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Notes

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Chapter 2

1. Excellent accounts of the SD economic policies may be found in Solís (1981), Levy (1981), Caso-Raphael and Miranda (1984), and Gil Díaz (1984b).
2. Data on the consolidated public sector deficit prior to 1965 are not available.
3. Kaldor's proposed tax reform is described in Kaldor (1964).
4. See Bueno (1971), Wallace (1980), and Wallace and ten Kate (1980).
5. See Gregory (1986) for a detailed discussion of the various problems plaguing the census data.
6. Tello (1979, chap. 1), Reynolds (1970), Solís (1981, 7–8), Levy (1981, 14–16), Clavijo and Valdivieso (1983), Rizzo (1984, 101, 122), Aspe and Sigmund (1984), Newell and Rubio (1984).
7. See, for example, Tello (1979, ch.1), Solís (1981), Levy (1981, 15), Villareal (1983, 382, 386), and Aspe and Beristain (1984a, 23).
8. See Camancho (1977) or Solís (1981).
9. Bueno (1971), Camancho (1977), Tello (1979, chap. 1), Levy (1981, 14), Villareal (1983), and Looney (1985, chap. 2).
10. See Fields (1980).
11. This figure is obtained by multiplying nominal GDP in 1958 and 1970 by the income share of the poorest 40 percent and then deflating by the period average CPI.
12. van Ginneken classified families with incomes below 10,000 pesos in 1970 prices (close to the 1970 minimum wage) as living in poverty.
13. The brief summary that follows is based on Gregory (1986, 151–66).
14. Allen Sangines performed the empirical estimation of the political expenditure cycle for this study.
15. See, for example, Villareal (1983).
16. The Durbin-Watson value fell in the indeterminant range. Bartlett's test was again applied and did not turn up evidence of first-order serial correlation.
17. See World Bank (1979, 28–33) and Solís (1981).
18. See Buffie (1987b, 1988) on the connection between capital accumulation and trade policy. In Buffie (1987a) it is shown that in the presence of an economywide rigid real wage, an optimal, second-best trade policy frequently entails an escalated structure of protection–cum–export promotion. When real wage rigidity is largely confined to the import-competing industrial sector, as in Mexico during the SD

period, there is a strong presumption that optimal trade policy will be biased in favor of protection.

19. See note 12 for an explanation of how the increase in real income of the poorest 40 percent is calculated.

20. This thesis is developed persuasively by Newell and Rubio (1984).

Chapter 3

1. A large number of other, less important measures were also proposed. See Solis (1981, 42–43).

2. The possibility of a forced devaluation was especially feared. It was felt that if this came to pass, the administration would suffer a complete loss of political legitimacy (Whitehead 1980, 847).

3. *Excelsior* (29 December 1972).

4. The political analysis that follows is based on Newell and Rubio (1984, 120–25).

5. The expansion in the parastatal sector cannot be attributed mostly to higher expenditures by PEMEX. Total real expenditures of the non-PEMEX parastatal sector increased at an annual average rate of 22.3 percent.

6. Newell and Rubio (1987, 137) also make this observation, but nonetheless label Echeverría a populist.

7. Different estimates of capital flight are discussed in chapter 4. The figure in the text refers to the "Modified Zedillo" estimate adjusted by Gulati's estimate of fake trade invoicing. The Morgan Guaranty definition of capital flight is used: the change in foreign debt plus net foreign direct investment plus the current surplus minus the change in reserves.

8. See Whitehead (1980, 846) and Zedillo (1986, 969).

9. The data in the 1975 Income-Expenditure Survey are not reliable. Comparing the summary income distribution measures in table 2.11 for 1970 and 1977 suggests, if anything, that inequality increased. (The first year of Lopez Portillo's term was 1977, but the IMF stabilization program implemented in that year may be properly regarded as a legacy of the Echeverría administration.) Note also that Atkinson's Coefficient rises between 1969 and 1977 except for extremely small values of E (< 0.5).

Chapter 4

1. These were the government guidelines for private sector wage increases.

2. Original plans to fully eliminate export subsidies (i.e., CEDIs) and institute an export tax to absorb excess profits generated by the 1976 devaluation were not carried out.

3. The goal in the Fund program was to raise the share of private sector investment in GNP by one percentage point.

4. The real import price here refers to a price index for total merchandise imports and is calculated by deflating by the period average GDP deflator.

5. The following account for how enhanced oil wealth altered Mexico's policy course draws heavily on Zedillo's (1985) superb survey.

6. I contend only that the slow growth in input prices helped stem the inflationary pressures created by the increase in government spending; I am not of the view that

inflation is predominantly a cost-side phenomenon in Mexico. There is considerable disagreement among Mexican economists on this point. Gil Diaz (1976), Cavazos (1976), and Yacaman (1983) argue that inflation is driven mostly by excess demand. Clavijo (1980) and Ize and Salas (1985) seem to favor the "structuralist" view that prices are set mostly by input costs, but their empirical results support the middling position that both input costs and excess demand influence the inflation rate. Ize and Salas concede that demand factors have "a significant role in explaining price dynamics" (198). Clavijo also finds that both cost factors and excess demand significantly affect inflation.

7. These wage indices may not accurately reflect movements in the after-tax real wage in 1980 and 1981. In the 1979 tax reform the exemption level was increased (to the minimum wage) and marginal tax rates for low income groups were lowered in an effort to offset the bracket creep caused by inflation.

8. For a detailed analysis of the 1979 tax reform, see Gil Díaz (1984a) and the account given by SHCP (1979) in *El Trimestre Economico.*

9. Expenditures to cover revenue shortfalls in four broad areas account for the bulk of these transfers: (1) the DIF, an institute for aiding the homeless and poor children (headed by Lopez Portillo's wife); (2) the National University; (3) unregistered subsidiaries of CONASUPO; and (4) *chiquilleria* (small stuff), a category comprising mostly companies in which the government has a minority interest, educational institutions other than the National University, and local development centers.

For reasons I do not fully understand, Jorge Hierro was kind enough to take the better part of one month out of his life (shortly before getting married) to unravel this mystery. I am greatly indebted to him.

10. The reason general tax revenues frequently exceed total revenues of the nonparastatal sector is that I classify tax payments by state-owned enterprises in table 4.7 as revenues of the parastatal sector.

11. This huge increase in consumer imports implies unbelievably large price and/or income elasticities of demand. Apparently, much of the increased demand reflected strong intertemporal substitution as the public speculated that the real exchange rate appreciation and trade liberalization would soon be reversed. On the relation between policy credibility and intertemporal substitution, see Calvo (1986, 1987).

12. It is doubtful that the slowdown in growth in the OECD countries after the second oil shock contributed significantly to the decline in nonoil exports. Mexico's share in OECD nonoil imports has always been very small. Even when oil exports are included, the Mexican share declined 15 percent between 1961–65 and 1976–78 (Clavijo and Valdivieso 1983, 905).

13. All of the definitions in table 4.12 employ the Morgan Guaranty definition of capital flight. Cuddington (1986) has pointed out that the Morgan Guaranty definition treats "normal" capital flows (foreign assets acquired for purposes of ordinary business activity, for portfolio diversification, etc.) as capital flight. Given that our interest is in how the net foreign debt evolved, this is the appropriate definition of capital flight. For estimates that attempt to distinguish between flight capital (or speculative capital flows) and normal capital flows and a discussion of the conceptual difficulties this entails, see Cuddington (1986) and Cumby and Levich (1987).

The data bases differ in several other ways besides those discussed in the text. For reasons that are not clear, the IMF data used by Cumby and Levich on the current account deficit and the change in reserves differ a great deal from the Bank of Mexico data as reported in *Indicadores Economicos*.

14. The extent to which capital flight estimates should be adjusted for discrepancies between home and partner country data is open to dispute. Partner and home country data may differ for reasons unrelated to illegal trade. (See Cumby and Levich 1987 on this point.)

15. The debt data in this paragraph is taken from *Mexican Economic Outlook* (CIEMEX-WHARTON), various issues. Data on the short-term debt is of poor quality, particularly for the private sector.

16. The figures for the ratios of debt and debt service to GDP do not contain a correction for departures of the real exchange rate from its long-run equilibrium value. As the peso was heavily overvalued between 1979 and 1981, the figures for these years are undoubtedly underestimates of the true values.

17. These are the figures for debt service implied by adherence to the existing repayments schedule. In the last four months of 1982, Mexico suspended all payments on the private sector debt and most payments on principal of the public sector debt. The suspension of debt service appears in the Mexican balance of payments accounts with a positive sign under the category *ingreso virtual* (virtual income) and a matching negative sign under the category *egreso virtual* (virtual expenditures).

18. Another factor that probably contributed to fiscal indiscipline at this time was the sway held by the Cambridge Group in policy circles. The Cambridge Group argued that the economy was not overheated by excess aggregate demand in 1980 and 1981. See Eatwell and Singh (1981) and Looney (1985, 173–77).

19. One possible explanation for the large increase in short-term lending can be found in Krugman (1985). Defensive lending may be rational if it lowers the probability of default. The expected loss on new lending must then be balanced against the gain for averting default and avoiding losses on previous lending. Clearly, however, there is a free rider problem in that it is in the interest of each individual bank to let other banks extend the new loans that protect old loans. Krugman suggests that this may lead to excessive short-term lending in crisis periods. Individual lenders who can free ride may prefer to lend short term so that they can get out quickly before default actually occurs.

20. This account of the swings in policy in the first half of 1982 is based on Zedillo (1985) and Looney (1985).

21. For ease of comparison, both the expenditure figures and PEMEX revenues are deflated by the period average CPI.

22. Perceived political risk must have been the major factor provoking capital flight since Mexdollars were available as a hedge against exchange risk. See Ize and Ortiz (1983) on this point and for an interesting model incorporating endogenous political risk. Their analysis suggests that political risk was an important factor in the "overdevaluation" of the peso in 1982.

23. There is disagreement on the role that Mexdollar accounts played in precipitating the 1982 crisis. Taylor (1983) contends that the lack of foreign exchange reserves to cover portfolio shifts out of Mexdollars made the financial system

exceedingly vulnerable to speculative flows. On the other hand, as Ortíz (1983) observes, financial stability prevailed throughout the late fifties and sixties when dollarization was greater than during 1981 or 1982. What matters for financial stability is that investors view Mexdollars as being *safe*.

24. Connolly and Taylor (1984) and Blanco and Garber (1986) develop and estimate models of the speculative attacks that brought about the collapse of the exchange rate in August 1982.

25. *Notas Sobre la Reestructuracion de la Deuda Externa de Mexico* (n.d., 11, table 1) [internal document produced by SHCP].

26. For a Balassa-type decomposition of the relative contributions of internal and external shocks to debt accumulation during this period, see Solís and Zedillo (1985) and Zedillo (1986). It is clear from table 5 in Zedillo (1986, 971) that if the item reflecting expansion of oil exports at constant terms of trade is classified as an external factor rather than a "domestic policy action," then the aggregate effect of external shocks during the Lopez Portillo administration was strongly favorable to Mexico.

27. This conclusion is supported by the empirical findings of Hill (1984) which are based on the data generated by the 1977 Income-Expenditure Survey. If the percentage of total taxes paid by each decile is taken as a proxy for its share of financing the subsidies, the subsidies to electricity and home heating fuel redistribute income from the top two to the bottom eight deciles, with the middle deciles benefitting most in absolute terms. The redistributive impact of low cost public sector transportation is similar. In the case of gas consumption, the redistribution is from the top decile and the bottom four deciles (whose consumption is negligible) to the fifth through the ninth deciles.

The middle and upper-middle classes also enjoy most of the benefits conferred by CONASUPO subsidies. Consumption at CONASUPO stores peaks at the seventh decile. The net gains for the bottom two deciles are miniscule. Solís (1984) investigates CONASUPO operations in greater detail and arrives at the same conclusion.

Chapter 5

1. The private sector import volume is calculated by multiplying the total import volume by the ratio of the dollar value of private sector imports to the dollar value of total imports.

2. Some data on the extremely sharp reduction in profit rates is available from the balance sheets and income statements of 1,300 industrial companies in which some form of foreign investment exists. According to calculations by a World Bank mission, in 1980 and 1981 the real pretax return on equity for the industrial sector as a whole was approximately 10 percent. In 1982 the return dropped to -30 percent and in 1983 it stood at -20 percent (World Bank 1986, 94–95). The operating return (revenues minus operating costs divided by total assets) was 6 percent in 1980, -4 percent in 1982, and zero in 1983 (96).

3. Deflating the dollar value of public sector imports by *Informe Anual's* index of dollar import prices (*Informe Anual 1985*, 201) gives an increase in real public sector imports of only 8 percent in 1984.

4. The following account of the Fund program is based on the Letter of Intent, which has been published in *El Trimestre Economico*, 52 (July–September 1985):865–73.

5. For a detailed description of the trade liberalization program, see *Informe Anual 1986* (115–17) and World Bank (1986, 15–18). In April 1985, the number of tariff rates were reduced from ten to seven and the range of rates compressed to 10–50 percent. In July, tariffs replaced licenses for a large number of imports. Import liberalization was also extended to encompass competitive intermediate inputs. Prior to 1985, import liberalization had applied only to noncompetitive intermediate inputs and capital goods. Under the new policy regime, import licenses are to be automatically granted whenever the price of a domestically produced intermediate input exceeds the international price by more than 50 percent. There is some question about the true extent of import liberalization. Some industries are placed in "special" categories that exempt them from liberalization. In other cases, domestic content requirements and the levying of tariffs on "reference prices" result in domestic prices that far exceed world market prices.

On the export side, the two main promotional measures were preferential access to imports and "indirect export promotion." Starting in 1985, export firms were entitled to import as much as 40 percent of their export earnings, with intermediate inputs entering duty free. Indirect export promotion provides for a temporary increase in imports of domestic firms producing important intermediate inputs utilized by the export sector.

6. Further steps were taken in 1987. At present (early 1988), there is a nearly uniform tariff rate of 20 percent and virtually all quantitative restrictions have been eliminated.

7. The planned privatization of 236 SOEs will not be of much help in this regard. A few SOEs account for the great majority of expenditures undertaken by the parastatal sector.

8. High nominal interest rates have been an important factor in the decline of income from the corporate profits tax (*Informe Anual 1985*, 30). Interest payments are subtracted from total gross profits when computing taxable profits. The tax law does not take account of the fact that under high inflation a large fraction of total interest payments are offset by reduction in the real value of firm debts.

9. Some would argue that capital gains or losses on the external and dollar-indexed internal debt owing to variations in the real exchange rate should be included. But in steady-state equilibrium, the real exchange rate is constant. Hence, if the aim is to obtain a measure of the size of the deficit not associated with inertial inflation, interest payments on external and dollar-indexed debt should be ignored altogether.

10. The estimates of the actual and inflation-adjusted deficits by the Central Bank and SHCP differ by more than one percentage point of GDP in some years, and there are questions about the accuracy of the reported figures. It is not clear how the FICORCA subsidies (see sec. 8.3 below for details of FICORCA program) are accounted for in the reported deficit. In addition, it seems that double counting is a problem. Apparently, foreign loans contracted by NAFINSA (the principal development bank) and re-lent in pesos are counted twice, as part of external and internal debt of the public sector. (See Perez 1986, 17.)

11. I ignore here capital gains and losses on assets other than money and government bonds.

12. In general, one would expect the IAD to vary with the inflation rate (either through a Tanzi effect upon real tax revenues or a change in the real interest rate), but

neither the sign of the relation nor its quantitative significance are clear. The Central Bank has made some crude guesstimates of the size of the Tanzi effect (*Informe Anual 1986*, 184–86). At the inflation rates Mexico is experiencing, the Tanzi effect seems to be very small.

13. Savings might also decline because the public harbors doubts about how long anti-inflationary policies will be kept in place (see Calvo 1986). Greater fiscal austerity (i.e., an inflation-adjusted surplus) may then be necessary for a period in order to restore the government's reputation.

14. Published figures overstate the true decrease in the real monetary base in 1985. Much of the decrease reflected an administrative sleight of hand. In January 1985, the legal reserve ratio was lowered from 48 to 10 percent. (For commercial banks, the 10 percent rate applied to deposits exceeding the December 1984 level, while for the government development banks (La Banca de Desarrollo) it applied to deposit balances above the highest balance registered in 1984.) At the same time, however, all banks were required to use 35 percent of their deposits to purchase federal government debt instruments, and the commercial banks were also required to place 3 percent of the funds at the disposal of the government development banks (*Informe Anual 1985*, 119–20). In effect, a large part of bank reserves were simply reclassified as government debt.

15. Loans for low-income housing, agricultural development, and export promotion were exempted from the credit squeeze.

16. These real import figures are calculated by deflating dollar import aggregates by the dollar price index for total imports found in *Informe Anual 1985* (201).

17. Ize and Ortiz (1985) argue that the continuation of capital flight was due in large part to ongoing fiscal weakness. The perceived inability of the government to service its internal debt raised fears that a de facto default would be engineered through a large devaluation that would strongly increase the price level.

18. For detailed descriptions of the debt restructuring, see *Informe Anual 1986*, Gurria Treviño (1987), and Heath (1987).

19. Many of the poor in the agricultural and urban informal sectors are paid less than the minimum wage, but there is not much doubt that the worsening in underemployment has strongly depressed real wages of these groups. Furthermore, adjusting real wages for the high inflation tax since 1981 would probably show a relatively larger decline in the real incomes of the poorest groups. Gonzales (1983) analyzes the likely incidence of the inflation tax using data gathered in the 1977 Income-Expenditure Survey. The poorest four deciles hold almost all of their wealth in the form of cash. The very poor also hold a substantial amount of debt with stores and the enterprises that employ them. Even if the nominal interest rate on such debt is assumed to remain constant as inflation increases, the inflation tax lowers real income of the second, third, and fourth poorest deciles.

20. It is extremely unfortunate that Mexican borrowing has turned out, perversely, to be *pro-shock*, not counter-shock as consumption smoothing would dictate. Almost $60 billion of debt was taken out between 1977 and 1982 when the terms of trade were favorable (perhaps high oil prices were viewed as permanent). In the post-1982 period, the terms of trade have hit an historical low and bank lending has been sharply curtailed. Gersovitz (1985) has observed that the pro-shock patterns of borrowing is not atypical.

21. CEDIs fell from 11 percent of manufacturing exports in 1979 to only 0.3 percent in 1985 (World Bank 1986). Since 1983, the FOMEX (fidecomiso para el Fomento de Exportaciones) interest rate subsidy has decreased steadily and, under the 1985 U.S.-Mexico trade accord, is supposed to be fully eliminated by the end of 1987.

Chapter 6

1. Almost all imports were subject to quantitative restrictions from 1982 to 1984. In July 1985, controls were greatly eased, but largely for capital goods and intermediate inputs. In 1986, 68 percent of nondurable consumer goods production and 98 percent of consumer durables production were still protected by nontariff barriers to trade (World Bank 1986, 20). Even with complete liberalization of consumer imports it would probably still be appropriate, for analytical purposes, to treat manufactures as part of the nontradables sector (i.e., the sector where prices are endogenously determined). Manufactured goods, unlike primary goods, tend to be heterogeneous so that domestic and foreign products are seldom perfect substitutes.

2. This data comes from the 1977 Income-Expenditure Survey. See Gallardo (1983), tables 3 (2230) and 8 (2242). In an extensive study, Levy (1980) argues that underemployment, not open unemployment, is the major problem in the Mexican labor market.

3. Kolbeck (1983) argues that this dualistic labor market specification is especially relevant for Mexico.

4. When L^n increases, θ_L^n is replaced by $\theta_L^n(1 - \psi)$ in (17), where $\psi \equiv w^x/w^n$.

5. The conclusion here that devaluation is contractionary is based on adverse supply-side effects. Devaluation may be demand contractionary as well (Krugman and Taylor 1978), but this possibility does not alter the results qualitatively. Any nominal devaluation that produces a real devaluation will lower employment in the high-wage manufacturing sector.

Devaluation may also prove contractionary by raising the real supply price of capital goods and depressing investment spending. The ensuing capital decumulation can then give rise to a lengthy period of falling output, high unemployment, and declining real wages (Buffie 1986).

6. A reduction in L^n is sufficient to lower real income in the present model because $w^x < w^n$ and export sector employment cannot expand by an amount more than nontradables sector employment contracts when there is no open unemployment initially. If open unemployment does exist initially, L^x can increase to a greater extent and devaluation could be expansionary. When the source of open unemployment is an economywide rigid real wage, the outcome turns on whether labor demand expands more in the export sector than it contracts in the nontradables sector. There is a presumption, however, that aggregate employment will decline when the devaluation is undertaken to eliminate an initial trade balance deficit. See Buffie (1987b) for an analysis of this case.

7. It has been assumed that all consumer imports are banned. If there is an import-competing sector protected by a tariff, an increase in v should be interpreted as a proportionate increase in the export subsidy and the tariff on consumer imports.

8. When L^n increases, μ is set equal to unity in the expression for Δ_1. The assumption that $v = 0$ initially means that a small increase in the subsidy does not

create any byproduct distortions. Once v ceases to be infinitesimally small, the byproduct distortions tend to lower income and further increases in the export subsidy become less effective.

9. This proposition holds only when the export subsidy and implicit tariff on imported intermediates are initially zero. Also, an export subsidy may exert a generally less adverse effect on employment even if (33) fails to hold, because a subsidy is more effective in stimulating labor demand in the export sector than a devaluation. Thus it is possible for L^n to decline more but open unemployment to increase less under an export subsidy than under a devaluation.

10. A comparison of the impact on P_n (and hence the general price level) does not yield firm conclusions. Nontradables supply expands more under an export subsidy because the price of imported inputs remains constant. If L^n declines, P_n may nonetheless rise more than under a comparable devaluation, because the greater increase in export sector employment causes nontradables demand to increase more strongly. However, P_n always rises less under an export subsidy when the subsidy succeeds in increasing L^n (drawing labor out of the export sector).

11. That is, the nominal money supply deflated by $P_n^{\gamma_n}P_x^{\gamma_x}$, the CPI, increases in the case of an export subsidy but remains unchanged under a devaluation. The Metzlerian savings function is responsible for this result—real wealth moves in the same direction as real income across steady states.

12. It is also assumed that the appropriate price deflator for government expenditures is the CPI ($P_n^{\gamma_n}P_x^{\gamma_x}$). If this is not the case, an additional terms appears in (35) that picks up the effect of a change in relative prices on the fiscal deficit.

13. This, of course, entails solving for L^n in a different model with some specific assumptions about the form of government expenditures. For example, if government expenditures are for a mixture of wage payments, consumption of nontradables, the imports, then (8) and (10″) are replaced by

$$D^n(\cdot) + G^n = Q^n \tag{9′}$$

$$Y = (1 - z)[R(\cdot) + w^g L^g], \tag{10‴}$$

where G^n is fixed government consumption of domestic manufactures; w^g is the public sector wage (indexed to the CPI); and L^g is the fixed level of public sector employment. The general solution for L^n in this model supports the claim made in the text.

Chapter 7

1. For a given set of relative goods prices and a given value of w^m, the three zero-profit conditions determine the capital rental, the land rental, and w^x.

2. If capital is used in producing one or both of the agricultural goods N^m increases with the aggregate capital stock under the assumption that the manufacturing sector is relatively capital intensive.

3. This syndrome of "financial repression" is extensively discussed in McKinnon (1973) and Shaw (1973).

4. See Gonzalez (1983).

5. In a model focussing on steady states where expectations are correct and risk is absent, it is difficult to explain why individuals would permanently hold a foreign-

currency-denominated asset. Therefore, I will not address the important issue of capital flight.

6. To ensure a positive demand for deposits, I also assume $\lim_{D^c \to 0} V_D = \infty$. Similar assumptions are made to guarantee that landowners and workers hold positive money balances (for workers, money holdings include both deposits and currency).

7. This assumption is also employed by Nairay 1984). It is helpful in tying down certain comparative statics results.

8. Real debt service varies with the real exchange rate, but in our small, totally open economy the real exchange rate is fixed, and hence it is legitimate to treat S as exogenous.

9. I ignore the Tanzi effect, the tendency for real tax revenues to decline when inflation accelerates. It is not clear that the Tanzi effect operates with much force in Mexico. In 1986, when oil prices collapsed and the inflation rate surged from 63.7 to 105 percent, the Mexican government managed to raise the share of nonoil revenues in GDP by 3.6 percentage points.

10. Viewed from another angle, the potential base for the inflation tax is $C + (D - L)$, currency plus net loans from the private to the public sector through the banking system. If r_d and r_L are kept fixed, $(D - L)$ is shielded from the inflation tax, so increases in π tax only C.

11. The net impact on the adjusted fiscal deficit is positive only when the deficit on financial intermediation is initially zero or not too large. If there is an initial deficit of πkD (implying that $r_L x + r_b k_b - \mathrm{r} r_d = 0$ initially), increases in D do not alter the adjusted fiscal deficit. And if the initial deficit exceeds πkD, the adjusted deficit worsens as D increases.

12. I have not said anything about the current account deficit. It can be confirmed, however, by aggregating over the private and public sector budget constraints, that the current account deficit is zero in steady-state equilibrium.

13. Note that $f_1^2 + k_b D_3 = f_1^2 + k_b h_1^v > 0$ since $f_1^2 > -h_1^v$.

14. If the real deposit rate is negative, μ_d and α_d should be interpreted as interest semi-elasticities of demand (i.e., $\mu_d - D_2/D$ and $\alpha_d - (\partial B^v/\partial r_b)/B^v$).

15. The direct effect may be inflationary when government revenues depend on the supply of effective labor and, as in efficiency wage models, the effort exerted by government employees is a positive function of the real wage. This interesting idea is developed in O'Connell (1987).

16. Ize 1984, 20, 22) also argues that higher taxes are not an adequate substitute for cuts in government current expenditures in adjusting to increased debt service.

17. Obviously, I am ignoring here intertemporal considerations, which suggest that it will be desirable to smooth out adjustment to the shock (by cutting capital as well as current expenditures), and the possibility that government consumption is socially more valuable than private consumption. Political economy considerations may also weaken this conclusion. As Ize (1984) has observed, if social tension increases when government social welfare expenditures are cut, domestic investment may decline (at least in the short run) while political risks are perceived to be high.

18. A decrease in M is quite improbably if bonds and deposits are complements.

19. See Morley and Fishlow (1987) for an interesting analysis of the dynamic stability problems that arise from the interaction of high real interest rates and high internal debt levels

20. The figures refer to end-of-year stocks deflated by the end-of-year CPI. The decrease in the real monetary base is calculated by adjusting for the changes introduced in the January 1895 banking law (Ley Organica del Banco de Mexico), which substituted mandatory purchases of government debt for a large part of the reserve requirement (see chap. 5, n. 14). According to the published figures, the decrease in the real monetary base between 1982 and 1986 was 56.4 percent.

21. The profit function corresponding to the following production function

$$Q = a_0KJ + a_1/J + N^{\alpha}K^{(1-\alpha)}$$

(where a_0, a_1, and α are constants) has the properties that $\phi_{wJ} = \phi_{KK} = 0$ and $\phi_{KJ} > 0$. And $\phi_J = \partial Q/\partial J = 0$ evaluated at $J = \sqrt{a_1/a_0K}$.

22. The impact on capitalist deposit demand is ambiguous because of conflicting income and substitution effects. It is assumed in figure 7.8 that D^c does not change following the decrease in J.

23. Subsequent events have borne out this conjecture. On 16 December 1987, with inflation running at an annual rate of over 200 percent, President De la Madrid instituted a system of partial wage-price controls (the Solidarity Economic Pact). Despite low rates of growth of controlled prices and the application of severely contractionary fiscal and monetary policy, free prices continued to increase strongly through the first half of 1988.

Chapter 8

1. *Avances del Plan Global de Desarrollo,* 1891 (Secretaría de Programacíon y Presupuesto).

2. The SICARTSA case has been analyzed in great detail by Wellons (1987).

3. The 1982 crisis was foreseen in early 1981 by many Mexican (and non-Mexican) economists. See, for example, Levy (1981, chap. 5).

4. See Kraft (1984) for a fascinating chronicle of this period. An excellent, very detailed account of the debt negotiations since 1982 may be found in Gurria Treviño (1987).

5. Measures were also taken in 1983 to regularize payments on the private sector debt. Arrangements were made for payment of over $800 million to foreign suppliers and payment of $900 million of interest arrears accumulated on commercial bank debt.

6. Calculated as net interest payments (interest on the private and public sector foreign debt plus remitted profits less income from Mexican investments abroad) less the net increase in external indebtedness (inclusive of net foreign direct investment but exclusive of the net changes in international reserves). For reasons discussed in chapter 4, Zedillo's figures (1986, 177) are used for the net increase in external indebtedness. When capital flight and reserve accumulation are factored in, the net transfer made by Mexico is considerably larger.

7. This account of the 1984 negotiations is from Zedillo (1986, 981).

8. The Baker Plan, announced in October 1985, proposed that fifteen countries be granted $29 billion of new loans from the World Bank and private commercial banks, under the condition that the countries introduce market-oriented policies.

9. The Paris Club agreement was made conditional on the success of the IMF standby, thus adding yet another cross-conditionality clause to the 1986 restructuring package.

Chapter 9

1. In fact, on 16 December 1987, Mexico sought relief from inflationary pressures by implementing a system of partial wage-price controls. The controls cover the exchange rate, all public sector prices, wages, and the prices of certain key consumption goods. Other prices are free to adjust.

2. Other types of tax increases may help control inflation without jeopardizing growth. In the model of chapter 7, for example, it is easy to show that a land tax will lower the inflation rate while leaving the steady-state capital stock and real output unchanged. Whether it is politically feasible to introduce such selective taxes is another matter.

3. There are numerous types of monetary policy. The statement in the text is correct for decreases in the reserve requirement and increases in real lending by development banks. A decrease in required bank purchase of government bonds raises real output and definitely reduces inflation if accompanied by a reduction in bond supply that stabilizes the real bond rate.

4. I am at a complete loss to explain why, with $15 billion of foreign exchange reserves in 1987, the administration does not pursue more expansionary policies.

5. This policy, of course, was suspended with the introduction of partial wage-price controls at the end of 1987. After the peso was devalued on 14 December 1987, the controlled exchange rate was kept fixed for over a month and then adjusted gradually to a rate of 2,273 pesos. In March 1988 it was decided that the controlled rate would remain fixed at 2,273 pesos through the end of May. Since free prices continued to rise at a rapid rate (6.9 percent in March), the real exchange rate appreciated considerably in the first quarter of 1988.

6. See Buffie (1987a, 1987c, 1988).

7. See Sachs (1987).

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