
Total credit of the financial system	51.9	50.3	45.3	47.8	56.5
Credit to the private sector	16.0	13.6	13.9	14.8	15.3
Real interest rates <sup>g</sup>					
Average real cost of bank funds	-58.5	-24.1	-8.1	-7.6	
Effective commercial bank loan rate <sup>h</sup>	-26.5	10.4	4.5		

Sources: The nonpreferential loan rate series is from *Estadísticas de México* (México, D.F.: INEGI, 1985):825. All other raw financial data are from *Indicadores Economicos* (Bank of Mexico).

Notes: M2 = Currency held by the public + peso- and foreign-currency-denominated checking accounts. M3 = M2 + liquid savings accounts. M4 = M3 + nonliquid (i.e., fixed-term) savings accounts.

<sup>a</sup>Real monetary aggregates are calculated as the end-of-year balance deflated by the end-of-year CPI.

<sup>b</sup>In 1985 the reserve requirement was lowered from 48 to 10 percent. Simultaneously, banks were required to use 38 percent of their funds to purchase various government assets (see n. 13). The figures in parentheses show the change in the monetary base under the assumption that the ratio of bank reserves to M4 was the same in 1985 and 1986 as in 1984.

<sup>c</sup>M4 less currency held by the public.

<sup>d</sup>Credit of the Central Bank, the development banks, and the commercial banks.

<sup>e</sup>Credit extended to the private sector by the Central Bank (which is negligible), the development banks, and the commercial banks.

<sup>f</sup>Average of the end- and beginning-of-year monetary aggregate relative to GDP.

<sup>g</sup>End-of-year interest rate (December value) less the December-to-December CPI inflation rate.

<sup>h</sup>The nonpreferential loan rate.

represents an extraordinary degree of import compression; the cutbacks in 1982 and 1983 brought the private sector import volume 25 percent below its level in 1970.<sup>1</sup>

Contractionary fiscal and monetary policies, tight import restrictions, and higher real export prices produced a dramatic \$11.6 billion turnaround in the current account balance. The contribution on the export side came mostly from manufacturing exports, whose 33 percent increase more than compensated for falling oil prices. The overall export volume rose by 16 percent and dollar export earnings by 5.1 percent.

As in so many Fund stabilization programs in Latin America, deepening stagflation was the price exacted for improvement in the external accounts

Table 5.5 Debt Burden Measures

	1983	1984	1985	1986
Total debt (billion \$)	93.8	96.6	97.3	98.3
Total debt/GDP <sup>a</sup>	65.8	56.4	55.1	77.3
Public sector debt service <sup>a</sup> (billion \$)	12.3	11.7	11.1	9.6
% of Merchandise exports	55.0	48.3	51.3	59.7
% of Current account income	42.4	35.5	36.1	39.5
% of GDP <sup>b</sup>	8.6	6.8	6.3	7.5
Total debt service <sup>c</sup> (billion \$)	14.6	14.1	13.0	11.1
% of Merchandise exports	65.4	58.1	60.1	69.5
% of Current account income	50.4	42.8	42.3	45.9
% of GDP <sup>b</sup>	10.2	8.2	7.4	8.8
Total debt service #2 <sup>d</sup> (billion \$)	30.5	27.9	17.5	15.0
% of Merchandise exports	136.8	115.5	80.8	93.4
% of Current account income	105.5	84.9	56.9	61.7
% of GDP <sup>b</sup>	21.4	16.3	9.9	11.8
Net debt <sup>e</sup> (billion \$)	57.9	52.4	48.2	47.0
Net debt service <sup>f</sup> (billion \$)	10.7	8.7	7.9	6.8
% of Merchandise exports	48.0	36.0	36.4	42.3
% of Current account income	37.0	26.5	25.6	28.0
% of GDP <sup>b</sup>	7.5	5.1	4.5	5.3
Net debt service #2 <sup>g</sup> (billion \$)	26.7	22.6	12.4	10.6
% of Merchandise exports	119.5	93.4	57.1	66.2
% of Current account income	92.1	68.7	40.2	43.8
% of GDP <sup>b</sup>	18.7	13.2	7.0	8.3

Sources: *Mexican Economic Outlook* (CIEMEX-WHARTON) for data on the total debt and short-term public and private sector debt. All other data comes from *Indicadores Economicos* (Bank of Mexico).

<sup>a</sup>Public sector interest payments and amortization of the medium- and long-term debt.

<sup>b</sup>GDP measured in dollars was calculated by dividing nominal GDP by the period average controlled exchange rate. There is *no* correction for deviations of the actual exchange rate from the equilibrium exchange rate.

<sup>c</sup>Public sector debt service plus private sector interest payments.

<sup>d</sup>The sum of public and private sector interest payments, public sector amortization of the short-, medium-, and long-term debt, and amortization of the short-term private sector debt. Amortization of the short-term debt is assumed to equal the previous period's short-term debt.

<sup>e</sup>Calculated as the cumulated value of official current account deficits starting from 1951.

<sup>f</sup>Calculated by scaling total interest payments by the public and private sectors by the ratio of net debt to total debt. No attempt is made to adjust for the fact that the interest rate on private sector foreign assets differs from the rates charged for foreign loans to the public and private sectors.

<sup>g</sup>Calculated as the sum of public sector amortization of the short-, medium-, and long-term debt, amortization of the short-term private sector debt, and net interest payments. Net interest payments are total interest payments by the public and private sectors scaled down by the ratio of net debt to total debt. Amortization of the short-term debt is assumed to equal the previous period's short-term debt.

and the public sector finances (table 5.7). Notwithstanding stiff monetary and fiscal contraction and wage restraint sufficient to produce cuts of 17 percent in the real minimum wage and 21 percent in the overall manufacturing sector wage, the inflation rate declined but slightly from 98 to 81 percent. While inflation remained high, real GDP declined 5.9 percent and aggregate underemployment increased substantially. The greatest decline in economic activity occurred in the manufacturing sector, where output decreased 7.3 percent and employment fell 6 percent.

Table 5.6 External Accounts

	1982	1983	1984	1985	1986
Current account (billion \$)	-6.2	5.4	4.2	1.2	-1.3
Capital flight (billion \$)					
MZ <sup>a</sup>	9.0	3.4	3.7	3.8	
Merchandise exports (billion \$)	21.2	22.3	24.2	21.7	16.0
Merchandise imports (billion \$)	14.4	8.6	11.3	13.2	11.4
Volume of merchandise imports (% change)	-39.0	-43.3	21.5	17.1	-12.0
Intermediate inputs	-36.2	-30.9	32.5	14.8	-13.2
Consumer goods	-46.3	-68.5	34.1	28.0	-20.2
Capital goods	-42.1	-62.2	13.7	23.3	-4.7
Volume of merchandise exports (% change)	16.9	16.1	12.8	-1.5	
Nonoil manufacturers	11.1	33.9	19.6	1.8	
Real exchange rate <sup>b</sup>	138.8	153.3	135.0	135.6	179.4
Real price of total merchandise imports <sup>c</sup>	111.2	143.5	127.1	132.1	180.7
Real price of total merchandise exports <sup>d</sup>	256.9	240.8	206.0	197.1	192.9
Nonoil manufacturers <sup>e</sup>	98.8	104.4			

Sources: Cumby and Levich (1987, 58); and Zedillo (1987, 177). National Income Accounts (INEGI) for traded goods price indices and the indices of import and export volumes. *Indicadores Economicos* (Bank of Mexico) for the current account deficit and the dollar values of imports and exports.

<sup>a</sup>Modified Zedillo estimate (see table 4.12).

<sup>b</sup>1980 = 100; calculated as the period average controlled exchange rate multiplied by the ratio of the U.S. wholesale price index (now called the producer price index) to the Mexican GDP deflator.

<sup>c</sup>1970 = 100; deflated by the GDP deflator. For 1984-86, spliced to CIEMEX-WHARTON series (*Mexican Economic Outlook* [June 1987]:181) for the internal price deflator for exports of goods and services.

<sup>d</sup>1970 = 100; deflated by the GDP deflator. For 1984-86, spliced to CIEMEX series (*ibid.*) for internal price deflator for imports of goods and services.

<sup>e</sup>1970 = 100; deflated by the GDP deflator.

The second straight year of severe stagflation also brought a collapse in aggregate investment spending, jeopardizing the future growth prospects of the economy. Undoubtedly, a substantial reduction in investment spending of the state-owned enterprises was in order, but private sector investment also declined to an almost equal extent (down 24.2 percent). Given the high rate of inflation that prevailed throughout 1983, it is improbable that demand contraction induced the fall in private sector investment spending. Rather, the main explanatory factors appear to lie elsewhere. Financial disintermediation and the abrupt cutoff in foreign lending led to a sharp reduction in bank credit: at 13.6 percent of GNP, real lending to the private sector stood at its lowest level since (at least) 1978. Large upward jumps in the real prices for capital goods and complementary inputs sharply diminished profit margins, reinforcing the contractionary effect of the credit squeeze.<sup>2</sup> The real price of imports rose approximately 29 percent while the increase in the real domestic price of energy inputs was an even larger 52 percent. The high real import prices led to reductions of 62.2 and 31 percent, respectively, in the volumes of imported capital goods and intermediate inputs.

The large increases in the real prices of domestic and imported intermediate inputs also appear to explain the puzzling coexistence of high



Table 5.7a Macroeconomic Aggregates (% change)<sup>a</sup>

	1982	1983	1984	1985	1986 <sup>P</sup>
Real GDP	-.5	-5.3	3.7	2.8	-3.8
Manufacturing	-2.9	-7.3	4.8	5.8	-5.6
Agriculture, forestry, and fisheries	-.6	2.8	2.5	3.8	-2.1
Inflation <sup>b</sup>	98.9	80.8	59.2	63.7	105.7
Manufacturing employment	-8.5	-6.0	2.3	.2	-6.7
Real investment	-15.9	-27.9	5.5	6.4	-12.2
Private	-17.3	-24.2	9.0	13.4	-9.8
Public	-14.2	-32.5	.6	-4.4	-16.5

Table 5.7b Composition of Output (% of GDP)<sup>d</sup>

Private consumption	69.0	67.3	66.6	66.1	66.2
Government consumption	9.3	9.7	10.0	9.9	10.1
Gross fixed capital formation	21.0	16.1	16.3	16.9	15.4
Private	11.7	9.4	9.9	10.9	10.2
Public	9.3	6.6	6.4	6.0	5.2
Change in inventories	.5	1.0	1.4	2.7	2.2
Exports	10.2	12.1	12.9	12.2	13.0
Imports	10.1	6.2	7.2	7.7	6.9

Sources: The manufacturing sector employment series is from *Indicadores Economicos* (Bank of Mexico). All other data is from the National Income Accounts (INEGI).

<sup>P</sup>Preliminary figures.

<sup>a</sup>Real variables are measured at 1970 prices.

<sup>b</sup>December-to-December change in the CPI.

<sup>c</sup>December-to-December change.

<sup>d</sup>Output shares at 1970 prices.

inflation and rising underemployment, on the one hand, and strongly contractionary fiscal and monetary policy and substantial wage repression, on the other. The downward pressure exerted on prices by contractionary demand policies and real wage repression seems to have been neutralized in large measure by the reduction in notional supply induced by higher intermediates prices. Similarly, since decreased usage of complementary intermediate inputs tends to lower labor's marginal physical productivity, a decline in real wages is not sufficient to guarantee a rise in employment. In fact, given the magnitude of the relative price swings that occurred in 1983, it is quite likely that the adverse productivity effect would dominate. In the next chapter, I demonstrate for a wide range of plausible technologies that when import quotas are tightened, even substantial real wage cuts will often be insufficient to prevent the emergence of open unemployment.

## 5.1 1984–85: Modest Recovery

At the start of 1984, the economy began to recover from the 1982–83 recession. Sluggish growth in the first two quarters was followed by strong

growth in the last half of the year, led by a resurgence in private investment spending and purchases of consumer durables. Overall GDP growth for the year was 3.7 percent. In the manufacturing sector, output increased 4.8 percent, but employment increased only 2.3 percent despite an additional 7 percent decrease in the real wage.

This very modest "recovery" (from deep recession to mild recession) reflected the stimulus of a number of reflationary demand and supply-side measures implemented during the course of the year. Real public sector investment declined another 10.4 percent, but real current expenditures net of interest payments on the foreign debt rose 5.1 percent and fiscal incentives were introduced to encourage private investment spending. Most importantly, the favorable payments balance recorded in 1983 allowed import controls to be greatly relaxed: imported intermediates rose by 32.5 percent and capital goods imports by 13.7 percent in 1984, with most of the extra imports going to the private sector.<sup>3</sup>

Progress on the price front coincided with recovery from the trough of the 1982–83 recession. Although the target of a 40 percent inflation rate proved unattainable, the actual inflation rate fell by twenty-one percentage points to 59.2 percent. While wage restraint helped contain inflationary pressures, the most important deflationary factor at work was the expanded flow of imports at lower real prices. After rising nearly 30 percent the previous year, the real average import price fell 11.4 percent in 1984.

The payments balance also evolved favorably in 1984. Dollar export earnings rose 8.4 percent, principally from a 19.6 percent increase in the volume of nonoil exports. As the growth in imports took place from an extremely depressed level (in 1983, the aggregate [public + private] import volume was only 14.6 percent above its 1970 level), a \$12.9 billion trade surplus was recorded. This translated into a current account surplus of \$4.2 billion which was used to prepay part of the foreign debt and accumulate an additional \$3 billion of international reserves (exceeding the target figure of \$2 billion). Capital flight, however, remained a problem: \$3.7 billion, the equivalent of one-third of merchandise imports in 1984, left the country.

The second consecutive favorable showing in the payments balance yielded an immediate dividend in enabling Mexico to restructure its foreign debt on much better terms. In the last quarter of the year, all public sector debt payments maturing between 1985 and 1990 were rescheduled. Almost all of the \$48 billion to be paid over 1985–90 was renegotiated to mature over fourteen years. The interest rate on the restructured debt was cut roughly one percentage point, and LIBOR replaced the U.S. prime rate as the reference rate for most of the debt.

The adjustment program drawn up at the beginning of the De La Madrid administration was formally ended early in 1985. On 24 March 1985, a new reform program was outlined in a Letter of Intent to the IMF.<sup>4</sup> This latest reform package emphasized the need for an accelerated pace of trade

liberalization and further reductions in the fiscal deficit. The fiscal goal was to lower the consolidated public sector deficit from 6.2 percent of GDP in 1984 to 5.1 percent in 1985. The program for trade liberalization comprised a variety of measures aimed at promoting nonoil exports and reducing the level and degree of dispersion in the structure of protection.<sup>5</sup> Later adjustments called for the existing system of import licenses to be fully replaced by the end of 1988 by a compact schedule of five tariff rates ranging from zero to 30 percent (*Informe Anual 1986*, 117).<sup>6</sup>

The reduction in the fiscal deficit was to be accomplished exclusively through a reduction in expenditures; the share of public sector revenues in GDP was to be kept fixed at its 1984 level by offsetting an anticipated decline in oil revenues through enlargement of the tax base and improved collection procedures (but not higher tax rates). The intended expenditure cuts were concentrated primarily in current expenditures, but also included a freeze on some 100 billion pesos (equivalent to 4 percent of the 1984 deficit) of nonpriority investments. To curb the deficit on financial intermediation, increases in the interest rates charged on preferential loans were announced and a ceiling of 350 billion pesos was placed on lending by the development banks. Lastly, a number of administrative reforms were introduced in an attempt to gain better control over public sector expenditures, especially those of the state-owned enterprises (SOEs):

1. Monthly and quarterly schedules were drawn up for SOE revenues and expenditures, and intersecretarial commissions formed to monitor progress toward the deficit targets.
2. Commercial banks (owned by the government since 1982) have been ordered not to extend credit to SOEs or other branches of the government without receiving prior authorization from SHCP. The banks are also to furnish regular reports to Hacienda detailing their credit transactions with the public sector.
3. The Treasury is to make payments in connection with debt service of the SOEs *directly* in order to avoid diversion of the funds earmarked for this purpose into other channels.
4. Only net transfers among SOEs are to be carried out. This measure was evidently necessary because certain SOEs obtain "unbudgeted financing" by being less than scrupulous about paying their bills with other SOEs.
5. New disbursement procedures have been instituted so that fiscal transfers will not be effected until they actually become necessary.
6. From the monthly allocation of funds to programs and projects slated for expenditure cuts, the Treasury is to withhold a sum equivalent to 15 percent of total fiscal transfers.

The rather bizarre nature of these reforms is revealing. It is not too difficult to discern that internal organizational problems have been, and probably still

are, a severe impediment to efforts to constrain expenditure growth. Put more plainly, the SOEs are apparently loose cannons.<sup>7</sup>

During the course of the year it became evident that, whatever intentions may have been, the fiscal deficit was once again assuming dangerous proportions. The deficit for 1984 turned out to be 8.7 percent of GDP, not 6.2 percent as stated in the Letter of Intent. Moreover, actual revenues and expenditures moved further away from their targetted levels in 1985, causing the deficit to climb to 10 percent of GDP. Declining oil prices lowered PEMEX's surplus, but other factors contributed as well to the growth in the deficit. While higher public sector prices raised the income of the non-PEMEX parastatals, the deficit on financial intermediation worsened considerably and general tax revenues continued to stagnate (table 5.8).

Clearly, despite avowals to the contrary, no substantive effort was made to enlarge the overall tax base. Remarkably, the share of income taxes was allowed to decline 1.6 percentage points over 1981–85, pulling down the share of general tax revenues by an almost equal amount. Only part of this decline can be attributed to the depressed level of corporate profits; since 1982, the lower yield from personal income taxes accounts for nearly all of the reduction in the income tax share.<sup>8</sup>

To a substantial extent, these large fiscal deficits reflect an inflated level of current expenditures associated with the inflationary component of interest payments on the internal debt. Table 5.9 shows two calculations of the inflation-adjusted deficit (IAD) obtained using the Central Bank's estimates of the impact of inflation on the value of peso-denominated internal debt (*Informe Anual 1986*, 185). The first estimate subtracts from the unadjusted monetary deficit the entire reduction in the value of the internal peso debt caused by inflation even when the implied ex post real interest rate is negative.<sup>9</sup> The second estimate is calculated using an inflation

**Table 5.8** Public Sector Prices and Revenues<sup>a</sup>

	1981	1982	1983	1984	1985	1986
Real public sector prices <sup>b</sup>	100.0	108.5	131.3	139.1	133.1	
Revenues of non-PEMEX parastatals <sup>c</sup>	7.9	8.1	7.8	8.5	9.1	9.4
General tax revenues	10.8	9.0	9.0	9.0	9.3	9.4
Income taxes	5.8	4.9	4.2	4.2	4.2	4.3
Personal	2.6	2.6	2.0	1.9	2.0	2.0
Indirect taxes <sup>d</sup>	5.0	4.1	4.8	4.8	5.0	5.1
Foreign trade	1.1	.90	.50	.50	.67	.87

Source: *Indicadores Economicos* (Bank of Mexico).

<sup>a</sup>Revenues are expressed as a percentage of GDP.

<sup>b</sup>Period average price deflated by the period average CPI.

<sup>c</sup>Sum of revenues (exclusive of any transfer payments received) plus taxes paid.

<sup>d</sup>Sum of value-added taxes, taxes on production and services, taxes on foreign trade, and "other" taxes. Does not include gasoline taxes (which I classify as revenues of PEMEX).

Table 5.9 Estimates of the Inflation-Adjusted Deficit (IAD), 1970–86 (% of GDP)

Year	IAD1	IAD2 <sup>a</sup>	Year	IAD1	IAD2 <sup>a</sup>
1970	3.15	3.41	1979	5.04	5.64
1971	1.80	2.12	1980	4.59	5.34
1972	4.17	4.59	1981	11.29	11.63
1973	3.95	5.09	1982	6.99	9.28
1974	4.54	5.43	1983	-.86	-.22
1975	8.33	8.81	1984	1.04	1.38
1976	6.22	7.28	1985	1.58	1.65
1977	4.30	4.96	1986	2.88	2.86
1978	4.76	5.22			

Sources: Data for the inflationary component of interest payments on the peso-denominated internal debt are from *Informe Anual 1986*, 185. The figures used for the unadjusted deficit are from *Estadísticas Hacendarias del Sector Público: Cifras Anuales, 1965–1982* (SHCP) and *Indicadores Economicos* (Bank of Mexico).

<sup>a</sup>Calculated using an inflation rate consistent with a long-term real interest rate of 5 percent.

rate consistent with a value of 5 percent for the long-run real CETES (government bonds) rate. According to both estimates, the IAD has been small in recent years.<sup>10</sup>

It is often claimed that a low value for the IAD indicates that inflation is mostly inertial and additional fiscal adjustment is unnecessary. But while the IAD is clearly a better measure than the actual budget deficit, the latter conclusions are not at all obvious. Consider the nature of the savings-investment constraint in an open economy experiencing ongoing inflation. In an inflationary context, the proper definition of disposable income incorporates anticipated capital gains or losses on different assets (see Turnovsky 1977, chap. 3). Thus, under the assumption of perfect foresight, the private sector budget constraint reads<sup>11</sup>

$$(1) \quad C + S = Y + iB - T - \pi M,$$

where  $C$  is real consumption,  $Y$  is real income,  $B$  is the real value of government (peso-denominated) debt,  $i$  is the real interest rate on government debt,  $\pi$  is the inflation rate,  $M$  is the real stock of high-powered money,  $T$  is real taxes, and  $S$  is real *net* savings (gross savings equal  $S + \pi M$ ). Equation (1) may be rewritten as

$$(2) \quad C + S = Y + IAD - G - DS - \pi M,$$

where  $DS$  is real interest payments on the public sector external debt,  $G$  is other real government expenditure, and  $IAD \equiv G + DS + iB - T$ . Substituting for  $Y$  from the goods market identity gives

$$(3) \quad S - I = (NX - DS) + IAD - \pi M$$

where  $I$  and  $NX$  denote, respectively, private investment and net exports. The first term on the right side is the current account surplus. Now suppose the IAD is independent of  $\pi$  and consider the tradeoffs offered by a Cruzado or Austral plan that eliminates the inflation tax.<sup>12</sup> Then (3) implies that

unless a reduction in the inflation tax increases real net savings one-for-one, either the current account balance will deteriorate or investment will decline (as happened in Argentina and Brazil). With less forced savings generated through the inflation tax, some other component of savings must rise to prevent a decrease in investment.<sup>13</sup> If the size of the current account surplus (foreign savings) is tightly constrained by the schedule for debt repayment, measures must be taken either to stimulate private savings or further lower the IAD. A zero or even negative value of the IAD does not eliminate the need for fiscal adjustment.

In the Mexican case, the impact of the mounting fiscal deficit was felt most strongly in financial markets. To lessen inflationary pressures, strict control over the growth rate of the monetary base was maintained.<sup>14</sup> Consequently, a large part of the deficit had to be financed by the sale of CETES to the banking system and the public (table 5.10). Early in the year the decision was made to place 250 billion pesos of CETES with Banca Multiple. After October, lending to the private sector was frozen and virtually all excess bank funds were diverted to purchases of various government-issued assets (CETES, petrobonds, etc.).<sup>15</sup>

Predictably, financing the deficit in this fashion led to generally rising interest rates and a strong contraction in lending to the private sector. Whereas the inflation rate (December to December) rose slightly from 59.2 to 63.7 percent, the average cost of bank funds increased each month, rising from 47.5 percent in December 1984 to 65.7 percent in December 1985. During the same period, the yield on three-month CETES jumped from 49.2 to 74.1 percent. The increased interest rate spread between CETES and bank funds provoked a new wave of financial disintermediation, reversing the gains made in 1984. While real credit to the public sector increased 12.6 percent in 1985, the real stock of bank funds fell 12.9 percent and real credit (of the entire financial system) to the private sector contracted slightly.

The severe credit squeeze imposed on the private sector, falling oil prices, and the catastrophic September earthquake in Mexico City pushed the economy back into recession. In the second half of 1985, real GDP growth turned negative as private investment spending and manufacturing sector output contracted sharply. Overall GDP growth for the year was just 2.7

**Table 5.10** Real Internal Debt, 1979–86

	1979	1980	1981	1982	1983	1984	1985	1986
Total*	100.0	107.8	126.7	175.9	155.3	137.9	147.4	167.7
% Change	—	7.8	17.5	38.8	-11.7	-11.2	6.9	13.8
% of GDP	18.8	18.9	20.8	35.9	31.4	26.5	29.2	40.1

Source: Data on the total internal debt are from CIEMEX-WHARTON, *Mexican Economic Outlook*, 19, no. 2 (1987): 188.

\*End-of-year stock of debt deflated by the end-of-year CPI. Includes both peso-denominated and dollar-indexed debt.

percent. In the manufacturing sector, output expanded a respectable 5.8 percent, but employment failed to increase.

As the economy slid back into recession in 1985, the large payments surpluses of the preceding two years gave way to an overall deficit. Real import payments rose by 19.9 percent, with public sector imports declining 9.1 percent and private sector imports increasing 41.2 percent.<sup>16</sup> Total export earnings decreased \$2.33 billion. Falling world market oil prices accounted for much of the decline, but nonoil export earnings also decreased \$500 million. The steep decline in export earnings combined with the resurgence of private sector import demand to cut the current account surplus from \$4.2 billion in 1984 to \$1.24 billion in 1985. Unfortunately, the movement toward current account balance was not matched by a similar movement in the capital account. While the long-run capital account registered a small surplus, capital flight removed \$3.8 billion from the country (\$9.9 billion after adjusting for underinvoicing of exports), forcing the Central Bank to absorb a \$2.3 billion decrease in its gross reserve holdings.<sup>17</sup>

## 5.2 The 1986 Oil Crisis

Four months after the devastating earthquake, the Mexican economy was battered by a second severe shock. The government's economic program for 1986 presumed that the average price for Mexican oil would drop 9 percent in world markets to \$23 per barrel (*Informe Anual 1986*, 17). Early in the year, however, prices began plummeting, and by July Mexican crude was fetching only \$8.45 per barrel. Prices recovered somewhat thereafter, but the average price for the year still came to only \$11.82, 53 percent below the 1985 average of \$25.35 (113, 178). The dollar value of oil exports declined \$8.5 billion, a loss equivalent to 6.7 percent of the 1985 GDP (17). Following previous declines, this brought the country's terms of trade to its lowest level in more than thirty years (table 5.11). Adjusted for changes in world market interest rates, Mexico's terms of trade had deteriorated nearly 60 percent since 1981 and over 40 percent since 1970.

The De La Madrid administration responded to the oil price shock by digging its heels in deeper. Essentially, the pre-shock policy course was continued, but with an extra measure of austerity. To blunt the impact on the trade balance, the rate of depreciation of the peso was accelerated strongly, producing, by the year's end, a 32 percent increase in the real exchange rate. A real devaluation of this magnitude, it was conceded, would be strongly stagflationary in the short run. In view of the experience in 1982-83, however, the alternative of imposing tight import quotas was judged to be even worse (*Informe Anual 1986*, 22).

Aggressive devaluation was supplemented by limited fiscal adjustment and extremely contractionary monetary policy. Some new expenditure cuts and tax increases were introduced, but these measures fell far short of neutralizing

Table 5.11 Terms of Trade Indices

Year	Unadjusted	Adjusted <sup>a</sup>	Year	Unadjusted	Adjusted <sup>a</sup>
1960	87.8	87.2	1974	100.1	116.4
1961	89.6	88.3	1975	97.8	96.1
1962	83.9	82.0	1976	113.0	119.2
1963	89.1	87.3	1977	113.0	121.9
1964	85.7	84.8	1978	104.1	115.6
1965	84.1	83.5	1979	113.1	110.4
1966	85.2	85.1	1980	127.6	123.5
1967	83.9	84.1	1981	124.3	127.4
1968	89.0	90.4	1982	108.2	94.5
1969	88.0	92.2	1983	98.8	77.4
1970	96.7	100.0	1984	97.1	66.5
1971	100.0	100.0	1985	91.9	71.5
1972	103.3	100.7	1986	65.6	54.6
1973	115.2	121.2			

Source: *Informe Anual 1986*.

<sup>a</sup>Adjusted for changes in international interest rates.

the impact of the oil price drop, and the consolidated public sector deficit soared to 16.3 percent of GNP.

As in previous years, the fiscal deficit was financed largely by depriving the private sector of credit. The real monetary base fell sharply, while the real internal debt rose 13.8 percent. Even though nearly all marginal bank credit (77–92 percent) remained reserved for the public sector, the large increase in bond supply could not be absorbed without inducing a strong rise in real interest rates. The real (compounded, annual equivalent) interest rate paid by three-month CETES averaged 19.54 percent. Bank rates followed suit. The average cost of real bank funds was 6.3 percent, and the real nonpreferential loan rate fluctuated between 13 and 18.2 percent (*Informe Anual 1986*, 27).

Renewed austerity coming on top of the terms of trade loss brought the weak 1984–85 recovery to a grinding halt: real output declined 3.8 percent, real investment 12.2 percent, and manufacturing sector employment 6.7 percent, while the inflation rate jumped from 63.2 to 105.7 percent in 1986. Despite the introduction of quarterly wage adjustments, the real (minimum) wage fell (8.4 percent) for the fifth consecutive year. The sole consolation was an unexpected improvement in the overall payments balance. High domestic interest rates elicited a substantial capital *inflow* which, together with a two percentage point fall in the interest rate applicable to the foreign debt (*Informe Anual 1986*, 25) (keeping the current account deficit to \$1.3 billion), enabled Central Bank reserves to rise by \$950 million.

In an attempt to head off the growing crisis, a standby agreement was signed with the IMF and a large-scale restructuring of the debt negotiated in the last half of the year. This latest debt package provided \$12 billion of new funds for 1987 and 1988 and restructured the old debt on very favorable



terms for Mexico. Capital payments coming due between 1985 and 1990 in the amount of \$51.2 billion have been rescheduled to mature over twenty years with a seven-year grace period. Interest charges have been lowered substantially through a reduction in the LIBOR spread from 121 to 80 basis points and the replacement of the U.S. prime rate by LIBOR or an average of three-month CD rates quoted in various countries.<sup>18</sup>

### 5.3 Post-1982 Economic Policy: An Evaluation

Judged against almost any set of economic criterion, the post-1982 adjustment record has been a dismal failure. At the end of 1986, real output stood slightly below its 1982 level and the inflation rate had accelerated to over 100 percent. In per capita terms, real income fell 11 percent during this four-year period, with labor bearing the brunt of the decline: since 1982, real wages have decreased approximately 30 percent (32 percent for the minimum wage), falling far below the levels that prevailed at the end of the Stabilizing Development (table 5.12).<sup>19</sup> Nor do the prospects for recovery look particularly promising. Both private and public sector investment remain heavily depressed, and while large current account surpluses were achieved in 1983 and 1984, by early 1986 balance of payments problems had emerged once again.

Adverse external shocks and the burden of servicing the debt made some deterioration in the economy's performance inevitable. Over 1983–86, Mexico's terms of trade (adjusted for changes in world market interest rates) declined 42.2 percent, the most severe blow coming in 1986 with the collapse of world market oil prices. The worsening terms of trade coupled with debt service claiming 40–50 percent of total current account income forced an extraordinary degree of import compression upon the private sector.<sup>20</sup> Contrary to textbook models, import compression is almost certain to be strongly stagflationary. The reason for this is simply that in Mexico, as in most LDCs, intermediate inputs and capital goods account for over 80 percent of total imports. On the normal assumption that factors of production are gross complements, a reduction in imports, whether imposed directly by import controls or induced by a real devaluation, exerts a powerful contractionary effect upon economic activity. Cutbacks in imported intermediates lower labor demand at a given real wage and discourage investment by reducing the productivity of capital. Restrictions on capital goods imports further depress investment by raising the supply price of capital. Since most imported machinery lacks close domestic substitutes, there is little, if any, demand stimulus created by expenditure switching; instead, the construction sector goes into a slump as investment orders fall off sharply.

Figure 5.1 shows how the private sector import volume evolved from 1970 to 1986. Clearly, import compression went far beyond simply offsetting the rapid growth of the oil boom years. Between 1981 and 1983, real private

Table 5.12 Real Wages (1970 = 100)<sup>a</sup>

Year	Average Minimum Wage <sup>b</sup>	Manufacturing Sector	
		Overall <sup>c</sup>	Blue-Collar
1964	76.4		
1965	74.8		
1966	85.7		
1967	83.3		
1968	94.7		97.9
1969	91.0		99.5
1970	100.0	100.0	100.0
1971	95.0	101.2	100.7
1972	107.6	106.7	106.6
1973	101.1	104.3	103.9
1974	110.8	104.5	106.6
1975	112.1	107.8	110.8
1976	124.7	116.7	123.2
1977	123.9	118.5	125.3
1978	119.7	116.2	121.9
1979	117.2	114.5	119.9
1980	109.0	111.2	114.8
1981	110.8	115.1	116.1
1982	97.9	114.1	116.9
1983	81.4	90.3	87.0
1984	75.9	84.0	83.5
1985	74.9	85.2	
1986	68.6		

Sources: Minimum wage data are from INEGI. The blue-collar and overall wage series for the manufacturing sector are from *Encuesta Industrial Mensual*, as reported in *Indices de Precios* (February 1986).

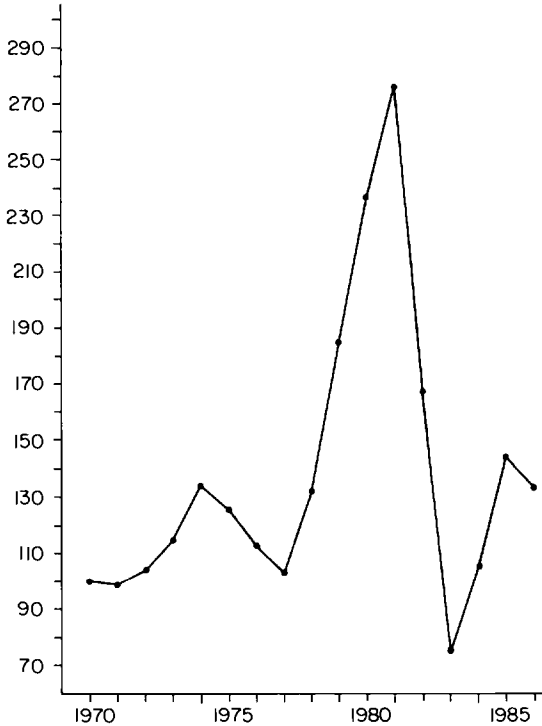
<sup>a</sup>Period average wage index deflated by the period average CPI.

<sup>b</sup>The minimum wage index is a weighted average of minimum wages in different regions, where the weights are given by the region's share in the total salaried population of the nation. In years in which there was more than one wage adjustment, the period average figure is generated by weighting the wage in each subperiod by the fraction of the year during which it prevailed.

<sup>c</sup>Composite index for manufacturing sector wages and salaries inclusive of fringe benefits.

sector imports were cut 73 percent; even after two years of "recovery," the import volume in 1985 barely exceeded its 1978 level.

But while the terms of trade shock and the burden of debt service made some contraction inevitable, errant policy must also shoulder a good portion of the blame for the post-1982 debacle. The excessive use of quantitative restrictions to regulate the current account caused import compression to be deeper and more prolonged than necessary. In view of the complementary nature of domestic factors and imports, policy should have been directed far more toward promoting manufacturing and agricultural exports so as to minimize the impact of debt service on import flows. Although some export promotion measures were introduced, others were withdrawn and nonoil exporters remain handicapped by controls aimed at ensuring "sufficient" supply for the domestic market. The CEDIs scheme of subsidies has been largely phased out and credit subsidies for exporters sharply curtailed.<sup>21</sup>



**Fig. 5.1 The private sector import volume, 1970–86**

Sources: *Indicadores Economicos* (Bank of Mexico) for dollar import values and the National Income Accounts (INEGI) for the aggregate import volume.

Note: The private sector import volume is estimated as the aggregate import volume multiplied by the ratio of the dollar value of private sector merchandise imports to the dollar value of total merchandise imports. The 1986 aggregate import volume is estimated by deflating the dollar value of total merchandise imports by the dollar price index for imports (the index given in *Informe Anual 1985* [201], updated to 1986 using the change in import prices in *Indicadores Economicos* [April 1987]) and then splicing to the National Income Accounts index for the aggregate import volume.

Export controls have been loosened somewhat, but at the end of 1985 44.1 percent of nonoil exports were still subject to (domestic) quotas and nominal protection of the agricultural sector was negative (World Bank 1986, 12–13).

Fiscal and interest rate policy intensified the contractionary blow delivered against the private sector by import compression. The fiscal deficit diminished but remained large and was financed in good measure by imposing high marginal reserve requirements on the banking system. In addition, the deficit drove bond rates strongly upward which, together with the failure to raise deposit rates to positive levels, provoked a sharp decrease in the supply of bank funds. Financial disintermediation and the redirection of credit toward the public sector have depressed bank loans to the private sector to historically

low levels: total real credit to the private sector was 11.7 percent lower in 1986 than in 1978, and the share of M4 in GDP was at its lowest level since 1965. Finally, private investment was further depressed by the manner in which fiscal cuts were achieved. No doubt a substantial reduction in parastatal investment spending was necessary, but investment expenditures for infrastructure capital were also severely slashed. As many types of infrastructure capital enhance the productivity of private sector capital, the latter cutbacks, like import compression and the reduction in bank lending, lowered the profitability of private investment.

Once investment declines, it is easy for the economy to slip into a downward spiral in which capital decumulation, rising inflation, and growing fiscal deficits become mutually reinforcing. As lower investment rates take their toll on the capital stock, output declines and inflation accelerates. For a given level of real government expenditures, the decline in real output widens the fiscal deficit by lowering real tax revenues. If the larger deficit is financed by printing money, inflation rises further (the budget is “balanced” by the inflation tax), triggering a new round of financial disintermediation and capital decumulation. If an attempt is made to contain inflationary pressures by covering the revenue shortfall through greater bond sales, the bond rate jumps upward and again the outcome is further financial disintermediation, capital decumulation, and intensified inflationary pressures.

In the next two chapters, formal theoretical models are developed in an attempt to gain a fuller understanding of the factors that seem to be driving the Mexican economy into a low growth, low real wage, high inflation, high underemployment equilibrium. In chapter 6 I analyze the repercussions of import compression on real wages and underemployment, while chapter 7 is an investigation of the links between capital accumulation, inflation, fiscal deficits, and financial disintermediation.

## 6 Import Compression, Real Wages, and Underemployment

Perhaps the most striking aspect of the post-1982 adjustment process has been the imposition of an extreme and unprecedented degree of import compression upon the private sector. Highly restrictive quotas were placed on imports of all types between 1982 and 1984 as part of a comprehensive stabilization program aimed first and foremost at eliminating the current account deficit. On 25 July 1985, a large number of quotas were eliminated, but, until very recently, import controls (licenses, high “reference” prices