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STRUCTURAL, ADJUSTMENT, STABILIZATION AND POLICY REFORM: DOMESTIC AND INTERNATIONAL FINANCE

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1. INTRODUCTION

In the 1980s many developing countries faced a combination of severe balance of payments problems, high and variable inflation, slow growth, and high unemployment. These problems emerged from the cumulative effects of weak national policies and institutions that combined with a drastic and unfavorable change in external conditions (terms of trade shocks, interest rate shocks, a worldwide recession, and a severe reduction in commercial bank lending) to lead to the debt crisis. In contrast, in that same decade, a group of countries located in East Asia escaped the debt crisis and achieved and annual rate of growth of over 6%.

In the wake of the Great Depression and the apparent success of the Soviet planning model from the 1930s until the 1960s, economic policy in the post-World War II period had been dominated by skepticism about market mechanisms, and a corresponding belief that government intervention could successfully be used to correct market failures. The most notable and most important examples in the developing countries are the widespread preparation of national economic plans, and the pursuit of import substituting industrialization (ISI). Until the early 1970s, such policies were generally supported by academic development economists and policy advisers, with a few notable exceptions, such as Haberler (1959) and Viner (1953). Given the high tariff levels of industrial countries, the inherent appeal of protectionist policies to the practical person, the use of protectionist policies by the United States and European countries during their periods of industrialization, and the role of industrialization in the process of economic development, ISI seemed an obvious development strategy. Rapid growth in most developing countries in the 1950s and 1960s appeared to justify the basic ISI approach.

State intervention took place on a broad scale (Krueger, 1992; Larraín and Selowsky, 1991). Public enterprises were created to achieve industrialization directly, as well as provide employment; state marketing boards helped enforce pricing policies that in many countries discriminated against agriculture to the benefit of urban dwellers. The financial system was repressed to ensure appropriate financing for both the industrial firms favored by the state, and to provide cheap financing for the government. In many

countries, especially in Latin America, the growth in the size of the public sector's spending obligations surpassed its capacity to collect revenues, and budget deficits increased to levels that were unsustainable in the international environment of the 1980s. Frequently, domestic currencies were overvalued as a result of domestic inflation and the attempt to use the nominal exchange rate as an anchor in the fight against inflation.

While economists such as Little, Scitovsky and Scott (1970) were sharply critical of the prevailing approach to development policy, and while the free-market critique of state intervention gained strength in the 1970s, it is only in retrospect that the disasters of the 1980s appear inevitable. The large-scale foreign borrowing by developing countries that helped create the debt crisis was initially applauded as part of the successful recycling of the balance of payments and saving surpluses of the oil producers. Even at the end of the 1970s, the final outburst of commercial bank lending between 1979 and 1982 helped conceal the unsustainability of the macroeconomic policies then being followed in many developing countries. But when the debt crisis struck, adjustment became unavoidable.

Structural adjustment defined

Structural adjustment is a process of market-oriented reform in policies and institutions, with the goals of restoring a sustainable balance of payments, reducing inflation, and creating the conditions for sustainable growth in per capita income. Structural adjustment programs generally start with a conventional stabilization program, intended to restore the viability of the current account and the budget, but they are distinguished from pure stabilization programs by the inclusion of a set of microeconomic-institutional policy reforms. In some cases, including Mexico starting in the mid 1980s, and Argentina in the late 1980s, important structural changes have been

made even before the country achieved macroeconomic stabilization1.

Stabilization measures aimed at restoring macroeconomic balance and reducing inflation focus on bringing the level of demand and its composition (tradable relative to non-tradable goods) into line with the level of output and the financial level of the trade deficit. Typically stabilization requires a reduction in both the public sector deficit and monetary financing of the government, in order to reduce the inflation rate. The structural transformation component focuses on the removal of microeconomic obstacle to the efficient allocation of resources. Typical measures include liberalizing the trade regime, removing price controls, deregulating the domestic goods markets, reforming the public sector including the tax system and the structure of government spending as well as state-owned enterprises, removing constraints on factor employment and mobility, deregulating domestic financial markets, and removing obstacles to saving and investment, and by creating and strengthening institutions to support stabilization and structural transformation.

In short, structural adjustment policies aim to restore macroeconomic balance, to integrate the economy into the global economy, to greatly increase the role of (relatively undistorted) markets in allocating resources, and to create the institutions needed for those purposes.

Adjustment programs before 1980

Since the early 1980s, structural adjustment has been closely identified with the role of the International Financial Institutions (IFIs) in fostering policy reforms in the developing countries. However, since any country implementing wideranging economic reforms can be described as pursuing a structural adjustment program, many have in the

1We have not pursued the etymology of structural adjustment, a term that does not appear as a separate entry in the New Palgrave. The literature tends to reserve the term "structural" for the more microeconomic or sectoral reforms; see for instance OECD (1987).

past undertaken structural adjustment programs without knowing they were doing so. Prominent among the many structural reform programs undertaken between the end of World War II and 1980 are the German adjustment program of the late 1940s and 1950s, the Spanish reforms initiated in 1959, the Korean and Taiwanese programs of the first half of the 1960s, and the Chilean adjustment program of the second half of the 1970s.

The German program included a currency reform to stop inflation and a structural transformation component focusing on reestablishing a market system. While the German currency reform was implemented overnight, the liberalization of trade and the introduction of currency convertibility took place gradually. Indeed, adjustment in western Europe was very gradual: for instance price controls in Britain were not removed until 1954, and current account convertibility was not financable level of the trade deficit. Typically stabilization requires a reduction in both the public sector deficit and monetary financing of the government, in order to reduce the inflation rate. The structural transformation component focuses on the removal of microeconomic obstacles to the efficient allocation of resources. Typical measures include liberalizing the trade regime, removing price controls, deregulating the domestic goods markets, reforming the public sector including the tax system and the structure of government spending as well as state-owned enterprises, removing constraints on factor employment and mobility, deregulating domestic financial markets, and removing obstacles to saving and investment, and by creating and strengthening institutions to support stabilization and structural transformation.

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Up to the early 1960s Korea, like most of the Latin-American countries, pursued a classic import substitution strategy2. Import competing manufacturing was encouraged through a host of incentives in the form of import restrictions (quotas, tariffs, and multiple exchange rates), tax concessions, subsidized credit, and the creation of public enterprises in the import competing sector. Slow growth and a military coup helped Korea recognize the limitations of the import substitution strategy, and achieve a shift in the early 1960s to an export-oriented development strategy.

The new strategy combined stabilization with a reduction in the anti-export bias

2The experience of Korea is analyzed in the World Bank's (1993b) study of the East Asian economies.

of the trade regime by dismantling or offsetting previous protectionist policies, and by introducing explicit export promotion incentives. One of the most important pro-export measures was the unification of the exchange rate system and the implementation of a successful large real devaluation in the period 1963-1964. Export activities were also encouraged by cheap banks loans for exporters, an aggressive indirect tax drawback system that included the remission of indirect taxes on inputs into exports and on the exports themselves, and discounts in the prices of transportation and electricity for export oriented activities. Fiscal and monetary policies succeeded in achieving low to moderate inflation and a fairly stable real exchange rate adjusted for changes in fundamentals (Kim and Roemer 1979; Frank *et al.*, 1975; Scitovsky 1990; Suh 1992).

The transformation of the Korean economy was dramatic. The average annual rate of growth of per capita GNP increased from 0.7 percent between 1952 and 1962, to 6.9 percent in the period 1962-1971. In the latter 10 years, the dollar value of exports grew at the astonishing average annual rate of 39 percent (Suh 1992). There are significant differences of opinion about the role of the state in promoting the expansion of exports. Some researchers claim that direct state intervention in the 1960s through selective incentives for exporters had a major role in export growth (Dornbusch 1985; Sachs 1987; Amsden 1989; Wade 1990), while others argue that the export promotion initiatives merely compensated for the antiexport bias of import restricting policies (Westphal 1978; Nam 1985; Krueger 1985). Of course these restrictions and incentives still created distortions at the margins between domestic production and importing, and between domestic production and exports. There is no disagreement on the role played by macroeconomic policies: researchers of the Korean experience accept that the stable macroeconomic situation with low inflation, small fiscal deficits and manageable balance of payments situation made a substantial positive contribution to its dramatic economic performance (Dornbusch 1985; Sachs 1987; Collins 1990; Corbo and Suh 1992).

The structural transformation of the Taiwanese economy was as impressive as that of Korea. Taiwan's transformation from a backward agricultural economy to an

industrial power started in 1958 when the basic exchange rate was devalued, and exporters of non-traditional products were allowed to trade their exchange surrender certificates for the full foreign exchange value of their exports (Tsiang, 1985). These measures were followed by a gradual liberalization of the foreign trade regime, and the unification of the multiple exchange rate system in 1959. At this time the system of foreign exchange certificates was eliminated and another large devaluation took place. These measures were followed in the 1960s by aggressive policies to create a close to free-trade, free-market regime for exports. The liberalization of controls and the changes in the trade regime made it increasingly profitable to produce for foreign markets, and unleashed unprecedented export growth.

Monetary and fiscal policy have been used in Taiwan to keep inflation under control since 1958. Taiwan relied on markets to allocate resources more than did Korea. For example, while economic policies in Taiwan encouraged saving mobilization through a positive real interest rate for deposits and loans, Korea made much more use of credit subsidies in the early stages of its reforms.

The Taiwanese economy responded impressively to these measures. The average annual rate of growth of GNP per capita reached 6.7 percent in the 1960s, while it had been only a little over 2 percent in the second half of the 1950s. In the same decade dollar exports grew at an average annual rate of 21.3 percent, compared with an annual rate of only 6 percent in the 1950s (Tsiang 1985).

The structural transformation of the Chilean economy was initiated in the middle of the 1970s, after the economic collapse and 600 percent inflation at the end of the Allende government. The adjustment program included macroeconomic stabilization, significant trade liberalization, and a consistent return to the use of markets. The key macroeconomic measure was a cut in the public sector deficit from nearly 25 percent of GDP in 1973 to a mere 0.9 percent of GDP in 1975, and a surplus starting in 1976. The government also undertook a large nominal devaluation to assist the real devaluation required for the switching of the pattern of demand and production.

Structural transformation measures included a reform of the trade regime, the liberalization of markets, and an aggressive privatization program. The change in the trade regime relied mostly on the dismantling of the import restriction regime, accompanied by the successful real devaluation. It relied much less on special measures for the encouragement to exports than had the Korean and even the Taiwanese programs. Competitive markets were promoted by the opening to trade, and the deregulation of factor markets. The role of the private sector was enhanced through the privatization of public enterprises (Corbo 1985a; Edwards and Edwards 1987).

Subsequent developments in Chile, which included a deep crisis in 1982 and the eventual recovery of growth at the end of the 1980s are discussed in the Chilean case study in Section 6.

Adjustment programs of the 1980s

The term structural adjustment came into common use only in the 1980s, after the World Bank proposed structural adjustment lending in 1979 (Stern, 1983) -before the debt crisis began, though not before some Bank member countries were experiencing severe balance of payments difficulties at the onset of the second oil price shock. While the debt crisis made the needs for stabilization and external financial assistance clear, the emphasis on trade liberalization and the other structural components owed much to the increasing weight of experience- such as that of Korea and Taiwan -and research (for instance, Bhagwati (1978), Krueger (1978), and Balassa and associates (1982)).

The World Bank proposed the introduction of structural adjustment lending at its Annual Meetings in September 1979. In the words of Ernest Stern, who played a central role in the introduction of these loans by the Bank:

"This new form of lending would:

- support a program of specific policy changes and institutional reforms designed to reduce the current account deficit to sustainable levels.
- assist a country in meeting the transitional costs of structural changes in industry

and agriculture by augmenting the supply of freely usable foreign exchange.

- act as a catalyst for the inflow of other external capital to help ease the balance of payments situation". (Stern, 1983, p. 89).

In February 1980, Robert McNamara[3] set out the goals of adjustment as being increased efficiency of resource use and "improved responsiveness of the economy to changes in economic conditions", a goal that in later years was shortened to "enhanced supply response". It was envisaged that these programs would involve the reassessment of domestic investment programs, changes in the trade regime, domestic resource mobilization, and price incentives. Read in the light of the World Bank's approach of the 1980s, McNamara's discussion of trade reform was surprisingly eclectic, including the possibility that it might be desirable to reorient investment to domestic markets to stimulate domestic demand in the face of limited export prospects. The memorandum envisaged that implementation of structural adjustment programs would take several years and that their results would only gradually become visible. It also emphasized the need for enhanced coordination between the World Bank and the IMF in the process of adjustment lending.

World Bank adjustment lending started in 1980 with three SALs (structural adjustment loans) and one SECAL (sectoral adjustment loan). Most of the early adjustment loans were SALs, but after 1982, the bulk of adjustment lending took the form of SECALs. A textbook adjustment lending program starts with one or more SALs, designed to support economy wide institutional and policy reforms aimed at reducing the trade balance deficit while creating the conditions for sustainable growth. Further adjustment lending will focus on reforms in particular sectors, supported by SECALs. Alternatively, SECALs may be used to support important sectoral reforms before a government can implement economy-wide reforms.

3World bank (1980).

Structural adjustment loans typically disburse within 18 months, but have a maturity of 17 to 50 years[4]. As the 1980s progressed, the IMF introduced facilities that provide loans for more than its customary three years, the Extended Fund Facility (EFF) and the Structural Adjustment Facility (SAF). The rationale for Fund adjustment lending was that, in the context of the reduced net capital inflows of the debt crisis, consumption and investment levels in the developing countries -and thus current and future output levels- would be cut too hard if countries had to be in a position to repay Fund loans within the otherwise standard three years.

As the 1980s progressed, the success of additional countries in Asia (Indonesia, Malaysia and Thailand), the sustained performance of the Chilean economy, the difficulties suffered by non-adjusting countries in Latin America, and the collapse of the socialist model in Eastern Europe and the former Soviet Union, made the need for reform increasingly evident in many countries. During the decade, virtually all countries in Latin America entered structural adjustment programs, and some of them, especially Mexico and Argentina, succeeded in implementing them. While many countries in Africa also entered adjustment programs, there were fewer success stories and more failures.

Adjustment programs were not confined to developing countries: New Zealand undertook a radical adjustment program starting in the 1980s; and the OECD increasingly laid stress on efficiency-oriented reforms in its member countries (OECD, 1988). Nor was structural adjustment in the developing countries confined to those receiving financial support from the IFIs: China pursued its reform program with strong World Bank intellectual and financial support, but without the benefit of Bank adjustment lending until late in its adjustment process.

4Adjustment loans may be provided either under IBRD terms (at market interest rates) or, for the poorest countries, IDA (International Development Association) terms, which are essentially interest free, except for a small fee.

By the beginning of the 1990s, the structural adjustment model had to an extraordinary extent became the accepted approach to reform[5], with erstwhile critics increasingly accepting the general approach while attempting to soften the rigors of its application. However, some institutional and intellectual opposition to the structural adjustment policies recommended by the International Financial Institutions (IFIs) remains. The ECA has been a persistent critic of World Bank adjustment programs in Africa (UN Economic Commission for Africa, 1989). [But in recent years some convergence has emerged between the ECA and World Bank views on the type of refoms more suited to Africa. In particular, both institutions put strong emphasis on the need to strengthen institutions, the high payoff from investment in human capital, and the need to restructure the public sector. Intellectual criticism to the type of policy recommendations of the IFIs has diminished as there has been a large convergence of views on development, but some criticism still remain(Helleiner, 1989; Taylor, 1988; and Cornia et. al., 1987).] Also many students of the East Asian experience (for example, Amsden 1989, Wade 1990) argue that its real lessons are very different from those drawn by the Bank[6].

2. BASIC DATA, AND THE NATURE OF A TYPICAL ADJUSTMENT PROGRAM

The data we present in this section are based on World Bank adjustment lending through 1992, and are drawn from the Bank's third report on adjustment lending[7]. Our statistical observations are therefore based on the adjustment programs of developing countries that adjusted with World Bank financial support; they omit both structural adjustment programs in industrialized countries[8] and developing country

5World Bank(1991) summarizes and develops this consensus.
6See too the World Bank's (1993a) attempt to deal with this question.
7Published as World Bank(1992)..
8We present a case study on New Zealand below.

programs undertaken without Bank support. The data covers a total of 258 World Bank adjustment loans, made to 75 countries, over the period 1980-1991 (World Bank, 1992). It is striking that at least 75 developing countries have formally declared themselves to be undertaking structural adjustment programs.

Countries that institute structural adjustment programs typically are suffering from a balance of payments crisis, manifested in an inability to obtain foreign financing, frequently a run on the currency, typically a large current account deficit, and -- if there are capital controls -- a large black market premium. The presence or expectation of a balance of payments problem is a necessary condition for IMF assistance, and is almost a necessary condition for the World Bank to provide rapidly disbursing loans9.

There are two potential sources of the balance of payments difficulties with which adjustment lending is associated. First, many adjusting countries were hit hard by the disturbances associated with the international debt crisis --the worldwide recession and sharp rise in real interest rates in 1982, and the decline in commodity prices. Table 2.1 presents estimates of the magnitude of external shocks suffered by countries that received World Bank adjustment loans. The data show that the intensive adjusting lending countries, most of those that received adjustment loans before 1986, in aggregate suffered large shocks in the early 1980s, and that these shocks persisted through the rest of the decade. Other countries that received adjustment loans were not adversely affected by the shocks of the early 1980s, but were hit hard in the second half of the decade. Countries that received no adjustment loans were also strongly adversely affected by the shocks of the first half of the 1980s, but these shocks had moderated by the second half of the decade.

The second type of balance of payments crisis arises as a result of a country following unsustainable policies, which would sooner or later have led to a crisis even

9 This is one reason China did not receive World Bank adjustment loans until recently.

without external shocks. The transition economies fit this category, as do some of the other adjustment lending recipients whose balance of payments difficulties appear to be chronic rather than closely related to particular shocks.

The two elements -- shocks and unsustainable policies -- are present in different proportions whenever IMF or Bank adjustment lending takes place. If the problem is mainly an external shock, IMF loans should be sufficient. The original rationale for adjustment lending, that it would help countries reform in a period of years, applies well to a country such as Korea, whose basic approach to development was successful, but whose policies in the late 1970s were poor. After four Fund standbys and three adjustment loans between 1980 and 1985, Korea has returned to vigorous growth, and has no need for IFI financing. But there are many countries with more profound development policy problems, which have been receiving continuing Fund and Bank support for a decade or more. For instance, between 1981 and 1991, Ghana received six Fund loans and 11 Bank adjustment loans; Cote d'Ivoire received seven Fund loans and eight Bank adjustment loans.

The first column confirms that most adjustment lending programs start with a Fund loan. If the first loan is not from the Fund, then it is more likely to be a SECAL than a SAL -- a contrast with the proportions of the second and third loans. There are two possible reasons for this relationship. One is that adjustment loans are being made to countries in such good shape that they do not need a Fund program or a SAL; the other is that the country's macroeconomic situation is not yet sufficiently stable to justify a Fund loan or SAL. The second possibility is more likely. The news in the second and third columns is that there is no clear trend at that point to SECALs, and that a significant share of early adjustment lending takes place through SECALs. If the Bank continues to make adjustment loans, they tend eventually to become SECALs; most of the SALs in the last column were recorded as SAL IV.

The loan sequence data in Table 2.3 suggest that structural adjustment typically starts with macroeconomic stabilization, and then moves on to sectoral reforms.

However, the table no doubt also to some extent reflects World Bank doctrine, which argues that the first few loans should achieve a viable macroeconomic situation.

The record of World Bank conditionality provides evidence of the nature of the policies that are the focus of adjustment programs. Table 2.4 shows the share of each type of loan-agreement conditions in all adjustment loans10. The distribution of loan conditions is striking: conditions relating to each of trade policy, of government finance and administration, public enterprise reform, and fiscal policy conditions are found in about half or more of all adjustment loans. Thus, adjustment programs focus primarily on the trade regime, and on the operations of the public sector. In sectoral terms, reforms focus on the agriculture sector and the financial sector11.

Finally, in this section we examine the amount of funding provided by adjustment lending. Dollar amounts and the share of such lending has not risen to more than 10 percent of total loans disbursed to developing countries (excluding India and China), net adjustment lending was by 1990 a major source of whatever net official disbursements were being made to the developing countries. Examining the regional breakdown of adjustment lending, approximately 25 percent has been to Africa, and 36 percent to Latin America and the Caribbean. Adjustment loans provided over half the net flow of official resources to Latin America in 1990, the year in which debt reduction operations began. Thus adjustment lending is important not only because it may encourage adjustment, but also because it is a vehicle for providing resources to developing countries.

10There are also conditions that are mentioned in the loan agreements or the report of the President to the Board that are not formal legal loan conditions. In the period to 1989 these related mostly to trade policies, the budget, monetary and exchange rate policies, and the financial sector. In the period 1988-91, they were related most to the financial sector and public enterprise reform.

11World Bank (1992), Table A2.4 reports that at least 85 percent of these conditions are substantially fulfilled in every category in Table 2.4.

3. ANALYTIC UNDERPINNINGS OF STRUCTURAL ADJUSTMENT PROGRAMS

In this section we discuss aspects of the analytics of structural adjustment, starting from the causes of the crisis and the need for adjustment. We then discuss the economics of stabilization, the economics of the microeconomic aspects of structural adjustment, the sequencing of adjustment measures, and the political economy of the maintenance of support for adjustment policies.

3.1. The Source of the Crisis.

Most adjustment programs in the 1980s started from an economic crisis, when the government and private sector were no longer able to continue commercial borrowing to finance current account deficits. In these circumstances, some adjustment is inevitable. Typically the country suffering an external crisis also has a large and unsustainable fiscal deficit, and in many cases is experiencing very rapid inflation.

The questions with which we start are: first, what does it mean for policies to be unsustainable; and second, why is adjustment so often delayed. We should note, though, that appearances on the second issue may be deceiving: crises thatä do not happen do not get much attention, and most countries avoid the type of adjustment crises that the severely indebted countries suffered in the 1980s.

More usually, countries change policies because there is sufficient domestic dissatisfaction over the economic situation for the government to attempt to improve it. For instance, New Zealand's radical adjustment program that is discussed below was not in any sense inevitable. Rather a political party was able to articulate the view that the country's relative decline could be stopped, and that both macroeconomic and structural policy changes would improve economic performance. A similar description applies in the case of the Thatcher adjustment program of the 1980s in the UK. China's leaders are supposed to have decided to undertake their reform program when they realized that their neighbors (specifically, it is said, Indonesia) were growing more rapidly than they were. The adjustment initiated by Malaysia in the second half of the 1980s also fits this description. General and gradual trade liberalization in the industrialized world in the

period since World War II has taken place not because of a crisis, but because of a general agreement on the long-run benefits that it would bring.

Unsustainable policies. A policy is unsustainable when it cannot continue forever. The unsustainability of a particular macroeconomic policy is most clearly evident in the foreign exchange markets, when a country is unable to continue borrowing to finance its current account deficit. A policy may be unsustainable and yet continue for some time, either because market participants do not recognize its unsustainability, because the government is using controls to suppress the market forces that would impose a change, or because market participants expect the policy to change. A crisis occurs when economic or political pressures to change economic policy immediately become essentially overwhelming12.

Policies may be unsustainable for two reasons: first, as an economic matter, budget constraints imply that current policies have to change; and second, as a political matter, because political opposition will make it impossible for the government to continue these policies. We deal first with economic unsustainability, which can arise either because the domestic budget or external payments cannot be financed, unless policy changes.

Debt dynamics. The dynamics of government debt and external debt are analytically similar; we examine the case of government debt. Let B_t be the real value of government debt (internal and external), X_t the real value of the primary budget surplus (i.e. the budget exclusive of interest), and S_t be the value of seigniorage obtained by the government in the current period. Then the government budget constraint is:

(1) $$B_t = (1+r_t)B_{t-1} - X_t - S_t$$

12The qualifier "essentially" is needed because occasionally a government may ride out a crisis without fundamentally changing policy.

where r_t is the realized real interest rate on the debt outstanding at the end of the last period, and

$$S_t = (H_t - H_{t-1})/P$$

where H_t is the stock of high-powered money13.

It is convenient to define

$$(2) \qquad q_t = \prod_{i=1}^{t} (1 + r_{t+i})^{-1}$$

where q_T is the discount factor that applies to cash flows T periods from period t.

Now solving equation (1) forward, we obtain:

$$(3) \qquad B_t = q_T B_{t+T} + \sum_{i=1}^{t} q_{t+i} (X_{t+i} + S_{t+i})$$

If

$$(4) \qquad \lim_{T \to \infty} q_T B_{t+T} = 0$$

then equation (3) implies that a government that has a positive stock of bonds outstanding has to expect to run future budget surpluses or print sufficient money to pay off the debt. In practice, since the future tax rates or discount rates are not known at time

13Seigniorage could be included as government revenue in Xt. This is in effect done in countries that include central bank profits as part of government revenue. In countries that pay interest on bank reserves -- a common practice in high inflation countries -- the monetary base should be adjusted to reflect the extent to which it represents non-interest bearing government debt. There are two reasons to separate out St in the budget constraint: first, when the government finances through non-interest bearing debt, no future interest liabilities are incurred, so that the adverse debt dynamics do not come into play; and second, explicit inclusion of S emphasizes the route through which budget deficits may be inflationary.

t, equation (3) is usually used by taking expected values on the right hand side. Several authors have used (3) to examine the sustainability of United States fiscal policy14. One question is whether the transversality condition (4) holds. This can be tested by creating a time series or other model to forecast $q_T B_{t+T}$, and examining its limiting behavior. If the condition (4) does not hold, then the present fiscal policy is not sustainable, in the sense that policy will have to be changed. Wilcox (1989) finds that U.S. fiscal policy was not sustainable in the post-World War II period15.

Equation (3) is an accounting identity. If current policies are unsustainable, then something has to give: in particular either some X_{t+i} have to change, so that the primary budget surplus will have to increase, perhaps throughä a capital levy on the debt, or through other taxes, or seigniorage will have to be increased. But because both the non-interest budget surplus and seigniorage are bounded by the size of the economy, it will at some point become clear that the debt cannot be serviced through these means, and then a capital levy -- formal or informal -- becomes inevitable. Well before that point is reached, the government is likely to find itself paying higher interest rates on the debt, and forced into adjusting its macroeconomic policies.

An almost identical analysis applies to the external sector. Here the counterpart of the primary deficit in the budget is the non-interest current account of the balance of payments. Except for countries which receive transfers, or whose currencies are held abroad, there is no counterpart of seigniorage. The interpretation of equation (3) is that a country with an external debt has to be expected to run future non-interest current account surpluses to pay off the debt. And when the debt is on an unsustainable path, the adjustment will have to come either from a write-down of the debt or from adjustment of the current account, through devaluation and supportive measures.

The sustainability of the paths for domestic and external debt are closely

14For example, Hamilton and Flavin (1986), Wilcox (1989), and Bohn (1992).
15See also Blanchard et al (1990).

connected. For many developing country governments with underdeveloped domestic capital markets, external borrowing was the main source of deficit financing. Further, correction of excessive external deficits typically requires a fiscal adjustment that also affects the path of government debt.

An alternative representation of debt dynamics focuses on the relationship between the real interest rate and the growth rate16. Here we work with ratios of the variables in (1) to GNP, represented by lower case symbols:

$$(2)' \qquad b_t = [(1+r_t)/(1+g_t)]b_{t-1} - x_t - s_t$$

where $(1+g_t) + (Y_t/Y_{t-1})$

For given x_t and s_t, the key question for debt dynamics is whether the real interest rate exceeds or is less than the growth rate of real GNP17. If

$$(5) \qquad r < g$$

then equation (2)' describes a stable difference equation. This means that the economy is growing fast enough that the amount borrowed by the government today is a greater share of GDP than the amount that has to be repaid. Under these high growth or low real interest conditions, the economics of government borrowing is relatively benign. Under such conditions, a government can run a primary deficit that is a constant share of GDP, and rely on growth to (more than) take care of the consequent interest burden.

16The comparison can be made between nominal growth and nominal interest rates, or real growth and real interest rates. For a simple exposition of debt dynamics along these lines, see Easterly and Fischer (1990).

17Depending on the context, either GNP or GDP might be the more useful scale variable. The growth rate in (2)' should be the growth rate of whichever scale variable is used.

For many countries, especially in the 1960s, the relationship (5) seemed to hold. However, that is not necessarily the normal situation over long periods. Indeed in simple growth models without uncertainty, the economy is operating inefficiently if condition (5) holds18. In any case, if (5) does not hold, thenä a country cannot run a primary deficit forever. Put more strongly, if (5) does not hold, then a country that runs a constant primary deficit will find its debt to GDP ratio rising. Thus the relationship between the interest rate and the growth rate, (5), provides a useful first check on the sustainability of a fiscal deficit or deficits in the non-interest current account. Using (5), the onset of the debt crisis can be attributed to the rise in r and the decline in g that took place in the early 1980s.

Another short-hand method for judging sustainability is to use a simple model that respects budget and external debt identities, such as the World Bank's Revised Minimum Standard Model(RMSM), to project forward the paths of domestic and external debt under alternative policy scenarios19. If a particular policy leads to an ever-increasing domestic or foreign debt relative to GNP, then the policy will have to be changed. The RMSM model is in fact used in this way.

Timing of the crisis. There remains the question of when and if a crisis will occur if a country's current policies are non-sustainable. As already noted, many countries change policies without going through a crisis. We may say that a crisis will occur when the markets -- for government debt, or foreign markets for the debt of the country's private sector -- conclude that the current path is non-sustainable, and that the government is unlikely to change its policies in time. At that point, the government or the country may be unable to sell its debt, and has to adjust. The need to adjust may also result from an unanticipated change in external conditions, for instance a change in the

18See Blanchard and Fischer (1989), p.103.
19The RMSM of the World Bank is a version of a Domar growth model with disaggregation on the debt side and in the balance of payments.

world interest rate or the terms of trade.

Krugman (1979) presents a model of a predictable run on the foreign exchange reserves in a fixed exchange rate system. Assuming that the government shifts toä a flexible exchange rate after the reserves run out, and that agents have perfect foresight, the crisis takes place at that moment when the post-attack adjustment path would commence at the existing exchange rate. The timing of the crisis is thus determined by the perfect foresight implication that asset prices do not take anticipated jumps. Generalizations of the Krugman analysis allow the governmentä to react before the point at which its reserves would be totally exhausted by the anticipated run on the reserves.

Alternatively, domestic political pressures may force a policy adjustment. However, domestic political pressures may sometimes push governments away from sustainable policies rather than towards them (Dornbusch and Edwards, 1992).

Why is stabilization delayed? If economists know what has to be done to avoid crises, and to increase growth, why are those policies not implemented? Part of the answer must be that the economists have not succeeded in convincing the relevant political decision-makers (including the voters) that their answers are correct -- and indeed sometimes economists are wrong. Another part is that the medicine may be too bitter for significant parts of the society, and thus for the body politic as a whole.

A growing theoretical and empirical literature deals with the political economy of reform, including the question of why stabilizations are delayed20. This helps answer the question of why countries sometimes find themselves in crisis . Alesina and Drazen (1991) argue that although there could be agreement on the need for a fiscal adjustment, conflict could emerge on how to distribute the burden of higher taxes or expenditure cuts among the different socioeconomic groups. In their model, stabilizations are delayed because of a conflict over which socioeconomic group will bear the greater part of the burden of adjustment. In a model with two groups, stabilization takes place only when

20The literature is concisely reviewed by Rodrik (1993).

one group concedes, in effect agreeing to bear the greater part of the burden, even though the total burden of stabilization is increased by delay. The delay is a result of each group's uncertainty about the burden being borne by the other before stabilization, and thus uncertainty about the date at which the other group would be better off agreeing to bear the greater burden in stabilization rather than continue in the pre-stabilization situation.

The source of their results can be understood from the fact that stabilization is immediate if it is known that the burden will be equally shared. The greater the difference between the burdens borne by the winners and losers, the later is the expected date of stabilization. The model predicts that the expected date of stabilization is later the more polarized is the society. Alesina and Drazen argue that their model explains why countries often fail in their first attempts at stabilization, and why a stabilization program may succeed when an apparently similar program failed earlier. In a war of attrition, the cost of waiting makes one group to concede.

Fernandez and Rodrik (1991) present a model in which uncertainty about the beneficiaries of reform similarly delays action, even for programs which will receive majority support if adopted, and even though individuals are risk neutral. Rodrik (1993) explains this result, which of course requires that the reform notä be a Pareto-improvement, in a very useful survey of the developing theory of the political economy of reform.

Political scientists have also studied why stabilization, in particular, and adjustment policies, in general, are delayed when it appears that current policies are unsustainable. This literature has considered several factors that could account for a delay in responding: the source of the crisis; the intensity of the crisis; and the political support for carrying out a stabilization program. Nelson (1990), summarizing a set of case studies, claims that the response was usually delayed when a crisis could be clearly identified with an external shock. Others have formulated the hypothesis that the demand for stabilization increases with the intensity of the crisis (Krueger, 1993; Haggard

and Webb, 1993). Usually a change in government precipitates the introduction of a stabilization program. As Haggard and Kaufman (1992, p.30) put it, "Incoming governments ... have capitalized on honeymoon periods and the disorganization or discrediting of the opposition to launch ambitious new reform initiatives." However they also claim that weak governments may fail to assemble enough support for a stabilization effort, which will then have to wait for the next government.

3.2. The Economics of Stabilization

In discussing the analytics of adjustment programs, it is useful to distinguish between countries that start with low inflation, and those which have also to deal with high inflation.

Many of the African countries that had to adjust in the 1980s, including members of the franc zone, as well as India in the 1990s, had avoided high inflation. Nonetheless, the gap between domestic demand and output exceeded the financable level of the current account deficit, and adjustment was necessary.

We start this section by illustrating the typical adjustment problem faced by a country where inflation is not a major issue. Then we extend the analysis to high inflation countries, by dealing explicitly with inflation reduction as an added adjustment problem in such countries.

3.2.1. Stabilization and Structural Adjustment in Low Inflation Countries

The economics of structural adjustment for a small open economy can be well understood in terms of the dependent economy model of Salter-Swan-Corden-Dornbusch (Salter, 1959; Swan, 1961; Corden, 1960; and Dornbusch, 1980). Figure 3.1 shows the typical model. There are two types of good, tradables on the vertical axis, and nontradables on the horizontal axis. Their relative price, $\hat{u}(\_ (P_T/P_N)$, where P_T and P_N are the prices of tradables and nontradables respectively) is defined as the real exchange rate, the price of tradable goods (a composite of importable and exportable goods, which

has been aggregated assuming that the country is a price taker in world markets) in terms of domestic goods. When tradable goods become more expensive, the real exchange rate rises, corresponding to a real devaluation.

The need for adjustment starts with the country consuming at D and, if there are no distortions in commodity or factor markets, producing at B, with producers and consumers facing the same real exchange rate. The country is running a trade deficit equal to GH, measured in terms of non-tradables. The market for non-tradables clears, as can be seen from the fact that the output of non-tradables at B is equal to their consumption, at D. Assuming the trade deficit has to be restored to balance, the country has to reach a new equilibrium on the production possibility frontier.

Typically the country also has many impediments -- in the form of distortions in product and factor markets, as well as institutional weaknesses -- to the efficient use of resources, and is therefore operating well within the production frontier in a point like C in figure 3.1. For countries that start their adjustment programs with severe distortions, there is a potential output gain from removing the structural impediments. However, it will generally take time for such supply side measures to affect output positively, and the initial adjustment effort is likely to reduce demand and output.

Since a large fiscal deficit is the most likely cause of the excess of expenditures over output, fiscal contraction will be a key component of the expenditure reduction package. Pure expenditure reducing policies, which shift the budget line in but do not change prices, are incapable of restoring external balance without creating an imbalance between the demand for and supply of non-tradable goods. What is needed is the combination of an expenditure reducing policy, which shifts in the budget line (for example to GG), and a (production and expenditure) switching policy, which changes relative prices, ending at an equilibrium like point A. Note that between budget lines GG and JJ, the relative price of tradables has risen, i.e. there has been a real devaluation.

Figure 3.1 provides a metaphor for structural adjustment: for an economy operating close to the frontier typically macroeconomic adjustment is needed to reduce

expenditures relative to income (as between points D and A); and, in the structural component, resources have to be reallocated (as between points B and A). But the figure is only a metaphor: macroeconomic adjustment typically involves dealing with inflation as well as excess spending, and there are choices about the methods (fiscal, monetary, exchange rate) by which macroeconomic adjustment is attained; the structural component involves more than getting prices right; and there are issues about the sequencing of reforms. Furthermore, in economies that have many distortions the structural component includes also their removal to increase output levels out of existing resources.

The dependent economy model can also be presented in terms of the real exchange rate and expenditure and output in terms of non-tradables, E/P_N and Q/P_N respectively (Dornbusch, 1980). Figure 3.2 shows the basic diagram, which is a transformation of Figure 3.1. The schedule YY shows the value of output in terms of non-tradable goods, for each value of the real exchange rate. It is the intercept of the tangent to the production frontier traced out in Figure 3.1 as the real exchange rate changes: the value of output measured in non-tradable goods rises as the real exchange rate rises. BB is the locus of external balance, combinations of the level of real spending and real exchange rate that maintain the demand for traded goods equal to their supply: when income increases, the real exchange rate has to rise to maintain external equilibrium[21]. Finally, NN is the locus of non-tradable-goods market equilibrium, which is negatively sloped on the assumption that substitution effects dominate.

Both the markets for tradable and non-tradable goods are in equilibrium at point E. At any other point, the exchange rate and/or the level of income and output have to change to bring about equilibrium; typically both spending and the real exchange rate have to change[22]. The model can conveniently be used to analyze the effects of

21In terms of Figure 3.1, the level of income OH and the relative price shown at B and D represent a point on the BB locus.

22Dornbusch (1980) reviews both the anatomy of disequilibrium, and the policy measures needed to return to equilibrium.

disturbances, such as the receipt of a transfer, or fiscal policies that affect the level of spending. Dornbusch (1980) shows also how to modify the dependent economy model to allow for endogenous terms of trade changes.

This analysis illustrates the direct relationship among expenditures, the real exchange rate, and the trade deficit. We can use the model to illustrate the effects of an expansionary aggregate demand policy for an economy operating close to the frontier. Consider the case of a country that starts in equilibrium at a point like E in Figure 3.2; then aggregate demand expands. The real exchange rate will depreciate, and the country will develop a trade deficit. Suppose now that the external financing -- for example, foreign aid or loans from multilateral institutions -- is reduced. Then there will be a trade balance deficit at the initial real exchange rate and level of real expenditures. In the absence of financing, the country has to adjust. The adjustment program will include expenditure reduction and supply expansion policies, along with a real devaluation. Structural reforms play a central role in facilitating the reallocation of resources and in moving the economy towards the production frontier. Structural reforms are also important in creating conditions for sustainable growth by improving the economic environment for physical and human capital accumulation.

The effects of the demand reduction programs are likely to dominate in the short run. As domestic expenditures are reduced, the real exchange rate has to depreciate to avoid creating an excess supply of non-tradable goods and unemployment. Unemployment will result if the real exchange rate is for whatever reason not allowed to increase, due for example to insufficient adjustment (or none at all) of the nominal exchange rate, or through real wage resistance. This situation is represented by point F in Figure 3.3. There is a trade balance deficit at point F, given by GF, and the real exchange rate is $(PT/PN)_O$. The expenditure reduction brings the economy to point H: with exchange rate $(PT/PN)_O$, there is an excess supply of non-tradable goods and unemployment.

This model illustrates that following a reduction in domestic expenditures, a real

devaluation is required to produce the larger trade surplus which can prevent the emergence of an excess supply of non-tradable goods.

The analytics of the two components of structural adjustment --stabilization and macroeconomic adjustment, and structural or microeconomic adjustment-- are not generally dealt with simultaneously. And even on the macroeconomic side, the economics of stabilization is generally dealt with separately from the analysis of the investment and growth that is supposed to result from stabilization and adjustment.

Any comprehensive policy model of the stabilization process thus has to include the government budget constraint and its financing, the external sector and its financing, and the dynamics of asset stocks and inflation[23]. In practice a wide variety of analytic models, many of which do not explicitly include the government budget constraint or external sector dynamics, is used in studying the dynamics of adjustment. Macroeconomic stabilization is usually analyzed in a one-good model, for example in the financial programming model of the IMF or the RMSM or extended RMSM models of the World Bank. Recently attempts have been made to broaden these models in three directions: to introduce the tradable-non-tradable breakdown; to deal more explicitly with the relevant budget constraints; and to introduce expectations explicitly[24].

A stabilization program generally includes fiscal consolidation, monetary contraction, exchange rate adjustments, and sometimes incomes policies. The starting point is a target external deficit, based on the availability of external financing including assumptions about debt service. This implies the adjustment that has to be made in domestic absorption relative to domestic output. Absorption can be reduced through direct declines in government spending and declines in private spending induced by monetary and fiscal policies. It is rarely the case that domestic output can be increased

23See for instance the models in Bryant et al, 1988 and 1993.
24Caballero and Corbo, 1986; Haque et al, 1991; Devarajan and de Melo, 1987; Schmidt-Hebbel and Serven, 1993; Bryant et al, 1993.

much in the short run. Often it is found that the required reductions in domestic demand are too difficult to implement politically, and in such a case the government or international agencies will have to seek additional external funding, sometimes in the form of arrears.

The real exchange rate will typically have to be devalued as part of the adjustment process. The required devaluation can be calculated from a net export equation with domestic income and the real exchange rate as arguments[25]. Thus the preliminary calculations for a stabilization program provide estimates of the fiscal policy variables and the real exchange rate in the new equilibrium; there will probably also be an inflation target. It is then necessary to decide on the adjustment path by which these targets are to be attained -- whether in a big bang or gradually, and what exchange rate and credit policies correspond to the planned adjustment path.

3.2.2. Stabilization and Structural Adjustment in High Inflation Countries

In high inflation countries, adjustment has a third dimension beyond the expenditure reduction-output expansion and real devaluation issues analyzed in the previous section -- the need to break the dynamics of inflation.

Inflation generates seigniorage revenues for the government, but at the same time generally reduces real government revenues through the erosion of the real value of tax revenues due to collection lags in a situation of accelerating inflation, the so called Keynes-Olivera-Tanzi effect (Tanzi, 1977). Whether a fiscal contraction is necessary to reduce inflation permanently can be decided in each case by calculating a low inflation budget for the country. This is a calculation of what the budget deficit would be, given planned tax rates and real government spending, if the economy were operating at a specified low inflation rate. The calculation thus takes account of the Keynes-Olivera-

25See Krugman (1992) for a discussion of the question of whether exchange rate changes are a necessary part of the adjustment mechanism of the current account.

Tanzi effect, of any reductions in nominal interest rates that would result from lower inflation,ä of the potential loss in seigniorage from operating at a low inflation rate26, and all the distortions that inflation puts into the government accounts. At the same time, a judgment would have to be reached on a desirable path for the government debt and the overall budget deficit. If the low inflation deficit is consistent with the desired deficit, then no fiscal correction is needed to deal with inflation -- though one may still be needed to deal with the external deficit.

Bruno and Fischer (1988) identify an extreme case of dual equilibria in which inflation is high even though the economy could, with the same fiscal policy, beä in a low inflation equilibrium. This result derives from the seigniorage Laffer curve. Alternatively, inflation may have risen to high levels over time, as the private sector adapts to ongoing inflation by reducing its money holdings, and the government adapts to inflation by attempting to reduce its costs to the private sector, for instance through indexing of government wages, and by paying interest on bank reserves. In such a situation, there is a low inflation equilibrium available with relatively little loss of fiscal revenue, but getting there is costly. Similarly, a country may find itself inadvertently in a high inflation equilibrium as a result of accommodating monetary policy operating rules, such as attempting to hold the real exchange rate and the real interest rate constant27.

While it is possible that fiscal correction is not needed to stabilize inflation, it has to be recognized that calculations of the desired deficit and the low-inflation deficit are imprecise and that wishful thinking -- especially about the size of the Tanzi effect --

26Dornbusch and Fischer (1993) review the public finance aspects of inflation, which starts with Keynes' (1923) superb analysis in the Monetary Tract, and which were later taken up by Cagan (1956) and Bailey (1956).

27In the 1980s, the Chilean central bank has used these operating rules. In practice, though, it has tightened policy when inflation has risen, so that the rule is not purely accommodating.

often plays a large part in such calculations. Despite the theoretical possibility, it is advisable to be skeptical about claims that no fiscal correction is needed to reduce inflation: more stabilizations have failed -- in Brazil alone -- because of overoptimism about the size of the Tanzi effect than because the fiscal adjustment was too ambitious28.

Similar calculations have to be made for the external accounts, to attempt to ensure that the current account deficit is consistent with available financing. This is typically done in a model of the type discussed in the previous section.

Dynamics of disinflation. The dynamics of disinflation can be studied using a simple macroeconomic model such as that presented in Dornbusch and Fischer (1993)29.

(6) $\Pi = \alpha W + (1-\alpha)\, e + \ddot{y} \qquad 0 < \alpha < 1$

(7) $w = \Pi_{-1} - u$

(8) $\beta \Pi + (1-\beta)\, \Pi_{-1} \qquad 0 < \beta < 1$

(9) $\Pi = \Pi_{-1} + \theta \ddot{y} - \alpha_1 \theta u \qquad \theta = 1/[1 - \beta (1 - \alpha)]$

(10) $u = u_{-1} - \mu(m - \Pi) - \varnothing (e - \Pi) - f$

Equation (6) represents cost-based pricing, with the inflation rate from the supply side reflecting wage changes (w) and the rate of depreciation of the currency (e), which affects the prices of imported commodities. Equation (7) is a stylized Phillips curve: the lagged inflation term reflects either adaptive expectations about inflation, or indexation of nominal wage adjustments, which is of course widespread in high inflation

28It is quite certain once the economic calculations have been made that the political decisionmakers will shave the extent of the fiscal (or external sector) correction from the recommended level. This opens up the question of whether the economist should correspondingly shade his or her calculations in the opposite direction. We are sure this happens in practice but recommend against it, as well as against the opposite error -- of shading the calculation in the direction the politician would like to hear.

29A similar model, with a richer lag structure, is used in Edwards (1993).

economies. Equation (8) is an exchange rate adjustment rule, in which the government is assumed to try to maintain the real exchange rate constant, but in which -- because of lags in measuring or perceiving price changes -- inflation surges result in real appreciation. Equation (9) is obtained from replacing equations (7) and (8) in (6). Equation (10) represents goods market equilibrium: increases in real balances, real depreciation, and fiscal expansion (f) reduce unemployment.

While the lag structures and the treatment of expectations in this model are excessively simple, the model summarizes well the essential problem of stabilization. By adding and subtracting Π_{-1} on the right hand side of (6) we obtain

$$(6) \qquad \Pi = \Pi_{-1} + \alpha(w - \Pi_{-1}) + (1 - \alpha)(e - \Pi_{-1}) + \ddot{y}$$

On the supply side, inflation today will be equal to inflation yesterday except for any combination of the following:

(a) Wage inflation falls below past price inflation. This requires a break with any implicit or explicit backward price indexation, otherwise the real wage tends to rise when inflation is reduced (Simonsen, 1983; Corbo, 1985b; Fischer, 1988). The suspension of indexation, the replacement of backward looking by forward looking indexation, or introduction of an incomes policy, could achieve this.

(b) Exchange depreciation falls below the past rate of inflation. This is the major attraction of exchange-rate based stabilizations, particularly in very open economies.

(c) Favorable supply shocks lead to disinflation without the need for the exchange rate or wages to take the lead. Just as the unfavorable supply shocks of the 1970s increased inflation, the favorable oil price shock of late 1985 helped the Israeli disinflation program that started in July that year30.

30Of course, as the 1985 Argentine case shows, favorable supply shocks are not sufficient without resolute fiscal action.

By using equation (9), we also obtain the Phillips curve conclusion:

(d) Inflation can be cut the old-fashioned way, by increasing unemployment, through restrictive aggregate demand policies.

Heterodoxy and orthodoxy. The stabilization problem is to reduce inflation, the balance of payments deficit, and the fiscal deficit at minimum cost in termsä of unemployment and to the poor, with minimum damage to growth, and in ways that will increase long-run growth. The attraction of supply side policies -- incomes policies, wage-price freezes, changes in indexation rules -- is that they appearä to hold out the prospect of reducing inflation costlessly. The danger of using such policies is that they cannot permanently reduce inflation unless the underlying fiscal and monetary causes of the inflation have been dealt with. But by combining the necessary fiscal and monetary measures with supply side measures, in so-called heterodox policies, the unemployment costs of stabilization can in principle be reduced31.

In equation (6), heterodoxy would seek to reduce w below the level it would take without direct intervention, either by freezing wages, or by suspending indexation that would otherwise set w at the level $?_{-1}$. More generally, heterodoxy could be seen also as seeking to produce a negative ÿ by controlling price increases. We discuss the role of the exchange rate in disinflation below.

Wage controls, pacts, and taxes. Heterodox programs often seek to control wages, either through controls or through pacts with labor, as in the Mexican "Pacto" among the government, labor, and industry. Wage taxes, TIPs (tax incentive plans), have been used in some formerly socialist economies, including Poland and Russia. In these cases, firms paid taxes on wage increases above some specified rate. While the macroeconomic case for reducing the rate of wage increase is clear from the above model,

31The term "heterodox" was supposed to mean "orthodox plus", but etymologically actually means "other than orthodox". This is not the meaning that those who use the word would like it to have: "polydox" is closer to the intended meaning.

wage controls that are maintained for any length of time either begin to break down, or else distort relative wages. Thus wage controls should be viewed at best as a transitory measure to help stabilize inflation.

Seigniorage and public finance. The public finance analysis of the inflation tax starts from Keynes' Tract on Monetary Reform, which emphasizes that inflation is a tax of last resort; the discussion took more analytic shape with Cagan (1956) and Bailey (1956), and is summarized and extended in Dornbusch and Fischer (1993). The inflation tax was placed in an intertemporal context by Mankiw (1987), who argued that an optimally chosen (from the viewpoint of the inflation tax) inflation rate would display a unit root, and be positively correlated with other tax rates. This latter implication appears not to hold (Edwards and Tabellini, 1991).

In the classic hyperinflations, seigniorage eventually became the main source of revenue as the Keynes-Tanzi effect eroded the tax system. But typically the amount of seigniorage collected in modern high and moderate inflations is only a few percentage points of GNP. This fact immediately raises the question of why the country cannot undertake the fiscal effort that would make it possible to reduce inflation to single- or low double-digit levels.

We identify two possible explanations. First, raising taxes or cutting spending by 2-4 percent of GNP is politically more difficult than it sounds. By contrast with explicit taxation, the inflation tax and its incidence are almost invisible and can be imposed without legislation. Second, inflation may continue because the politicians believe it too costly to stop, even though the fiscal effort to stop it would be politically possible.

The literature identifies at least two costs of disinflation: distributional costs; and output costs. The distributional costs of ending inflation play a prominent role in political economy models that seek to explain stabilization delays32, but little is known

32Such as Alesina and Drazen (1991), and Mondino, Sturzenegger, and Tommasi (1992).

about their empirical importance33. The output cost emerges from the traditional Phillips curve approach to inflation.

Once the role of expectations in the Phillips curve is recognized, the output costs can in principle be avoided if the private sector can be persuaded to expect lower inflation by some route other than lower inflation. Thus in models where credibility is important, credible pre-announced reductions in money growth can reduce the output costs of disinflation34. Even in the presence of long-term contracts, credible disinflations announced sufficiently far in advance, or sophisticated paths of money growth, in principle make it possible to disinflate costlessly. However, the evidence suggests that disinflation is costly35 , except perhaps for disinflations that are based on an exchange rate anchor (Kiguel and Liviatan, 1992).

Nominal Anchors. A nominal anchor is a nominal variable which guides monetary policy. The term appears to be new36, but the concept is at least as old as the gold exchange standard, where the price of gold was the nominal anchor that determined the quantity of money. In modern discussions, the nominal anchor is typically thought of as either the quantity of money or some other nominal asset (e.g. credit), or the exchange rate. The exchange rate may be fixed, or may follow a preannounced crawling peg path, as in the tablitas of the late seventies in the Southern Cone of South America. The exchange rate path may be reset from time to time, as for instance in the Israeli diagonal band system introduced in 1991.

The exchange rate and the quantity of money can be regarded as anchors in the sense that the central bank can, at least for some time, control them. In principle, the

33World Bank (1990), examines the distributional impact of adjustment policies.
34The role of credibility was brought home forcefully by Sargent's (1982) well-known article on the ends of four hyperinflations; later work has suggested that even the hyperinflations were not ended without output costs. See also Sargent (1983) and the comments by Summers.
35See Solimano (1990) for a review of experience, including that of the hyperinflations.
36We are not aware of when the term was first used; certainly one of the authors recalls using it in 1984, and it must have been used much earlier.

price level, or the target inflation rate, could be nominal anchors, but those variables are less directly under the control of the central bank. Of course, no nominal anchor can keep inflation low for long unless the underlying real fundamentals, in particular the budget deficit, are consistent with the specified path of the anchor. Also, the behavior of the anchor should be consistent with the mechanism of adjustment in other nominal prices; otherwise large distortions in relative prices could develop, and damage the effectivenessä of the program. In particular, backward-looking wage indexation is often incompatible with the use of a fixed exchange rate anchor. Chile's stabilization program of 1978-82 illustrates this problem (Corbo, 1985b; Edwards and Edwards, 1987; Corbo and Fischer, 1994).

The general need for a nominal anchor arises from the property, emphasized by Patinkin (1956), that the price level and other nominal variables are indeterminate unless at least one nominal variable is specified exogenously. The specific need for a nominal anchor during a stabilization arises from the likelihood that the system has been without a nominal anchor during the preceding inflation -- indeed, inflation could not have risen to such levels if an effective nominal anchor had been in place. It is not uncommon for monetary policy in high-inflation countries to target real variables such as the real supply of credit, the real exchange rate and the real interest rate, and not to adjust these real targets in response to inflation37.

In practice, the choice between the exchange rate and the quantity of moneyä as nominal anchor during a stabilization has almost always been settled in favorä of an exchange rate peg38. The extent of the commitment to the exchange rate anchor varies. At one extreme is the Argentine 1991 convertibility law, which embodies the nominal

37If the real targets are adjusted in response to inflation, e.g. the real interest rate is raised when inflation increases, then the system in effect is operating with a nominal anchor (cf the discussion of Chilean monetary policy in footnote 28).

38The choice between these two anchors is analyzed in Fischer (1986) and Bruno (1991). Edwards (1993) discusses the notion of a nominal anchors and, empirically, the effect of different anchors on the dynamic properties of the economy.

anchor in legislation; at the other is an exchange rate peg that is simply announced without any longer term commitment being made.

The exchange rate has several advantages over the quantity of money as a nominal anchor: the central bank knows precisely what it has to do; the public knows at every moment whether the central bank is succeeding; and the exchange rate affects import prices and the prices of tradables directly. An exchange rate peg can quickly garner credibility, at least for the short term; in the long term, credibility can be retained only by success in maintaining the exchange rate peg. By contrast, there is bound to be great uncertainty about the demand for real balances during a stabilization, both because it is not known to what extent the preceding inflation has permanently reduced the demand for money, and as a result of uncertainty over the success of the stabilization attempt. Consequently the central bank adhering to a money stock target may find itself with an exchange rate and interest rates that are far out of line with the needs of the situation. The recent instability of the demand for money in many of the industrialized countries, including the US and the UK, has further reduced confidence in the efficacy of a monetary anchor.

Kiguel and Liviatan (1992) argue that, contrary to the usual pattern in stabilizations, exchange-rate based stabilizations (ERBSs) in chronic inflation countries start with a boom (perhaps after a brief recession) rather than a recession. Then, if the exchange rate peg is maintained, there is a period of overvaluation which results in a recession. Thus, they argue, the ERBS does not avoid the recession that accompanies stabilization, but only delays it. During the ERBS, the trade balance and current account deteriorate, real wages generally increase, the real exchange rate appreciates, and either or both consumption and investment boom. In several cases, the consumption boom took place despite a significant cut in the budget deficit and higher taxes. Real interest rates declined in some cases, and rose sharply in the recent successful Mexican and Israeli stabilizations.

Kiguel and Liviatan identify several possible explanations for the stylized facts

of the differences between ERB and money-based stabilizations, including the role of sticky prices, the possibility that lower real interest rates encourage spending, that uncertainty about the success of the stabilization combined with concern over the policies that will follow (e.g. imposition of tariffs, tax increases) can account for the spending boom, and the possibility that the increase in real wages encourages consumption[39].

Calvo and Vegh (1991) present a model based on a cash-in-advance constraint, with staggered contracts, that attempts to account for the different dynamic responses to exchange rate- and money-based stabilizations[40]. With a credible permanent exchange rate peg, the inflation rate declines immediately to its new steady state level, and the real equilibrium is unaffected. If the exchange rate peg is not credible, in the sense that it is expected to be temporary, then the real exchange rate appreciates as a result of price stickiness, and the cash-in-advance constraint produces a consumption boom during the peg, because the lower rate of devaluation temporarily reduces the effective price of consumption. This model is thus capable of accounting for some of the basic empirical characteristics of ERBSs reported by Kiguel and Liviatan, even if the cash-in-advance constraint route to the consumption boom is not compelling. Another empirical implication, that the recession comes when the policy fails, is also questionable: in the Mexican and Israeli cases, the recession appears to have come as a result of the real appreciation that took place as the stabilization policy was maintained, rather than as a result of policy failure.

The issue of the nominal anchor has received renewed attention in the context of socialist economy reform. An exchange rate peg was central to the Polish stabilization.

39Of course, the real wage is generally endogenous, so the question arises of what is causing the real wage increase in the first place. In the Israeli stabilization of 1985-86, the real wage increase six months after the start of the stabilization was essentially exogenous, negotiated between the government and the unions six months earlier.

40The results of this and related papers are well summarized in Vegh (1992).

In such a situation, where the fundamentals are not known, and where it is unlikely the pegged exchange rate can be sustained for more than a year, the authorities have to worry about when and how to switch away from the peg. A typical change is to switch to a crawling peg, maintaining exchange rate discipline, but not committing to an unsustainable rate.

The Role of External Financing Stabilization programs in both low and high inflation developing countries have typically been undertaken with the assistance of loans from the international financial institutions (IFIs). Even in industrialized countries, stabilizations have often been supported by foreign loans, for instance the British stabilization of 1976, undertaken with IMF support. However, foreign financing is not necessary for adjustment, as the Chile and New Zealand examples discussed below show.

Most structural adjustment programs in recent years have been financially supported by the international institutions. In presenting the rationale for adjustment lending, the World Bank (1992, p7) explains that policy reform is a typical investment, with short run costs and longer run benefits that outweigh the costs[41]. "But transitional financing is usually needed to spread the costs over time, minimizing the reductions in consumption (especially important in poor countries) and making the reform feasible for policymakers." Critics of adjustment lending sometimes describe the loans as a bribe to undertake policy reform, but this is not a particularly useful formulation[42] of the complexities of putting together and maintaining a domestic coalition in support of reform.

Of course, the debt and adjustment crisis was partly a result of the easy and unconditional availability of external financing for developing countries. In adjustment loans, conditionality is imposed to deal with the dynamic inconsistency that arises after

41Krueger (1984) presents this argument.

42See World Bank (1992), Box 2, p9, for a useful discussion of the argument that adjustment lending is unnecessary because countries that do not want to reform should not be bribed to reform and countries that do want to reform willä do so anyway.

the loan contract has been agreed. However, even when loan conditions are imposed, borrowers who are indebted to an IFI know that it too has a stake in maintaining their relationship. The theoretical complexities of conditionality and the incentives it creates to undertake reforms are analyzed in Mosley (1992). A review of the extent to which loan conditions are met can be found in Webb (1992).

Between 1980 and 1991, the World Bank committed $41 billion to 258 adjustment loans. Gross disbursements of adjustment loans during that period amounted to $35 billion. As seen in Table 25, total disbursements under adjustment loans never amounted to as much as 20 percent of total official disbursements. Nonetheless, for several countries, particularly in Africa, there can be no question that adjustment loans and associated IMF loans were crucial to covering substantial external financing gaps.

We are not aware of studies that analyze what would have happened to the reform process in a country if adjustment loans had not been available. We suspect that when these studies are made, and the relevant theory developed, they will show that countries would have gone into deeper crises before adjusting, and that the adjustment would have been more painful. Quite likely they will also show that some countries prolonged their adjustment to ensure that future policy reforms could be supported by adjustment loans. This is not necessarily a bad outcome.

3.3. Sectoral Reforms and Sequencing

The range of potential efficiency-enhancing policy changes that can be made in any economy is enormous. Table 2.4 shows the types of policy changes that have been undertaken in World Bank-supported adjustment programs. Policy measures supported in these areas are intended to increase the efficiency of the economy and improve its ability to respond appropriately to price signals -- in brief, to improve the supply response of the economy. As already noted, conditions relating to trade reform, to public enterprise reform, and to the rationalization of government finance and administration appear in at least 50 percent of loans. These are the predominant areas of reform. The most common sectoral reforms are in agriculture and the financial sector.

The rationale for the central role of trade reform is discussed in Thomas et al (1990), Dornbusch (1992), and in Chapter xx by Dani Rodrik in this volume. The emphasis on public sector reform is a result both of the inefficiencies demonstrated in this sector in many countries, and the fact that these inefficiencies generally impact the whole economy. With the bulk of output in many developing countries being produced in agriculture, and given the pronounced anti-agriculture bias of development strategies in many developing countries during the 1960s and 1970s, the sectoral emphasis on agriculture is easily understood.

"Getting prices right", trying to move prices closer to social marginal cost, is a large part of the emphasis of trade, agriculture, industrial and other supply side reforms[43]. But in several areas, it is also generally recognized that getting prices right is not sufficient, that for instance export promotion measures are needed to help producers take advantage of the right prices, and that institutional capacity within the government has to be built up. The new trade theory research that shows that interventions may sometimes be welfare-enhancing, for instance because they help develop domestic technological capacity, has not generally been reflected in structural adjustment programs. One reason is that it is difficult in practice to identify policies that will work, leading to the conclusion that free trade is a good rule of thumb[44]. Conceivably the World Bank's (1993a) study of the East Asian miracle economies will lead eventually to cautious departures from the liberalization approach[45]. However, the negative record of the great majority of developing countries in pursuing industrial policies in the last twenty five years should encourage a sense of caution before embarking on industrial policy.

43We discuss interactions among distortions -- second best issues -- in the discussion of sequencing that follows.

44 See for example, Helpman (1989) and Krugman (1988).

45It is necessary to distinguish between rhetoric and practice when discussing trade liberalization and intervention. Trade reform loans are made to countries with highly distorted trade regimes, provided they are on balance moving in the right direction.

The prominent role of financial sector reform is a result of both the perception that an efficient financial sector is essential to growth, the generally poor performance of development banks, and the widespread failures of financial institutions during the debt crisis[46]. This is an area where recent research finds many possibilities of market failure (Villanueva and Mirkhor, 1990; McKinnon, 1991; Stiglitz, 1993), and where some proponents of the East Asian model of development advocate the directed allocation of credit.

Initial conditions play a central role in the design and implementation of financial reforms. If a large proportion of assets of financial institutions are held at below market rates, or are not performing, then financial reforms will create difficulties for existing institutions. In particular, if deposit and lending rates are deregulated simultaneously, and free entry is permitted into the banking system, then existing banks will be forced to pay market interest rates. They will then suffer substantial losses, jeopardizing the banking system's solvency and macroeconomic stability. It may be necessary in such cases to allow for a transition phase, in which lending rates are deregulated first, with deposit rates following only gradually (World Bank, 1989). In other cases, most banks may already be insolvent before the financial reforms are implemented. The banks have then to be closed down or recapitalized before deregulation. Otherwise, as the banks have already lost their capital, moral hazard problems will be exacerbated, and the future collapse of many financial institutions could be very costly.

Financial sector reforms are especially difficult because the running of such institutions requires a great deal of specific business knowledge and experience. They are also difficult to evaluate, in particular because undercapitalized institutions can run for

46See World Bank (1989) study of the financial system, for the remarkably long list of countries in which the banking system was essentially bankrupt.

some time without problems becoming evident. It is also necessary before liberalizing to have in place an appropriate regulatory and supervisory capacity in an independent Superintendency of Banks, or similar organization (Villanueva and Mirakhor, 1990; Stiglitz, 1993).

Adjustment programs in the financial sector recognize the complexities of the credit markets by emphasizing the need for prudential supervision and regulationä of financial institutions. In moderate and high inflation countries, controlled interest rates are typically well below the inflation rate, and adjustment programs typically seek to raise real interest rates to positive levels.

Initially, adjustment was expected to last just a few years, and there was little attention to its distributional impact. The poverty impact of adjustment measures was increasingly taken into account as it became clear that the adjustment process would be prolonged, and as critics of adjustment pointed to the apparent worsening of poverty in adjusting countries[47]. Analysis of Bolivia's emergency social fund and other anti-poverty mechanisms suggested that targeted anti-poverty programs, including employment, education, and health care, could help protect the poor during adjustment at a reasonable budgetary cost -- sometimes funded entirely, and apparently additionally, by donors[48].

Sequencing. Given the many reforms needed in most adjusting countries, the question naturally arises of whether they should be carried out in any particular order. Obviously, everything depends on everything else, but since both the implementation of reforms and their effects take time, and since the administrative ability of any administration is limited, perhaps certain changes should be in place before others are attempted. In a very useful article, Edwards (1989b) reviews the literature on the

47See for example Cornia et al (1987); and for a later World Bank study, Maasland and van der Gaag (1992).
48See World Bank (1990) report on poverty.

sequencing of reforms 49, and sets out an analytic model to analyze the issues.

Key issues that have been discussed in the literature are: the order of liberalization of the current and capital accounts of the balance of payments; the order of macroeconomic stabilization and structural reforms; and the sectoral order of liberalization of the trade account. Edwards presents the arguments that have been made on the ordering of trade liberalization and macroeconomic stabilization. For stabilization first, the arguments are: unless the fiscal deficit is corrected, liberalization will be carried out at too low (appreciated) a real exchange rate; that inflation distorts price signals; that there are insufficient instruments to set the exchange rate at a level appropriate for both stabilization and structural reforms. To these should be added the fact that tariffs provide an important revenue source in many countries, and cannot be reduced unless compensating fiscal revenues have been found.

Several authors argue that trade liberalization and stabilization should be simultaneous, since there is very little connection between the state of the macroeconomy and trade orientation, and there is no point in prolonging the inefficiencies of the restrictive trade regime. Political economy arguments have also been used to recommend that macroeconomic stabilization and trade liberalization should be undertaken simultaneously. In general, stabilization and trade reforms offer mixed results. Haggard and Webb (1993) argue that in a well-designed reform program, groups that lose from one element (e.g. trade reform) can be compensated by gains from another element (e.g. stabilization).

Although the general presumption is that macroeconomic stabilization should come first (Sachs, 1987; Rodrik, 1990), there has been little systematic collection of evidence on the issue. There are examples of countries whose trade liberalizations have failed, apparently because of macroeconomic instability, for example, Sri Lanka in 1978-79,

49Edwards traces the analysis of the issue to Little, Scitovsky and Scott (1970) and McKinnon (1973).

Chile in 1959-1961, and Israel in 1981-82 (Michaely et al, 1991). There are also countries that successfully started liberalizing trade before stabilizing, for example Mexico and Argentina. There is also a difference between recommending macroeconomic stabilization first if there is a choice -- a view we share, and arguing that trade liberalization should not be attempted if macroeconomic stabilization is for whatever reason out of reach.

In 1973 McKinnon argued that trade liberalization should precede capital account liberalization, since liberalization of the capital account tends to produce a capital inflow and real appreciation, at a time when the real exchange rate should be depreciating to reflect the reduction in protection. Frenkel (1983) adds the observation that the speed of adjustment in asset markets is far greater than that in flow markets, so that if both are liberalized at the same time, adjustment will be complete in the capital market well before prices are right in the flow market (see also Krueger, 1985 and 1992). Again, while the trade reform first argument is generally accepted, trade reforms have been carried out successfully by countries whose capital accounts were already open, for instance Indonesia and Mexico.

In his analytic model, Edwards identifies four distortions: a tariff; a labor market distortion; a tax in the nontradables market that drives a wedge between producer and consumer prices; and a financial market distortion that causes the domestic interest rate to differ from the world rate. Edwards emphasizes the interactions of intertemporal and inter-sectoral distortions, but finds few general results on optimal sequencing. This is an area where practice has moved far ahead of theory, and where the difficulties of second-best suggest that interesting general results will be sparse.

Big bang, gradualism, and credibility The issue of the optimal speed of trade reform was discussed by Little, Scitovsky and Scott (1970), in the Bhagwati-Krueger NBER project (Bhagwati (1978), and Krueger (1978)) and in the Michaely-Papageorgiou-Choksi World Bank comparative study (1991). It has become even more prominent in the reforming East European and former Soviet countries, under the heading of the big bang versus gradualism, with the successful gradualist Chinese approach often being

contrasted with the Polish big bang. The discussion has also moved from just trade liberalization to economy wide liberalization.

The analysis takes place at two levels. First, assuming all policy changes are credible, that is that all market participants believe that announced policies will be implemented, what is the optimal timing and ordering of reforms? The starting point is that in the absence of other distortions, the first best solution is immediate and simultaneous removal of all policy distortions. If this is not possible, for example because administrative capacity is limited, or because some policy distortions cannot be removed immediately, the analysis is in the realm of the second best. Edwards and Van Wijnbergen (1989) present examples where gradual policy reform is optimal in this context.

It is difficult to discern a coherent set of analytic results on the speed of reform under full credibility of policy. The case for gradualism must be closely related to the presence of capital market imperfections. Suppose that the adjustment of the private sector to relative price changes takes time, and that during the adjustment period, some firms that should optimally survive would have negative cash flows if all prices were adjusted to their optimal level at the beginning of the program. With perfect capital markets, firms that should survive would be able to borrow to cover their negative cash flows. But if capital markets are imperfect, it might be better to allow prices to adjust gradually toward their optimal level, to ensure that some firms that should survive do survive.

Credibility adds another dimension to the analysis. Big bang advocates argue that a government that acts quickly strengthens the public's belief that reforms will be maintained without backtracking (Calvo, 1989; Przeworski, 1991). Since the economic response to reforms depends on expected incentives, it is important to create a firm expectation of the overall direction of reform as soon as possible. Advocates of a more gradual approach argue that a big bang runs the risk of backtracking as the short-run costs provoke resistance.

Political arguments also do not provide a clear answer. Advocates of the big bang conclude that multiple reforms can create coalitions in favor of reform that would not be put together in a more gradual process; they also frequently argue that since reforms have short-run costs, it is essential to strike on as broad a front as possible, as soon as possible, before the costs of reform begin to erode government support (Douglas, 1990: Krueger, 1993; Haggard and Webb, 1993). They argue that a new administration that inherits a crisis should start quickly: "A new government that takes office in the middle of a severe crisis and acts immediately can blame the decline in living standards on actions of the previous government. The longer the government delays, the more likely that the costs of adjustment will be attributed to the current government, increasing the level of opposition." (Haggard and Webb, 1993, p.159). Advocates of gradualism argue that large short-run costs can defeat a reform, whereas the same aggregate costs spread over time will not at any point generate sufficient opposition to defeat the reform. The latter has been interpreted as one of the main lessons from the reforms in China (McMillan and Naughton, 1992).

Political scientists and economists have started to assemble some initial evidence on these hypotheses (Nelson, 1990; Thomas and Grindle, 1991; Haggard and Kaufman, 1992; Krueger, 1993; Williamson, 1994; Haggard and Webb, forthcoming), but it is too early to have clear cut conclusions.

Both the credibility and political economy considerations bearing on the speed of reform have to be modified to take into account the institutional and technical capacity of the government to carry out the reform program.

4. EVALUATIONS OF STRUCTURAL ADJUSTMENT PROGRAMS

Although judgments on the effects of policies are made all the time, the

scientific basis for these judgments is typically not well-established. For anyone equipped with a true model, which includes the endogenous response of economic agents to changes in policies, the problem would be easy. But there is no known true model. Another complication arises because the data used to estimate the models are usually of very low quality (Srinivasan, 1994). Furthermore, the evaluation of programs using data for a cross-section of countries faces the additional problem of cross-country comparability (Ahmad, 1994). The data for different countries also has to be converted to a common unit. The sharp differences in relative prices across countries make most of the standard adjustment methods highly questionable. Some progress has been achieved in this area in recent years with the work related to the International Comparisons Project of Summer and Heston, but many problems still remain (Heston, 1994). Problems also exist with the population numbers that are used to obtain per capita figures (Chamie, 1994)

The difficulties in evaluating structural adjustment programs in particular are compounded because they seek to achieve both macroeconomic stabilization and a structural transformation of the economy, with the ultimate objective of achieving a sustainable and high rate of growth of GDP while reducing poverty. Some of these objectives may be reached in the medium term, while success in achieving a sustainable high growth rate can only be evaluated over a longer period.

Typically adjustment programs are implemented over periods of five or more years. Given the length of the program implementation process, examination of performance two or three years after the initiation of an adjustment program is likely to reveal little about its eventual benefits. Rather, it probably picks up mainly the short-term avoidable and unavoidable costs of stabilization (Corden, 1989). Therefore, in evaluating the effectiveness of adjustment programs it is desirable to measure outcomes for a period much beyond the initiation of the program.

A second element to consider in evaluating adjustment performance is the selection of performance indicators. The most common measures of program performance used in the literature are: the rate of growth of GDP; the ratio of investment to GDP; the ratio of saving to GDP; the ratio of exports to GDP; the inflation rate; and the current account deficit relative to GDP. The first measure does not need justification. The saving, investment and exports measures are indicators of progress in structural transformation, and also to some extent of the restoration of macroeconomic stability. The last two indicators are to a greater extent, indicators of the success of stabilization.

A third element is the need to isolate the marginal contribution of an adjustment program from other non-program determinants of performance. The problem is that there is no clear counterfactual that represents the performance that would have been obtained in the absence of the program. This problem is common to the evaluation of any policy or institutional change. As a recent survey in The Economist put it: " In economics, questions about what might have been are practically unanswerable; questions about what is are hard enough" (The Economist, September 19-25, 1992).

The counterfactual should include the effects on performance of the initial conditions, the external environment in the program period, and the policies and institutions that would have been in place in the program period had there has not been a program in place (Goldstein and Montiel, 1986; Khan, 1990; Corbo and Rojas, 1992). The difficulties arise because this counterfactual has to be estimated50. Alternative approaches used to evaluate program effectiveness differ in the methods used to estimate the counterfactual.

50Similar problems have been encountered in the evaluation of training programs in labor economics, and the work on the evaluation of the effectiveness of adjustment programs has been much influenced by that literature. See for instance Heckman (1978)).

Three approaches have been used to estimate the counterfactual in cross-sectional work: the country's performance for a period before the program was put in place; the observed performance of a comparator group of countries without a program for the same period; and a simulated performance of what would have been observed in the absence of a program if everything had been the same except the presence of a program. These methods are known as the before-and-after approach, the control-group approach, and the modified control-group approach respectively[51]. There are many versions of the modified- control group approach, differing in the method used to deal with the selectivity bias problem (Corbo and Rojas, 1992), that is, on how to deal with the problem that countries that undertake programs are ipso facto different from those that do not.

Although the before-and-after approach has been the most commonly used in the literature on the evaluation of program performance, the results are likely to provide a biased and inconsistent estimate of program effects. The obvious problem is that this approach embodies the assumption that absent the program, the performance indicators would have taken their base period values. Since countries do not undertake adjustment programs out of a clear blue sky, this assumption is implausible. Suppose for example that there had been no change in the external environment, but that a country was living well beyond its means in the base period. Then the before-and-after approach underestimates the effects of the program, because the previous situation was unsustainable.

The control-group approach implicitly attempts to control for the external environment, but it uses the restrictive assumption that the external environment should affect program and non-program countries equally. In the context of the oil shock, this would imply that oil importers and exporters would be affected in the same way.

51In the evaluation of IMF programs, some evaluations have been made comparing outcomes with program targets (Edwards, 1989; Guitian, 1981).

Obviously, this assumption fails whenever external factors have different effects on the performance of program and non-program countries.

The modified control-group approach, to be described shortly, provides an unbiased and consistent estimate of program effects if the model to estimate the counterfactual is unbiased. The basic idea behind the modified control group-approach is to accept that program countries are different than non-program countries, to identify the differences between them in the pre-program period, and then to control statistically for these differences in assessing program performance in the post reform period. This is equivalent to assuming that program countries are not randomly selected. Instead, they are adversely selected, since only countries with poor performance undertake a program. The modified control-group approach can also control for world economic conditions.

A counterfactual is also needed to evaluate the impact of an adjustment program,ä or any other policies, for an individual country. The most common methods here are the before-and-after approach, and model based estimates of the counterfactual for the program period. Models used have typically been either econometric (Corbo and de Melo, 1989; Mosley et al, 1990), or computable general equilibrium (Bourguignon and Morrisson, 1992; Harrigan and Mosley, 1990).

We now describe in detail the methodology used in the evaluation of adjustment lending for a cross-section of countries.

Statistical analysis of performance across countries

The before-and-after approach estimate of program performance is simply the mean change in a selected performance indicator over some relevant period. With • y the change in the selected performance indicator between the program evaluation period and the base period, the before-and-after estimate (ß) involves calculating the mean change across the reduced sample of program countries only, for each of the selected performance indicators:

$$y_i = \beta \qquad \text{(for program countries)} \tag{4-1}$$

The control-group estimate is calculated by running the following regression for the complete sample of program and non-program countries:

$$y_i = \beta_0 + \beta_1 d_i \tag{4-2}$$

where d_i is a dummy variable with a value of one for program countries. The estimated value of β_1 is equal to the difference in the mean change in the performance indicator y between program and non-program countries. Thus, using this methodology, a statistically significant value for β_1 would indicate that the change in the performance indicator y for the program countries was different from the corresponding change in non-program countries (the control-group).

The modified control-group approach specifies a reduced-form equation that links policy instruments, initial conditions, and world economic conditions to performance. The method starts from the basic reduced form equation for the performance indicator y_i, given by

$$y_i = x'_i \phi + W'_i a + \beta_4 d_i + e_i \tag{4-3}$$

where x_i is a K-element vector of macroeconomic policy instruments that would have been observed, in the post-program period, in the absence of a program in country i; W_i is an M-element random vector of world economic conditions that affect the performance of the y_i performance indicator in country i.

To complete the methodology one needs to specify also a policy reaction function, which shows how policy instruments change in response to changes in the state of the economy. Following Goldstein and Montiel (1986), the policy vector x_i is estimated from a policy reaction function of the form:

$$x_i = t[y_i^d - (y_i)_{-1}] + u_i \qquad (4.4)$$

where y_i^d is the desired value of the performance indicator y_i and u_i is an unobservable error term. The policy variables x_i react to the difference between the desired and the actual value of the performance indicator. The model is completed by endogenising the country's decision on whether to enter an adjustment program (d_i)52

Program evaluations

Much work on program evaluation has been done in recent years, based on both cross-sectional country data, and data for individual countries. Evaluations have been made of IMF stabilization programs, and of World Bank-supported structural adjustment programs, by the staff of the IFIs and by other researchers.

This recent work has evaluated the effectiveness of programs rather than of policies. The transmission mechanism from program to performance indicators is implicit in the analysis; programs are assumed to work both by changing the values of policy variables and by enhancing the impact of policy variables on performance by changing the structure of the economy. Numerous individual country studies have been done for programs that include stabilization and structural transformation components.

The work on the evaluation of IMF programs has illustrated quite clearly the limitations of the before-and-after and the control group techniques. For instance, Goldstein and Montiel(1986) evaluated the effectiveness of IMF programs for four indicators of performance: the ratio of the overall balance of paymentsä to nominal GNP; the ratio of the current account to nominal GDP; the rate of CPI inflation; and the rate of growth of real GDP. They found that, by not controlling for other factors, the before-and-after approach produced results that were extremely sensitive to the year of the program.

52For details on two approaches to the estimation of this model, see Goldstein and Montiel (1986), and Corbo and Rojas (1992).

Even the sign of the effects changed depending on the year in which the programs were initiated.

When they pooled all the programs and used equation (4-1) to estimate the before-and-after effects for the full sample of program countries, they found that the programs had negative effects on the four indicators of performance. When they used the control-group approach to control for external conditions, the data implied that Fund programs are associated with an improvement in the current account and with slightly better growth, but with slightly worse inflation and balance of payment situations. However, these differences were not statistically significant. The latter test was done on the coefficient of β_1 in model (4-2). When Goldstein and Montiel used the modified control-group approach, they found that countries with IMF programs did a little better on inflation but worse on the other three indicators of performance. Once again, however, the differences between the performance of program and non-program countries were not statistically significant.

Pastor (1987) used the control-group approach to analyze the effectivenessä of IMF-programs in 15 Latin-American countries during the period 1965-1981. He found that the balance of payments improved, while inflation and the share of labor income deteriorated. He did not find an effect of IMF programs on growth. One limitation of these evaluations is that they do not correct for selectivity bias and they use a crude method to control for external conditions.

Another comprehensive study of the effectiveness of IMF programs was undertaken by Khan (1990). Khan used the Goldstein and Montiel version of the modified control-group approach. However, the model is estimated using pooled time-series, cross-section data. Khan used four performance indicators: the change in the ratio of the balance of payments to GDP; the change in the ratio of the current account to GDP; the change in the inflation rate; and the change in the rate of growth. In the comparisons he used two alternative current periods: the program year; and the average of the program year and the succeeding year. The second alternative allows for the slow

response of the economy to program changes. For the first definition of the current period, Khan found that programs had a positive effect on the current account balance, and a negative effect on the rate of growth. Both effects were statistically significant. The effects on inflation and the balance of payments, although favorable, were not statistically significant. Using the second definition of the current period, Khan found that the balance of payments, the current account, and the growth effects were statistically significant. Further, the size of the balance of payments and current account effects was larger. However, the negative and significant effect on growth was maintained.

World Bank (1988) evaluates the effectiveness of its structural adjustment lending, using both cross-sectional data and country studies. The cross-sectional work concluded that the 30 countries receiving adjustment lending before 1985 performed better on average, by the end of 1987, than developing countries not receiving such loans. Two methods were used for the evaluations: before-and-after, and control-group. The evolution of eight indicators of performance was studied: GDP growth; the ratio of investment to GDP; export growth; the ratio of the current account balance to GDP; the ratio of the budget balance to GDP; the inflation rate; the ratio of external debt to exports; and the ratio of debt service to exports. The control-group results showed that the thirty countries that received adjustment lending before 1985 performed somewhat better than the sixty-three that did not, even though the adjusting countries experienced more severe external shocks. The better performance was especially marked in the twelve countries that received three or more adjustment loans before 1987 and those that are substantial exporters of manufactured goods. Improvements were smaller in the highly indebted countries and in Sub-Saharan Africa. However, no statistical analysis of the significance of the differences was performed (World Bank, 1988).

The work reported in World Bank (1990) benefited from a larger sample of countries that had received adjustment loans from the World Bank. It also focused mainly on the contribution of adjustment lending to sustainable growth. For this

purpose, it examined the performance of intermediate indicators of structural transformation -- saving, investment, and export ratios -- along with the rate of GDP growth. The statistical evaluation was based on a version of the mo dified control-group approach.

When comparing changes in these indicators between 1981-84 and 1985-88, it was found that after explicitly controlling for external shocks, initial conditions, levels of external financing, and estimated policies that would have been followed without adjustment lending, the annual average rate of growth of GDP of countries that received two or more adjustment loans, was close to 2 percentage points of GDP higher than that for countries that were not heavy users of adjustment lending. It was also found that the domestic saving to GDP ratio increased over 4 percentage points when measured at current prices, and 5.8 percentage points when measured at constant prices. The investment ratio was practically unaffected, while the export to GDP ratio increased 5 percentage points at current prices and 2.3 percentage points at constant prices. However, the latter effect was not statistically significant.

When comparing performance in the 1980s with that in the 1970s, the results were somewhat different. In particular the investment to GDP ratio at constant prices decreased 5.6 percentage points between 1970-1980 and 1985-1988. This result was strongly statistically significant (World Bank, 1990, p.18).

World Bank (1992) continued the evaluation of adjustment programs by adding more information and by investigating differences in model structure for different country groupings. This report also made progress in understanding the behavior of the investment ratio, which declined by a statistically significant 3.5 percent between the 1970s and 1985-199053. However, when different groups of countries were examined, it was found that this result is due mostly to a large drop in this ratio for the low income countries. Middle-income country performance improved by all the indicators, while the

53A similar drop was found in World Bank (1990).

low income countries did well on growth and the export to GDP ratio, but worse on the investment to GDP ratio; there was no significant difference between periods in the saving ratio. For the low income countries the only statistically significant effects were the increase in the rate of growth of GDP and the drop in the investment rate.

Mosley, Harrigan and Toye (1990, table 7.1) evaluate the effectiveness of adjustment policies rather than of adjustment lending. In their multiple regression analysis they include beside external economic variables and initial conditions, two variables related to the program: a program implementation variable, and the size of the loan. From their empirical work the authors conclude that for the period 1980-86, compliance in the current period and in the previous two years has a positive effect on growth. However the amount of financing in the previous period has a (surprising) negative effect on growth. All in all, they conclude that Bank programs have a weak positive effect on GDP growth. This is the net of a positive effect of program compliance on growth and a significant and negative effect of the amount of program finance. The authors also find a negative effect of Bank programs on investment rates. They attribute this to the compression of government expenditures, the shift from project finance to adjustment lending, and the effect of the stabilization-induced recession on private investment through aggregate demand factors.

Conway (1990), using a panel data approach for a sample of 76 developing countries, also concludes that there is a significant positive association between participation in a World Bank adjustment lending program and more rapid growth in real GNP, an improved current account as a percentage of GNP, and a lower ratio of domestic investment to GNP54.

The statistical cross-sectional studies provide an aggregate and reasonably consistent picture of the effectiveness of adjustment programs. However, except for the work of Mosley et.al (1990), this research has not empirically evaluated the economics

54Conway also introduced country dummies to control for country characteristics.

behind the programs; nor has it taken the extent of compliance into account with any care. Some criticisms of IMF and World Bank-supported programs have followed these routes.

Edwards (1989a) evaluated IMF programs, examining both compliance and someä of the assumptions behind their design. He finds that compliance in recent programs has been low, and that there has been a profusion of waivers. On this basis, he concludes that recent programs were not fully adequate to deal with the sharp external shocks of the early 1980s that culminated in the debt crisis. He also questioned the scant attention that IMF programs paid to income distribution. In examining the economic assumptions behind programs, Edwards examined the output-effects of devaluations. From his empirical work based on a group of 12 countries[55] ,he concluded that devaluations have had a negative short-run effectä on output. However, he supports the assumption used in Fund programs that exchange and trade controls have negative effects on output growth[56].

Another common critique is that adjustment programs have not followed an appropriate sequencing of reforms and, in particular, have started trade liberalization while the macroeconomic situation was still unstable. In the latter case, it is argued that the low credibility of the reform program could be welfare deteriorating (Sachs, 1987; Rodrik, 1990).

In the case of Africa, it has been argued that the policy reforms introduced in the adjustment programs do not properly take into account the institutional constraints facing these countries. Indeed, several researchers have suggested that existing institutional constraints could imply program effects far removed from those expected when the programs were put in place (Killick, 1984; Helleiner, 1992; Taylor, 1988). It has

55India, Malaysia, Philippines, Sri Lanka, Thailand, Greece, Israel, Brazil, Colombia, El Salvador, South Africa, and the former Yugoslavia.
56For a reply to Edwards see Goldstein (1989).

also been argued that World Bank-supported adjustment programs have been used to buy reforms, whose continuity would be questionable, even if they were implemented initially (Mosley et al, 1990).

5. BEYOND ADJUSTMENT TO LONGER-TERM GROWTH

Structural reforms that contribute to the reduction of macroeconomic imbalances and the improvement of resource allocation create the foundations forä a recovery of growth (Fischer, 1987; Dornbusch, 1990). There are five main requirements for sustained growth: stable macroeconomic conditions; an appropriate structure of incentives, generally provided through markets; an adequate physical and human capital base; an adequate level of saving; and efficient institutions to turn saving into productive investment.

We have already discussed some of the elements needed to meet the first two requirements. The last three are more important for sustaining growth. In the initial stages of development, growth frequently comes from the use of natural resources. In later stages, investment in human and physical capital, and the introduction of new technologies, become relatively more important.

In most developing countries in the 1980s, the upgrading of the infrastructure and the human capital base, that has a public good character, required a profound restructuring of the public sector, getting rid of activities that are more efficiently undertaken in the private sector to make space in the public sector budget to finance these (infrastructure and human capital) expenditures. Some countries have also developed a framework in which the private sector can investä in these activities. Chile has gone far in this direction by promoting the participation of the private sector in the production of education and health services. Lately it has also developed a framework in which the private sector can invest in infrastructure; including roads and port facilities.

The participation of the private sector in the provision of health and education

has been made possible by decentralizing production. For example, the provision of these services for the poorest groups, who would otherwise have gone without them, has been encouraged by providing state subsidies (per student or per patient) while the production of the service has been decentralized into the private sector. Mexico has also made progress in encouraging private sector participation in infrastructure, but has been less successful in moving the private sector into the provision of health and education services (World Bank, 1990).

In principle, the increase in investment could be financed by borrowing in the international capital markets, though it is rare that as much as 5 percent of GNP can be borrowed on a sustainable basis (Krugman, 1993). Further, heavy relianceä on capital inflow flows in the early stages of an adjustment program could lead to a premature real exchange rate appreciation. Since aid prospects also appear toä be worsening, developing countries that want to increase their investment rates will have to increase national saving.

The weight of the empirical evidence suggests that private saving rates are not very sensitive to policy variables, and in particular to interest rates (Giovannini, 1985; Corbo and Schmidt-Hebbel, 1991). However negative real interest rates probably discourage saving -- certainly they reduce the amount and efficiency of financial intermediation and encourage capital flight.

Increased public saving will contribute to increasing national saving provided it is not offset by a decrease in private saving. Empirical evidence presented by Corbo and Schmidt-Hebbel (1991) shows that change in public saving generally are not greatly offset by the response of private saving. This evidence on saving highlights the central importance of fiscal balance.

The last factor, an increase in the rate and efficiency of private investment, is much affected by the stability of the macroeconomic framework and by clear and predictable tax rules and property rights (Rodrik, 1989; Serven and Solimano, 1992). However, there will inevitably be doubts about the final success of an adjustment

program in its early stages. Typically investors will wait to have a clearer assessment of the most likely evolution of the economy, both the level of activity and relative prices, before committing to investment. This slow response is a common characteristic of most adjustment programs (Dornbusch, 1990; Serven and Solimano, 1992).

The belief that economic policies and the investment rate are major determinants of economic growth has long been expressed in the writings of economists. However it is only recently that the links among policy, investment, and long-term growth have been captured in simple analytic models, in the endogenous growth literature (Romer, 1986, 1990; Lucas, 1988; Easterly, 1993).

The ideas underlying these models -- economies of scale, externalities, and public goods -- and the argument that the removal of distortions promotes growth have been familiar in the development literature for a long time. At a minimum, the new models provide a framework that may improve understanding of the operation of growth-promoting policies that have been proposed in the past; perhaps they will also improve the quality of growth-promoting policies in the future.

This literature highlights a number of channels through which public policies can affect growth. The promotion of human capital accumulation, through education and even through improvements in nutrition, can foster growth. So can investmentä in R&D. The models also point to the possibility of economies becoming stuck inä a poverty trap: a situation in which low income and low human capital levels create incentives for high population growth and low human capital investment, thus perpetuating the state of poverty. Policies that stimulate investment in human capital can help the economy break out of the trap.

Recent work that has used these new theories to examine the links between trade policy and growth indicates that, after adjusting for factor accumulation, countries with more open economies have had higher rates of growth (Easterly and Wetzel, 1989; de Melo and Robinson, 1989; Nishimizu and Page, 1991; Dollar, 1992; Levine and Renelt, 1990; Edwards, 1993b). Countries that are more open to trade produce with more up-to-

date technology and invest more in quality improvement and research and development than countries more closed to trade (Dornbusch, 1992).

The new theories point to the many routes through which fiscal policies can affect growth.

The impact of financial policies and structure on growth has also been the focus of recent scrutiny. Gelb (1989) and Easterly and Wetzel (1989) present evidence suggesting that severe financial distortions such as sharply negative real interest rates and very small formal financial systems adversely affect growth; see also King and Rebello (1993).

New growth theory insights have been used recently to study the difference in growth performance across Latin American countries. Corbo and Rojas (1993) find that variation in the investment ratio is the most important single factor affecting growth; this accounts for 37% of the variation in the per capita growth rate. Of course, at a deeper level investment is endogenous, and it too needs to be explained. The addition of other new growth theory variables -- such as the initial level of GDP per capita, the ratio of government expenditure to GDP, measures of human capital, and the inflation rate and the ratio of the trade deficit to GDP -- raises the R^2 to 62%. The inflation rate, the trade deficit ratio, and the human capital proxy were the most significant of these additional variables.

Stabilization and adjustment programs typically reduce growth in their early years. The question then arises of how long it takes until sustained growth begins (Dornbusch, 1990). This is obviously a question that has no unique answer, for it depends on the extent of the disarray at the start of the reform program, on the speed and comprehensiveness of the adjustment program, on the financing available to cushion the reforms, and on the credibility and stability of government policies. Nonetheless, observation of even such successful programs as those of Chile and Mexico in the 1980s, suggests that it takes a long time, perhaps five or more years, until growth begins to revive. The delays are due to the complexity of the necessary policy changes, and on lags in the investment response of the private sector. Such a long transition period

increases the political difficulty of sustaining the adjustment program.

6. CASE STUDIES

In this section we present brief case studies of adjustment programs in three countries, Chile, Ghana, and New Zealand, chosen to provide examples of adjustment in Latin America, Africa, and an industrialized country, respectively. We are interested in each case in: the cause of the crisis; the program and its political economy; and the results.

6.1. Chile

Chile initiated its adjustment program in the mid-1970s. The economy grew rapidly in the late 1970s but went into deep crisis in 1982. By 1984 the Chilean program was widely seen as a failure. Yet today Chile is viewed as one of the great success stories of adjustment and growth. Here we examine the Chilean reform program, the causes of the crisis of 1982-83, and the nature of the economic recovery program initiated in 1984. We conclude by drawing some lessons from the reforms.

6.1.1. Causes of the Crisis

From the 1930's, Chile pursued an active import substitution policy, along with active government participation in the production and marketing of private goods. These policies reached their peak in the early 1970s during the Allende administration. Agrarian reforms initiated in the previous decade were drastically accelerated during the Allende government, and ended with the expropriation of practically all large estates. The Allende government also took over the banking system. Multinationals were expropriated, in some cases, as with copper enterprises, without compensation payments. This caused international conflicts for the government, especially with the US.

On the macroeconomic front, the Allende government started with an

aggressive expansion of aggregate demand. In 1971, current government spending grew by 12.4 per cent and the fiscal deficit reached 10.7 per cent of GDP. Pulled by the aggressive demand expansion, GDP grew 9 per cent in real terms (Table 6.2.1). In this first year the money supply grew 66 per cent in real terms (see Table 6.1.1).

Measured inflation was relatively low but price controls and commodity and factor market rationing were widespread. Price controls were intensified during the next few years. With the continuation of expansionary policies, the fiscal deficit increased from 2.7 per cent of GDP in 1970 to close to 25 per cent of GDP in 1973. As the budget deficit was mostly financed by borrowing from the central bank, and because the economy was fairly closed to trade, pressures on domestic prices had to be contained by tighter price controls. Not surprisingly, active black markets developed in which consumer goods were available at a multiple of the official price. At the enterprise level, excess demand was manifested in chronic shortages of basic inputs at the official prices. As a result black markets for inputs also emerged.

By August 1973 the government had run out of net foreign reserves. Strong political opposition was developing from the groups that were been expropriated. When the economic situation started to take a sharp turn for the worse, the political crisis intensified.

6.1.2. The Adjustment Program[57]

The government that took power through a military coup in September 1973 inherited an economy characterized by a dominant role of the public sector, severe macroeconomic imbalances, and an extremely distorted set of price incentives. Resources were being allocated mainly by bureaucratic rules. The labor market was dominated by a few militant unions, which were highly politically motivated. The central bank's gross

57For more details on the reforms, see Corbo (1985b) and Ramos (1986).

international reserves were down almost to zero, and the budget was out of control[58]. Inflation was running at close to 500% a year.

On the economic front, the initial 18 months of the new administration were spent implementing a costly gradual stabilization program, aimed at reducing the inflation rate; the government attempted to reestablish the price system as the main mechanism to allocate resources, and initiated a deep fiscal reform.

By 1975 a team of economists with very strong (classical) liberal ideas began emerging within the government. This new team was about to initiate an economic transformation that would result in a competitive, market-oriented, open Chilean economy. Reforms were introduced in four areas: public sector reforms, to attain macroeconomic stability and improve efficiency; trade reforms; goods and labor market reforms, to facilitate the needed drastic reallocation of resources; and financial sector reforms, to improve efficiency and to facilitate the reallocation of resources.

The initial price liberalization of the Pinochet government was undertaken before the macroeconomic situation was stabilized, and inflation rose to near 1000 percent. The economic team's first move was to initiate a stabilization program, while continuing price reforms. The main components of the stabilization program were the restructuring of the public sector and the elimination of the fiscal deficit.

Public Sector Reforms

A major tax reform was initiated in 1974. Its main purpose was to reduce the fiscal deficit by increasing tax revenues. As part of the reforms a value added tax was introduced to replace a cascaded sales tax. The VAT became the main source of fiscal revenue in the years to come. Another important goal sought by the reform was to improve the incentives to work by reducing marginal tax rates. On the expenditure side, public employment and public investment were drastically reduced.

58The deficit in 1973 was 24.7 percent of GDP.

The 1974 fiscal adjustment was drastic: the deficit was reduced from 24.7 per cent of GDP in 1973 to 10.5 per cent of GDP in 1974 (see Table 6.2). In 1975 Chile suffered severe terms of trade shocks. The lack of external funding forced a drastic reduction of expenditures to face the emerging trade balance deficit. This second fiscal adjustment was as severe as the first. A further 26% cut in real public expenditures, imposed in the middle of a severe contraction, reduced the fiscal deficit to a mere 2.6% of GDP.59

The privatization process which started in 1975 also contributed to the fiscal adjustment. The process started with the sale or restoration of enterprises that had been taken over or bought during the Allende government. When the restitution of private property was completed, the privatization of large public enterprises was initiated. This process would continue until 1989.

The recession of 1975 slowed the retrenchment of the public sector. In 1976 the fiscal deficit was maintained at almost the 1975 level, 2.3 per cent of GDP, and inflation was 232 per cent. Most of the fiscal adjustment had been done by this time. Current expenditures in real terms stayed at their 1975 level. From then on, the fiscal deficit was gradually reduced and in 1979-1981 there were fiscal surpluses (see Table 6.1.2).

Improvements in the administration of the tax system were implemented through the 1970s. The government instituted a radical pension system, with important fiscal effects, in 1981. In that year, the old pay-as-you-go system was substituted by one based on individual capitalization. Gradually, most of the labor force moved into the new system. As the old system had been partially funded by a payroll tax, the transfer of the labor force into the new system tended to increase the fiscal deficit. Of course, although tax collection decreased, future pension payments also decreased. Nonetheless, some adjustment would have to be made in the fiscal system to prevent an increase in the recorded deficit.

59Note that this happened in a year that GDP dropped by 12.9 percent.

Trade Reforms

As a consequence of the trade policies of the previous 40 years, the Chilean trade regime was very distorted by 1973. The average nominal tariff at the end of 1973 was 105% (Corbo 1990). Tariffs ranged from 0% for some consumer goods to 750% for some goods considered as luxuries. There were also many non-tariff barriers, including quotas, prior approvals and so on. As a direct result of the protection system, export activities were heavily taxed.

Imports were concentrated in intermediate goods, followed by capital goods and a few consumer goods. Non-food consumer goods imports were almost nonexistent. Exports were concentrated in copper, which made export earnings highly dependentä on copper prices. International trade was almost entirely in government hands. äBy 1973 there were six exchange rates, with the ratio between the highest and the lowest being 52 to 1. Private capital inflows were almost non existent as the country risk was too high.

Trade reform started with the unification of the exchange rate system, the tariffication of non-tariff barriers, and the reduction of extreme tariffs. Initially, the fiscal consequences of the trade liberalization were minimal, as there were no imports of goods with the highest tariffs, and tariffication provided additional revenues. A large nominal devaluation at the time of the unificationä of the exchange rate together with the drastic fiscal adjustment helped bring about a large real devaluation.

In the initial years of the reforms, aggressive nominal devaluations were used to achieve the real devaluation required to accompany the drastic fiscal adjustment. Inflation was still high, and devaluations were implemented in the context of a crawling peg system; the rate of devaluation was determined by the government's goal of reducing inflation, as well as changes in fundamentals. For instance, in 1975, following the first oil shock and a 45% reduction in real copper prices, a sharp fiscal adjustment took place which was accompanied by a nominal devaluation that reached 490% for the year.

The speed and extent of trade liberalization were not known when the trade reforms began. However, the reforms accelerated as the liberal economic team improved

its standing in the government. By 1979, the trade reform was completed when a uniform tariff rate of 10% was established with just one exception for the car industry.

The exchange rate was fixed with respect to the U.S. dollar in June 1979. The fixing of the exchange rate at a time when domestic inflation was still far above international levels, and when wages were indexed, would create much trouble later.

The liberalization of the capital account was initiated much later. Up to late 1978, the central bank authorities were afraid that an early liberalizationä of the capital account would result in large capital inflows and a real exchange rate appreciation, given high real domestic interest rates.

Labor Market Reforms

By 1973 the labor code was very restrictive, for instance making it essentially impossible to dismiss workers. In its early years, the Pinochet regime severely curtailed the power of the labor unions. Later, a new labor code was introduced modernize labor legislation. The new code increased the flexibility of labor contracts and the dis missal process, and instituted negotiation at the firm rather than sectoral level. But it also put in place a major rigidity in real wages, by requiring compulsory wage indexation for all workers subject to collective bargaining. When the nominal exchange rate was fixed in 1979, the dollar value of real wages increased enormously. This increase in wages fueled an expenditure expansion and a large loss of competitiveness of the tradable sectors.

Financial Sector Reforms

Almost all the domestic financial system was in public hands at the end of 1973, and nominal interest rates were heavily regulated. The privatization of financial institutions began in 1974, and nominal interest rates were gradually liberalized too.

However, the lack of an appropriate regulatory and supervisory framework would later create major difficulties. In 1977, a recently privatized middle-sized bank, which belonged to an industrial conglomerate, entered into bankruptcy and was taken over by regulators. Corbo (1985b), and de la Cuadra and Valdés (1991), among others,

suggest that this action signaled de facto deposit insurance and set the stage for the exacerbation of moral hazard problems. Financial groups could lend, almost without limit, to their own enterprises as their borrowing costs did not reflect the higher risks associated with the concentration of their portfolios.

Similarly, the existence of deposit insurance without prudential regulation and banking supervision also encouraged financial groups to take undue currency risks by borrowing abroad. The currency risks assumed by different Chilean economic groups was one of the causes of the very high rate of bank failures in 1981-1983 (de la Cuadra and Valdés, 1991).

6.1.3. Results of the Adjustment Program

Surprisingly, the Chilean economy grew, moderately, in 1974, the year after the coup. However, this growth was followed by a deep recession in 1975. The recovery and expansion from that recession lasted until 1981. There was then another extremely deep recession in 1982-83, followed by a recovery that started in 1984 and that put the economy onto a sustainable growth path.

The recession of 1975 had three major causes. First, the terms of trade worsened as copper prices fell 45 percent in real terms, and the price of oil rose by a factor of three. Second, fiscal and monetary policies were extremely restrictive, attempting to stop inflation and to reduce an incipient current account deficit that could not be funded through borrowing. Third, with the change in trade incentives, some import competing sectors started to shrink.

By 1976 inflation remained high, at 230 percent, the unemployment rate was 16.8%, and the international reserve position was weak (US$ 107.9 millions, less than one month of imports), but the fiscal deficit was only 2.3 percent of GDP (see Tables 6.1.1 and 6.1.2). Stopping inflation was now the economic team's top priority, with fiscal contraction its main instrument. The use of an orthodox program to reduce a stubborn

inflation became very costly in terms of output losses and the higher unemployment (Corbo and Solimano, 1991). The cost of stabilization would have been lower if the fiscal adjustment would have been accompanied by coordinated deceleration of the rate of increase of wages and the exchange rate. Finally, inflation came down very slowly and with a high cost in terms of unemployment. Nonetheless, the economy started to grow as the reforms progressed and their credibility was enhanced. GDP growth was 3.5 per cent in 1976, 9.9 per cent in 1977 and 8.2 per cent in 1978 (see Table 6.1.1).

By early 1978 the economic authorities were becoming impatient with the slow progress in reducing inflation. They first instituted a crawling peg exchange rate system, and then in June 1979 fixed the exchange rate despite a domestic inflation rate of 30 percent. There was a very clear conflict between the objective of achieving a stable equilibrium real exchange rate and the use of exchange rate as an anchor for the price level. The growing overvaluation of the currency had deep macroeconomic repercussions and was one of the main causes of the boom that developed in the following years as well as of the deep recession that followed.

With the introduction of a preannounced crawling peg, the cost of foreign borrowing decreased substantially. It fell from 22.6 per cent per year in the fourth quarter of 1977 to 10.2 per cent per year in the first quarter of 1978, and became negative from there on until the last quarter of 1980. The reduction in the cost of foreign borrowing unleashed large capital inflows and a drop in domestic real interest rates[60]. Inappropriate regulation and supervision of the banking system facilitated the increase in capital inflows. The drop in real peso and dollar interest rates and the large increase in real credit fueled a rapid increase in real domestic expenditures.

The widening gap between the rate of growth of expenditures and GDP was reflected in a growing trade deficit. The trade balance deficit as a percentageä of GDP

60Some observers relate the increase in capital inflows mainly to the lifting of capital controls (Edwards, 1986; Morande, 1988).

rose from 3.2 per cent in 1978 to 5.2 per cent in 1979, 6.7 per cent in 1980, and 12.9 per cent in 1981. The sharp increase in the demand for nontradable goods resulted in a market clearing appreciation of the real exchange rate, by 25 percent between 1978 and 1981.

By the end of 1981 and early in 1982, the large trade deficit and adverse external shocks (a worsening in the terms of trade, and a sharp increase in international interest rates61) began to generate doubts about the sustainability of the exchange rate. As a result, capital inflows began to slow, and a period of capital flight started. With the loss of external funding, the key policy issueä in early 1982 was how to engineer a sharp reduction in the trade deficit without causing an undue increase in unemployment. Chile was already in crisis before the international debt crisis broke in August 1982, but at that point capital inflows all but disappeared and the speed of reduction in the trade balance deficit had to be accelerated.

After a couple of years in which policies concentrated on the consequences of the recession, a medium term adjustment program was put in place in 1984. The program's main objectives were to reduce the fiscal deficit that emerged from the recession and the rescue of the financial system, and to achieve a large real devaluation. As the traded goods sectors had achieved large efficiency improvements during the preceding period of real appreciation, there was a powerful supply response to the real depreciation, and the economy entered a sustained period of high growth. When the new democratic government took office in early 1990, and by its actions reaffirmed the main thrust of policy, a large direct foreign investment boom was initiated and growth stayed high.

For a highly indebted country as Chile, economic performance in the post 1985 period was remarkable. For the period 1986-89, the average annual rate of growth of GDP

61Relative to the average for the period 1977-79, the size of the external shock is estimated as a positive shock of 1.2 percent of GDP in 1980, a loss of 0.5 percent of GDP in 1981, and a loss of 3.8 per cent of GDP in 1982 (see Table 6.1.3).

reached 7.2 per cent, while the average annual rate of inflation declinedä to 17.8 per cent. During the same period the unemployment rate was reduced from 13.8 per cent in 1985 to only 6.7 per cent in 1989 (see Table 6.1). When the new authorities took office in early 1990, the economy was overheating. The new government imposed a contractionary monetary policy early in 1990, thereby establishing the continuity of policy. After a brief period of lower growth, the acceleration of inflation was stopped, and in 1991 the economy was on its way to sustainable growth with a decreasing rate of inflation.

6.2. Ghana[62]

Economic adjustment and the recovery of growth have been exceptionally difficult in Africa (World Bank, 1993b). Ghana, which started its adjustment program in 1983, has been the most successful of the African adjusters63.

6.2.1. Causes of the Crisis

Ghana had an estimated GDP per capita of US$ 400 in 1990. The country is well endowed with natural resources such as arable land, forests, and large mineral deposits including gold, diamonds, bauxite and manganese.

When it began its Economic Recovery Program in April 1983, Ghana was submerged inä a deep economic crisis, which had been building for the previous 15 years. At the time an autonomous government was established in 1951, (followed by full independence in 1957), in comparison with other African countries, Ghana had a well-educated population and was receiving large external inflows. During the 1950s the

62On conditions in the 1960s, see Clark Leith (1976); on the more recent period, see Kapur et al (1991) and Leechor (l991).

63World Bank (1993b) classifies six of 29 adjusting African countries as successful adjusters. These countries all experienced an increase in GDP growth of at least 2 percent between 1981-86 and 1987-91. They are Ghana, Tanzania, the Gambia, Burkina Faso, Nigeria, and Zimbabwe.

economy grew at an average annual rate of 4 per cent. Growth started to slow during the 1960s, when it averaged just 2.8 percent. Further, the growth rate declined as the decade progressed, and the average growth rate for the 1970s was negative. Food production decreased 18% during the decade, including cocoa (the main export product). The drop in cocoa production is most remarkable considering that there was a cocoa price boom in the middle of the 1970s.

The poor economic performance during the 1970s and early 1980s was due to inadequate domestic policies and severe internal and external shocks (droughts in 1975-77 and 1981-83, deterioration in terms of trade). On the macroeconomic front, a large fiscal deficit was behind an acceleration of inflation and a deteriorating current account deficit. On the microeconomic front, heavy government intervention through price controls, import controls, a multiple exchange rate system, distribution controls, as well as a massive expansion of the public sector in the production of private goods, resulted in heavily distorted relative prices (including for cocoa) and an overextended public sector.

When balance of payments problems became acute in the early 1980s, exchange and import controls were intensified. Restrictions on imports of spare parts and basic inputs hampered production. At the same time the exchange and trade restrictions accumulated during the previous twenty years, has resulted in an anti-export bias that had crowded out most potential export activities. In particular, the marketing board for the main commodity export, cocoa, paid producers far less than the international price. At the same time, expansionary demand policies were fueling an accelerating inflation. With the nominal exchange rate fixed, a largereal exchange rate appreciation developed. Not surprisingly, the black market exchange rate premium increased and the implicit tax on exports increased too. To avoid this tax, cocoa smuggling became rampant.

Controls on interest rates at a time of high inflation led to highly negative real interest rates, discouraging saving, promoting inefficient investment decisions, and

encouraging capital flight. The negative real interest rates and the heavy borrowing of the government resulted in financial repression and a very inefficient financial system, especially in the rural areas. During the period 1981-1983, GDP declined at an annual average rate of 4.6 percent; the average inflation rate was 76 percent; the fiscal and current account deficits were around 5 percent and 7.6 percent of GDP respectively. As the fiscal situation deteriorated, the funding and quality of basic government services and public investment started to suffer. The deterioration in the economic situation fueled migrations of the well-educated population. To make matters worse, in the early 1980s foreign capital inflows started to dry up as the creditors questioned Ghana's economic policies.

By the end of 1982, the balance of payments deficit had dried up the international reserves and the economy had accumulated international arrears equivalent to 10 percent of the GDP (about 18 months of imports). The crisis that had been building up for the previous twenty years -- GDP per capita declined by 30 percent in the period 1968-1983 -- reached its climax.

6.2.2. The Economic Reform Program

The goals of the Economic Recovery Program introduced in 1983 were to restore economic balance and to lay the foundations for sustainable growth with equity. These objectives were supposed to be achieved in the medium term after a thorough transformation of the existing economic system. The program included a stabilization component aimed at reducing inflation and moving towards a trade balance deficit consistent with the available financing; a series of microeconomic and institutional reforms aimed at correcting price incentives and increasing the integration of the Ghanaian economy in the world economy; the rehabilitation of the physical and social infrastructure; and the removal of impediments to the expansion of private investment. The shift away from controls toward the use of market based incentives was to be

gradual, but prices that remained under control were intended to be managed flexibly and to avoid large distortions.

The main initial measures included a large nominal devaluation of the cedi, the removal of the implicit taxation of exports resulting from the exchange system and the trade regime, an increase in the price received by cocoa producers to levels close to international prices, and an improvement in fiscal revenue collection. Important flows of external aid, soft loans and credit arrangements, supported the program of reforms in Ghana.

Public sector reforms were an integral part of the adjustment program. Fiscal contraction was needed to achieve and sustain a real devaluation. The fiscal deficit was reduced from 6.9 percent of GDP in 1982 to 2 percent in 1989. The deficit has remained at that level since.

The fiscal reform consisted of an initially painful reduction of expenditures and a substantial reduction in public enterprise loses. Revenues from traditional taxes were increased by broadening the tax base and improving tax administration.

The civil service was also reformed: the number of public employees was reduced, real wages for the remaining ones were raised, and the wage scale was decompressed. These reforms permitted the government to keep the good employees who would otherwise have left their jobs. The public sector reforms also included an increase in budgetary allocations for the rehabilitation, maintenance and construction of new economic and social infrastructure.

The reforms of public enterprises notably improved their performance. By early 1991 23 public enterprises had been liquidated and 15 others privatized. The reduction in the fiscal deficit and the restoration of external flows enabled the government to reduce the absorption of resources from the banking system. In 1987 the government started making net payments to the banks.

The rationalization of the tax structure included reductions of income and dividend tax rates, and increases in indirect taxes (on consumption, petroleum and motor

vehicles). The fiscal reforms were directed at improving incentives (specially for investment and savings), and also toward achieving an equitable distribution of the social costs of adjustment, by aiding the most vulnerable economic and social groups such as small farmers, urban unemployed and underemployed, and retrenched public employees.

Credit and monetary policies were designed to reduce inflation and the current account deficit, while at the same time providing financing for the desired growth of production. Credit was made available to the private sector as the government diminished its absorption of resources from the banking system.

Controls on deposits and lending interest rates began to be eliminated in 1988. Quantitative controls on credit were also lifted. Deeper institutional reforms of the banking system were implemented in 1989-1990, including a revision of banking legislation and the improvement in the supervision of banks. These measures, together with restructuring plans for all the financially distressed, commercial and development banks, enhanced the position of the financial institutions. At the same time they created conditions for increasing the efficiency of financial intermediation.

In 1987 an auction system for the treasury bills was implemented, and new financial instruments were introduced. The Bank of Ghana started using market-based instruments for monetary control. These measures led to an expansion of the financial markets. Real interest rates became positive in 1990.

Important reforms were also introduced in the exchange rate system and trade policy. The reforms of the exchange rate system were initiated at the beginningä of the reform program, when a series of large discrete devaluations wa undertaken. The accompanying contractionary fiscal and monetary policies were designed to obtain a large real devaluation.

In 1986 an exchange rate auction system was implemented, to obtain a market-determined value of the official exchange rate. The parallel market was legalized in 1988, with the creation of exchange rate bureaus that could freely trade in foreign exchange for

transactions not allowed in the official market. Then, in 1990, both markets were unified by broadening access to the official market, and the recreation of an inter-bank market.

Reform of trade policies included the elimination of import licenses, reductions in tariffs, and the elimination of restrictions on current account international payments and transfers. The reforms related to the cocoa sector have been far-reaching. Producer prices were raised closer to the world level, price subsidies on inputs were eliminated, and the operating costs of the Ghana Cocoa Board were reduced; on balance these measures increased incentives for cocoa production. However, a sharp drop in the international price of cocoa in 1987-1989 discouraged cocoa in 1987-1989 discouraged cocoa output and exports just when implicit domestic taxes had been reduced.

6.2.3. The Results

In spite of a large worsening of the terms of trade, the Ghanaian economy grew at an average rate of 5 percent during the period 1983-1990, a rate higher than the population growth (2.6 percent). GDP per capita grew for the first time in a decade.

In 1990, agriculture remains the largest sector of the economy, accounting for about 45 per cent of GDP. It is followed by the service sector which accounts for 40 percent of GDP, and has been the most dynamic sector of the economy for the last five years, growing at an average rate of 8.8 percent over 1985-90. Although industry (including mining) generates a small share of GDP (a little over 14%), this sector is relatively diverse and well developed in comparison with other countries in the region. In spite of a major reduction in the anti-export bias of the trade regime, exports are still very concentrated -- cocoa, wood, and gold account for over 75 percent of export earnings.

Important progress has been achieved in reducing inflation: the annual inflation rate been reduced from 142 percent in 1983 to close to 20 percent in 1991. However inflation fluctuations, year to year, have been wide. Real wages rose during the period.

The effects of the program on savings and investment have been less impressive. Although public investment has increased to rebuild infrastructure, the response of private investment has been weak. The higher growth rates were due more to the result of better utilization of the existing capacity, with the assistance of aid flows -- as the severe exchange rate constraint was left behind -- than to an increase in capacity itself. As in most adjustment programs the response of private investment has been slower than envisaged in the program. A possible explanation is the slow buildup of credibility in the program, and its heavy dependence on external financial support. Negative real interest rates until 1990 most likely restricted the response of private saving and even more, did not sufficiently reduce the incentives for capital flight.

Exports and imports both grew at about 10 percent. The improved balance of payments, reinforced by the official transfers and concessional loans, facilitated the elimination of external arrears and contributed to an improvement in the international reserves position.

The diminishing external-debt/GDP ratio since 1987, and the renegotiation of the maturity structure of the external debt, reduced the external debt burden. By 1990 the external-debt-service/exports ratio had fallen to 40 percent, from 70 percent in 1988. Rising aggregate income, the increase in rural incomes, and improvements in the provision of social services made possible progress in the alleviation of poverty during the last years. The Ghanaian PAMSCAD64, which coordinated the activities of anti-poverty agencies, helped ensure that the anti-poverty element of the adjustment program was kept at the forefront of policy concerns.

Economic performance worsened in 1990 as a result of a drought, an increaseä in oil prices, and a sharp drop in the terms of trade (about 26%). The government responded to the decline in the terms of trade by an increase in public sector saving, and

64Programme of Action to Mitigate the Social Costs of Adjustment; see World Bank (1990b).

with a further depreciation of the cedi. The initial increase in the current account deficit was financed with private capital inflows in the form of direct foreign investment, as well as external aid, and external borrowing.

6.3. New Zealand[65]

New Zealand has a population of 3.4 million, and is a member of the OECD. In 1950, per capita income was third highest in the world; in 1990 it was 24th. From another perspective, per capita income in 1950 was 26% above the OECD average, while in 1990 it was 27% below the OECD average. A radical adjustment program was initiated by a newly elected Labor government in 1984. Labor won re-election in 1987, and was defeated in 1990, but the new Conservative government continued the reform program. The reformists lost ground in the election of 1993, and the new government promised to moderate the pace and impact of adjustment.

6.3.1. Causes of the Crisis

The New Zealand economy grew at a satisfactory rate, 4 percent, in the decade to 1973. In that year New Zealand benefitted from the increase in food prices, but was adversely affected by the oil price shock. Britain's entry into the European Community had an even more profound impact on the New Zealand economy, by ending preferential access to its largest market for agricultural exports. New Zealand's terms of trade worsened by 30 percent in the year ending March 1975, and the current account deficit rose to 14 percent of GDP.

The government responded by trying to maintain domestic demand, with agricultural subsidies, and budget deficits. In 1978 it mounted a major public investment program, "Think Big", which led to larger budget deficits and a growing internal and

65On the New Zealand reforms, see Bollard (1992 and 1993), Caygill (1989), Dalziel and Lattimore (1991), and Douglas (1990).

external debt; subsidies were also extended to private sector investments. The budget deficit66, which had averaged 2.3 percent of GDP for the period 1964-73, increased to an average of 6.5 percent for the period 1974-83. The public debt correspondingly increased from 43 percent of GDP in 1975 to 73 percent in 1985, with the external debt in that year amounting to 32 percent of GDP67. Comprehensive wage and price controls were imposed in June 1982 to deal with the double digit inflation that had persisted for the entire previous decade. GDP growth averaged 1.8 percent in the decade to 1984. The registered unemployment rate rose from 0.1 percent in 1974 to 5.7 percent in 198468.

By 1984 there was a widespread perception, compounded by a foreign exchange crisis just before the election, that the economy was in crisis. A new Labor government was elected on a reform platform, committed to change, though "most [voters] were clearer about what they were voting against than what they were voting for"69. The refusal by the outgoing administration to permit a devaluation in the interim between the election and the time the new administration took office heightened the sense of crisis that greeted the incoming administration.

The key economic policy figure in the new government was Roger Douglas, the Minister of Finance. Douglas, who had been a junior minister in the first half of the 1970s, had been rethinking his views and his approach to policy during his time in opposition. By 1984 he had reached a set of conclusions about the needs for macroeconomic stability and low inflation, and the desirability of decontrolling the economy and allowing market forces to work, which were soon to become embodied in policy. He reconciled his radical pro-market views with his membership in a Labor

66This is the budget deficit including asset transactions (from Dalziel and Lattimore, p57). In the source, data are given for fiscal years, which at that time ended in March. They have been shifted to the previous year, to make them coincide better with the calendar.
67The external debt jumped from 24 to 32 percent of GDP between 1984 and 1985.
68Dalziel and Lattimore (p55) report corresponding OECD definition unemployment rates that rise from 3 percent in 1974 to 10.5 percent in 1984.
69Bollard (1993, p24) quoting C. James.

government by arguing that state intervention in markets typically created favored groups and promoted inequality rather than efficiency, and that only a Labor government could do what was essential to restore long-run growth to the economy. On tactics, his views (see Douglas, 1990) were to move as fast as possible, wherever possible, to express no doubts, and to maintain momentum. Douglas initially received strong support from the Prime Minister, and from the appointment of two capable and relatively senior Associate Ministers of Finance.

Douglas and the economic program also received powerful intellectual support from the Treasury, whose views had been evolving during the failures of the previous administration. Treasury economists had developed a set of views, largely on microeconomic issues, and heavily influenced by trends within the economics profession, that contributed to the intellectual coherence of the reform program. For instance, on the issue of public ownership, the new Treasury view emphasized principal-agent problems, and argued that corporatization and privatization were preferable to public ownership. Similarly, they used the theory of contestability to argue for less direct regulation. In general, they wanted to reduce the dominant role of government in the economy and to harness competition wherever possible. They did not pay much attention to the dynamics and potential social costs of policy reform, tending to believe that growth would follow as microeconomic distortions were removed. Similarly, there was very little attention to distributional issues.

6.3.2. The Adjustment Program

Caygill (1989), one of the two Associate Ministers of Finance, describes the New Zealand economic reform strategy as consisting of three main elements: a medium-term approach to economic policy, with the emphasis on consistency and credibility; an orthodox medium-term macroeconomic strategy aimed at reducing the budget deficit and inflation; and the removal of sectoral distortions.

Despite the large budget deficit and the foreign exchange crisis in 1984, the

initial focus of the adjustment program was on the third, the microeconomic, component. Figure 6.3.1, reproduced from Bollard (1993), shows how far the sequencing of reform in New Zealand departed from the conventional prescription of starting with macroeconomic stabilization and leaving financial liberalization for later.

The initial set of reforms were in the financial and foreign exchange markets, in trade liberalization, and deregulation, including in agriculture. Interest rate controls and credit growth guidelines were removed at the outset, as were controls on external investment and borrowing. Foreign exchange controls were lifted in 1984, a 20 percent devaluation was undertaken, and a free float instituted in 1985; an important trade agreement had been reached with Australia in 1983, import licensing was ended in 1984, and tariffs reduced gradually over the period 1986-92. Industrial and labor market deregulation began in earnest in 1984, and continued through 1990. By 1991, the deregulation of the New Zealand economy was almost complete.

Despite the high inflation and large budget and current account deficits, no serious attack on the fiscal problem was made until 1987. Monetary policy was tightened, and the real interest rate increased70, but in the absence of fiscal contraction, and with large capital inflows, the inflation rate responded very little. The absence of macroeconomic stabilization is visible not only in the continuing high budget deficits and inflation, but also in the low unemployment rate that persisted through 1987. The tightening of monetary policy in 1987 ledä to the continuation of very high real interest rates and a major appreciation of the New Zealand dollar. Harberger, in the introduction to Bollard (1992) argues that the failure to attempt fiscal stabilization before 1987 was the major weakness of the New Zealand program.

70Because price controls were in effect in 1983 and 1984, we should assume that the real interest rate was less than the interest rate minus the official inflation rate.

Corporatization and privatization of government companies began on a major scale in 1987, leading to a budget surplus including privatization receipts that reached nearly 4 percent of GDP in 1990. Tax reforms to produce a neutral tax system began in 1986, with the extension of the goods and services tax to virtually all final domestic consumption, and with income tax rates being reduced and the structure simplified. More radical reforms of government services were introduced starting in 1991, with reform of the state pension and health systems on the agenda.

A major change in monetary policy was introduced in the Reserve Bank Act of 1989. Under the new law, the government reaches an agreement with the Governor of the Bank on a target path for inflation, the achievement of which is then the Governor's responsibility. If he fails, he can be dismissed. An automatic allowance is made for terms of trade changes. This innovation is important for at least four reasons: first, the policy criterion is unambiguous -- the central bank has no discretion to trade off output for inflation; second, the targets can be varied by an agreement between the government and the central bank, so that some flexibility is maintained; third, this is a monetary policy rule, but it is specified in terms of the target outcome, with the means of and responsibility for achieving the target left to the central bank -- this is not a monetary rule which seeks to solve the technical problem of how best to achieve a given inflation rate; and fourth, the adjustment for terms of trade changes recognizes that supply shocks should be allowed for in setting monetary policy. After achieving the initial target path, the Governor has recently been reappointed.

6.3.3. The Results

The results of the New Zealand adjustment program have been mixed. The adjustment period was extremely long. Real GDP was essentially unchanged between 1984 and 1992. Three percent growth returned in 1993, and is predicted for the next two years as well. Thus it took eight years of adjustment before a period of sustained growth started.

A major reason for the slow adjustment is the delay in attempting fiscal stabilization. The microeconomic reforms introduced beginning in 1984 did not have a major effect on growth or unemployment, but in the presence of continuing inflation and large budget deficits did not produce much of a supply response. Monetary and fiscal tightening took place only in 1987, real interest rates increased, and the currency appreciated. The unemployment rate then began to rise, and growth stayed low as inflation was wrung out of the system. The real appreciation three years after the start of the adjustment program meant that export growth, often the first evidence of supply response, stayed low until 1991.

The reformers argue that the early reforms, particularly the floating of the exchange rate, helped establish their credibility. It seems likely that they would have been even more credible had they attacked the budget deficit and inflation at the beginning. Further, the prolonged slow growth that resulted from the New Zealand sequencing meant that the public saw very little benefit from reform for almost a decade. More resolute early adjustment would have brought a greater initial output decline, but a more rapid return to growth -- albeit from a lower level of income.

Despite the program's goal of reducing the role of government in the economy, social sector spending continued to grow during the 1980s[71]. This increase in part reflects a disagreement between the Prime Minister and the Finance Minister over the social consequences of adjustment. A Royal Commission on Social Policy that reported in 1988, criticized the reform program for ignoring the equity-efficiency tradeoff, and the government's failure to compensate losers from the reforms. Bollard (1993) notes that there was a shift of income from the lower to upper quintiles during the adjustment period, but notes also that a similar change was taking place in other countries not pursuing an adjustment program. In any case, the Prime Minister rejected the Finance Minister's proposal for a flat rate income tax, and Douglas later resigned.

71See Bollard (1992, p31).

Inflation came down very rapidly after 1990. It is natural to give the credit for this change to the new monetary policy, though it should also be noted that Australia achieved a similar reduction in inflation without changing its monetary rule[72]. Expectations of inflation in New Zealand are however lower than those in Australia.

After nine years of persistent reform, the New Zealand economy has been transformed. The economy is deregulated, there has been extensive privatization, the budget deficit is declining, inflation is minimal. However, the 1993 election results reflected adjustment fatigue, and the pace of reform is now likely to slow and some of the reforms may even be reversed. Ironically, sustained growth appears to be returning just as the public has tired of the changes that made it possible.

7. CONCLUDING COMMENTS

Structural adjustment touches on virtually every aspect of the economy, microeconomic and macroeconomic. Correspondingly, the analysis of adjustment has to draw on a wide range of economic analysis and the full range of any economist's skills. The topic is so all-inclusive that no single model can be used to analyze adjustment. Rather different aspects have to be dealt with by using different models. The microeconomics of distortions and regulation, open economy macroeconomics, the macroeconomics of stabilization, static and dynamic trade theory, models of financial repression and reform, and political economy models are the main tools used in analyzing structural adjustment.

The absence of agreed-upon analytic or econometric models to analyze some of the basic problems of adjustment is striking. For instance, the analysis of sequencing problems is still underdeveloped. The important issue of the distributional impact of adjustment has received attention in computable general equilibrium models (see for

72The New Zealand experience is compared with those of Australia and Canada in an MIT thesis by Guy Debelle (1994).

instance Bourguignon and Morrisson, 1992), but it is fair to say that this work has not yet had a wide impact.

It is also striking how few empirical generalizations are yet widely accepted. In part this is because of the difficulty of constructing counterfactuals, a problem that lies at the heart of the econometric issues discussed in Section 4 of this chapter. In part it reflects the very broad and imprecise questions often asked in the analysis of adjustment, e.g. should the financial sector be deregulated before the trade sector. Almost surely the answer is "it depends", but we do not as yet have sufficient evidence or analytics to know precisely on what it depends. One thing we do know is that it depends also on political factors (see for instance Krueger, 1993). That of course adds both interest and complexity to the analysis of adjustment.

Of course, the inadequacies that remain in the analysis of adjustment policies are not particular to adjustment, but the same as those that apply in almost every applied area in economics. And they have their good side: they provide the basic challenge for future research in this area.

TABLE 2.1: EXTERNAL SHOCKS TO ADJUSTING COUNTRIES
(percent of GDP)

Country group	Magnitude of shock	
	1981-85/1971-80	1986-90/1971-80
Intensive adjustment lending (IAL)	-5.0	-4.9
Other adjustment lending (OAL)	2.9	-4.4
No adjustment lending (NAL)	-3.5	-2.0

Source: World Bank(1992), Table A.2, p.27.

Note: Intensive adjusters are the 27 countries that received at least two structural adjustment loans or three adjustment loans (i.e. including sectoral adjustment loans) by June 1990, with the first effective before June 1986; there are 30 other adjustment lending countries, and 20 countries that did not receive adjustment loans. Although 75 countries received adjustment loans, data for statistical analysis are available only for 57. The external shock is the sum of the interest rate and the terms of trade shock. Both shocks are measured with respect to the base period.

TABLE 2.2: POLICY INDICATORS, ADJUSTING COUNTRIES

	Trade deficit, % of GDP				Fiscal deficit, % of GDP				Inflation rate, % p.a.*			
Group	71-80	81-82	83-85	86-90	71-80	81-82	83-85	86-90	71-80	81-82	83-85	86-90
IAL	5.7	8.0	4.0	3.4	5.9	8.4	6.4	6.2	15	15	20	17
OAL	6.1	8.7	4.7	4.3	4.9	6.4	7.3	8.0	11	13	10	11
NAL	5.5	10.9	6.1	4.4	4.4	7.5	6.5	6.3	11	10	10	16

Source: World Bank (1992), Tables A.2 and A.5.
*Median.

TABLE 2.3: SEQUENCE OF LOANS

	First loan		Second loan		Third loan		Fifth loan*	
Fund	SAL	SECAL	SAL	SECAL	SAL	SECAL	SAL	SECAL
60	7	8	40	33	31	23	5	14

Source: Based on World Bank (1992), Table A.1.5. See footnote 10 for details.
* Excluding Venezuelan debt reduction loan.

TABLE 2.4. LOAN-AGREEMENT CONDITIONS*

		1979-85	Fiscal 1980-88	Fiscal 1989-91
I.	**Supply side**			
	Trade policies	58	57	50
	Sectoral			
	Industry	22	21	15
	Energy	15	15	16
	Agriculture	45	45	31
	Financial sector	31	32	32
	Rationalization of govt.finance & admin.	51	57	82
	Public enterprise reforms	44	44	56
	Social sector	11	13	24
II.	**Absorption reduction**			
	Fiscal policy	51	49	60
	Monetary policy	16	13	20
III.	**Switching policies**			
	Exchange rate	16	14	13
	Wage policy	13	13	18

Source: Based on World Bank (1990), Table 4.2, and World Bank (1992), Table A2.2

* Percent of loans with conditions in these areas. The loan agreement conditions are in percentage terms. Typically each loan contains many conditions so the row column sums exceed 100%.

TABLE 2.5: VOLUME AND SHARE OF ADJUSTMENT LENDING

	1980-82	1983-85	1986-88	1989	1990	1991
Commitments ($ bill)*	0.8	2.2	4.5	6.1	6.9	7.0
Disbursements (S bill)						
Gross	0.8	1.5	3.6	3.9	6.6	6.2
Net	0.8	1.5	3.0	3.1	5.6	3.6
AL/total loans isbursed (%)	0.9	2.2	5.4	5.9	10.0	8.7
AL/total official disbursements	2.9	5.5	10.1	10.3	16.3	12.4
AL net/official net disbursements	3.9	8.5	17.7	20.8	30.2	-

Source: World Bank(1992), Tables A1.1 and A1.4.

* At average annual rates

FIGURE 3.1.: STRUCTURAL ADJUSTMENT IN THE DEPENDENT ECONOMY MODEL

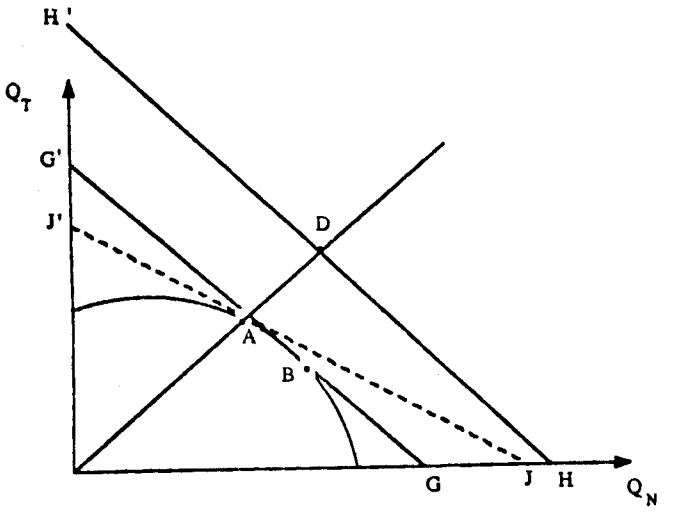


FIGURE 3.2.: EQUILIBRIUM IN THE DEPENDENT ECONOMY MODEL

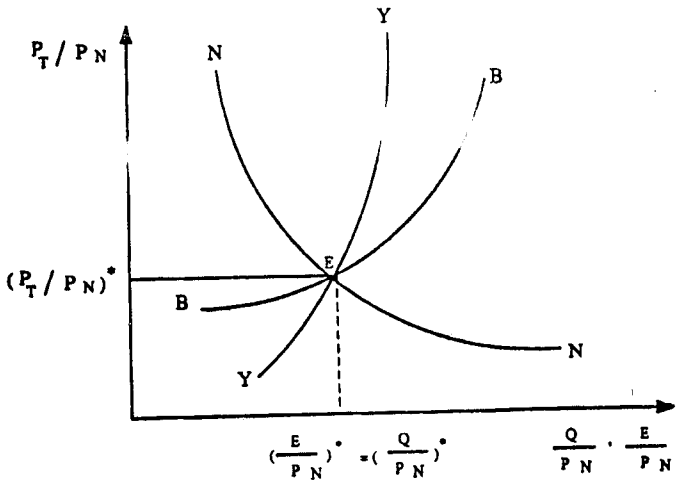


FIGURE 3.3.: THE CONSEQUENCE OF A DECREASE IN LEVEL OF REAL EXPENDITURES

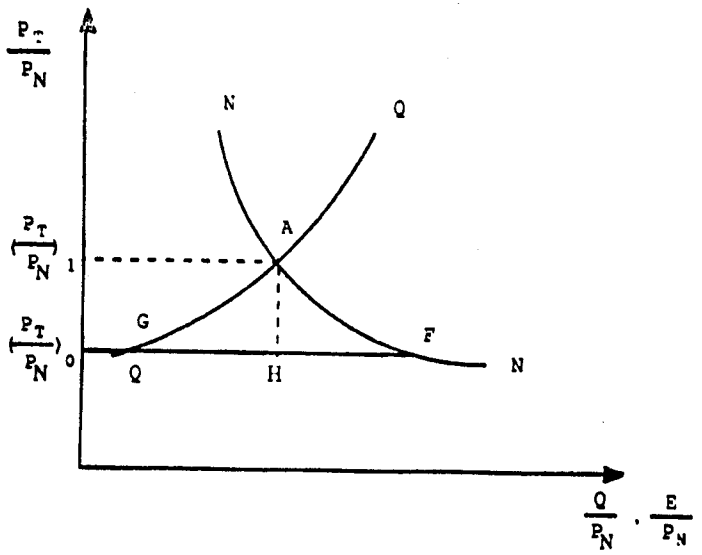


TABLE 6.1.1: CHILE: ANNUAL FINANCIAL INDICATORS, 1969 - 1993

	Trade Balance Surplus (in US$*) (1)	Total net cap. inflow except reserves (in US$*) (2)	Net Foreign Reserves Central Bank (in US$*) (3)	Net Foreign Reserves Banking system (in US$*) (4)	Rate of change in nom. M1A (5)	Short term Real interest rate (peso loans) (6)
1969	246,5	222,5	285,2	10,7	40.5%	N.A.
1970	155,9	267,5	393,5	16,0	51.9%	N.A.
1971	-16,3	-26,5	162,7	-42,9	100.0%	N.A.
1972	-253,4	327,4	75,8	-149,8	99.5%	N.A.
1973	-138,3	397,0	167,4	-235,3	271.6%	N.A.
1974	135,0	139,0	94,0	-221,3	291.6%	N.A.
1975	-118,3	373,0	-129,2	-162,4	257.2%	15,9
1976	460,6	66,0	107,9	-131,6	231.8%	64,2
1977	-231,8	577,0	273,3	-254,1	161.0%	57,1
1978	-728,6	1946,0	1058,0	-373,6	86.6%	42,3
1979	-873,0	2247,0	2313,8	-386,6	67.1%	16,9
1980	-1055,0	3165,0	4073,7	-832,7	60.1%	12,2
1981	-2869,0	4698,0	3775,3	-1107,0	33.4%	38,9
1982	-388,2	1215,0	2577,5	-1175,4	-5.7%	5,1
1983	659,7	508,0	2022,7	-721,9	16.8%	15,9
1984	-3,2	1940,0	2055,9	-54,5	18.8%	11,3
1985	816,3	1384,0	1866,7	-252,0	21.0%	11,1
1986	1308,0	741,0	1778,3	-390,1	39.4%	7,6
1987	1308,6	944,0	1871,1	-637,7	28.1%	9,4
1988	1760,0	1009,0	2549,9	-894,1	40.2%	7,4
1989	1578,1	1264,0	2948,1	-1268,0	24.4%	11,8
1990	1273,1	3048,7	5357,5	-1243,2	14.4%	16,4
1991	1575,9	829,2	6640,5	-996,0	41.1%	8,3
1992	749,2	2882,8	9009,2	-2535,7	36.9%	9,9
1993	-978,6	2763,6	9758,6	-2538,9	13.0%	0,4

* in millions of US$

Column sources:

(1) Social and Economic Indicators 1960-1988 (SEI), Central Bank, FOB value since 1973. Since 1989 Monthly Bulletin of the Central Bank.

(2) Up to 1973, SEI, Central Bank. Since 1974 until 1976, Corbo(1985b). Thereafter Monthly Bulletin, Central Bank.

(3) and (4) SEI, Central Bank. Since 1983 does not include assets and liabilities from liquidated banks.

(5) SEI and Monthly Bulletin, Central Bank (Dec to Dec).

(6) SEI and Monthly Bulletin. This corresponds to the cumulated ex-post monthly real interest rates charged for short term loans.

TABLE 6.1.2: CHILE: ANNUAL MACROECONOMIC INDICATORS
1969 - 1993

	Total GDP real growth (%) (1)	GDP growth T Sectors (2)	GDP growth NT Sectors (3)	Public sector Deficit (% of GDP) (4)	Price of Copper (USc/ /pound (5)	Inflation (% change in CPI, annual base) (6)	Unem-ployment rate (% of Labor Force) (7)	Real Exchange Rate 1977= 100 (8)
1969	3,7	-0,8	6,6	0,4	66,6	30,7%	5,5	93,5
1970	2,1	1,4	2,9	2,7	64,2	32,5%	5,7	93,4
1971	9,0	9,2	8,8	10,7	49,3	22,1%	3,9	85,6
1972	-1,2	-0,8	-1,1	13,0	48,6	117,9%	3,3	64,7
1973	-5,6	-7,3	-3,7	24,7	80,8	487,5%	5,0	74,4
1974	1,0	6,6	-0,4	3,5	93,3	497,8%	9,5	122,7
1975	-12,9	-16,6	-8,4	0,9	55,9	379,2%	14,8	147,1
1976	3,5	5,3	1,6	-0,6	63,6	234,5%	15,0	124,1
1977	9,9	7,8	9,4	-0,1	59,3	113,8%	13,1	100,0
1978	8,2	4,5	9,6	-1,5	61,9	50,0%	13,9	111,4
1979	8,3	7,0	10,0	-3,3	89,8	36,6%	13,9	112,2
1980	7,8	5,5	10,0	-4,5	99,2	35,1%	12,2	97,2
1981	5,5	3,8	5,4	-0,8	78,9	19,7%	11,3	84,5
1982	-14,1	-11,2	-15,7	3,5	67,1	9,9%	18,5	94,2
1983	-0,7	0,5	-1,4	3,2	72,2	27,3%	19,8	113,1
1984	6,3	8,0	5,3	4,3	62,4	19,9%	16,3	118,2
1985	2,4	2,5	2,4	2,5	64,3	30,7%	13,8	145,2
1986	5,7	6,7	5,0	2,1	62,3	19,5%	10,8	159,7
1987	5,7	3,7	7,0	0,2	81,1	19,9%	10,5	166,6
1988	7,4	7,0	7,6	-0,2	117,9	14,7%	6,3	177,6
1989	10,0	8,4	11,0	-1,0	129,1	17,0%	5,3	173,5
1990	2,1	0,7	3,0	-1,1	120,9	26,0%	5,7	180,1
1991	6,0	4,4	6,9	-1,6	106,1	21,8%	5,3	169,9
1992	10,3	7,1	12,0	-2,9	103,6	15,4%	4,4	156,7
1993	6,0	2,3	7,9	-1,9	86,7	12,7%	4,5	

Column sources:
(1) and (5), SEI up to 1988, Monthly Bulletin Central Bank of Chile thereafter..
(2) SEI. It includes: Agriculture, Fishing, Mining and Industry.
(3) SEI. It includes: Electricity, Gas and Water, Construction, Trade, Transportation and Communications, Other Services. The sum of tradable and non-tradable GDP growth does not add up to the total GDP growth as it excludes Import Taxes and Bank Charges.
(4) Corbo and Fischer (1994) for the period 1969-1988, thereafter Government Budget Office. It excludes amortizations.
(6) Schmidt-Hebbel and Marshall, quoted in Corbo (1985a) and actualized with Boletín Mensual, Central Bank.
(7) Coeymans (1992) up to 1987 and Monthly Bulletin of the Central Bank thereafter. It corresponds to the last quarter of the year..
(8) Corbo and Fischer(1994).

TABLE 6.1.3.: EXTERNAL SHOCKS

Year	Total External Effect TXE	Term of Trade Effect TTE	Real Interest Rate Effect RIRE	Price of Exports PX	Price of Imports PM	Average Real Interest Rate of Foreign Debt RIR	Foreign Debt to GDP Ratio FD/GDP	Exports to GDP Ratio X/GDP	Imports to GDP Ratio M/GDP
77-79	0.00%	0.00%	0.00%	1.0000	1.0000	-0.0018	0.4104	0.2149	0.2415
1980	1.20%	1.04%	0.16%	1.1049	1.0501	-0.056	0.4020	0.2282	0.2698
1981	-0.52%	-0.55%	0.03%	0.9424	0.9715	-0.0026	0.4761	0.1642	0.2675
1982	-3.80%	-1.87%	-1.92%	0.7437	0.8495	0.0451	0.7047	0.1936	0.2125
1983	-3.37%	-0.88%	-2.49%	0.7175	0.7849	0.0590	0.8816	0.2404	0.2132

- (PMt/PMo - 1) *($(M/GDP)_0$

$RIRE = -(RIR_t - RIR_0) * (FD/GDP)_0$

where the period 0 is the average 1977 - 1979.

TABLE 6.2.1: MACROECONOMIC INDICATORS: GHANA
1978 - 1990

Item	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
ConstantPrices(%)													
Gross Domestic Product m.p.	9.8	-1.7	0.6	-2.9	-6.5	-4.5	8.7	4.5	5.0	4.4	5.9	5.6	
Total Consumption	14.0	-3.4	3.5	-3.1	-10.1	-0.6	8.2	4.3	3.4	5.1	6.1	7.4	
Shares of GDP in Current Prices (%)													
Resource Balance (BOP)	-2.1	0.1	0.8	-9.9	-2.5	-3.9	-2.0	-3.7	-2.2	-5.7	-5.2	8.3	
Net Current Transfer	-0.1	0.0	-0.1	-0.1	0.0	0.0	0.5	0.7	1.3	4.0	3.3	4.3	
Current Account Balance (a)	-3.0	1.0	-1.2	-12.0	-4.8	-6.1	-4.1	-5.4	-2.9	-4.3	-4.4	6.5	
Exports of GNFS(NA)	8.4	11.2	8.5	4.8	3.3	6.1	7.4	9.6	19.2	20.6	18.6	20.6	
Imports of GNFS(NA)	9.7	11.2	9.2	5.3	3.0	9.3	7.7	11.7	22.5	23.6	24.5	28.4	
Private Consumption	84.7	83.1	83.9	87.2	89.8	90.8	86.0	83.1	82.6	81.6	84.3	83.3	84.9
General Government Consumption	11.3	10.3	11.1	8.8	6.5	8.6	7.4	9.3	11.2	10.6	9.4	9.8	8.9
Gross Domestic Investment	5.4	6.5	5.6	4.6	3.4	3.7	7.0	9.6	9.6	10.9	12.3	13.7	
Gross Domestic Savings	4.0	6.6	4.9	4.0	3.7	0.6	6.6	7.6	6.3	7.9	6.4		
Gross National Savings	3.8	6.2	4.5	3.7	3.5	-0.3	5.4	6.4	5.1	9.3	7.1		
Fiscal Deficit(-)/Surplus (b)	-9.0	-6.4	-4.2	-6.5	-5.6	-2.7	-1.8	-2.2	0.1	0.5	0.4	0.7	0.2
Debt Burden Ratios													
Total External Debt/Exports	127.2	107.2	108.3	175.6	195.5	334.4	307.9	321.4	323.7	345.5	312.3		
Total External Debt/GNP	34.7	31.1	29.6	34.6	34.6	39.4	42.9	48.3	46.3	61.7	59.3		
Interests/Exports	2.4	3.0	4.3	7.7	8.8	13.1	11.1	13.0	13.5	13.0	12.1		
Interest/GDP	0.7	0.9	1.2	1.5	1.6	1.5	1.5	2.0	1.9	2.3	2.3	1.3	
(% change)													
Consumer prices	73.1	54.4	50.1	116.5	22.3	122.9	39.7	10.3	24.6	39.8	31.4	25.2	37.2
Net Domestic Credit	67.7	17.7	28.2	63.1	21.6	72.2	50.2	59.7	53.1	72.4	-4.8	24.3	
Money plus Quasi-Money	68.6	14.7	33.8	51.3	23.3	40.2	53.6	46.2	47.9	53.3	46.3	54.7	
Indices(1980=100)													
Real Money	149.6	108.0	100.0	69.9	70.5	44.4	48.8	64.7	76.8	84.2	93.8		
Terms of Trade	--	--	100.0	--	--	--	50.6	48.0	54.9	40.5	38.9	--	--
Real Effective Exchange Rate (decreases indicate depreciation)	96.7	--	100.0	222.4	278.1	186.9	72.1	52.4	30.2	23.3	22.4	--	--

Sources: World Bank and IMP publications.

(a) Before net official transfers.

(b) Including grants.

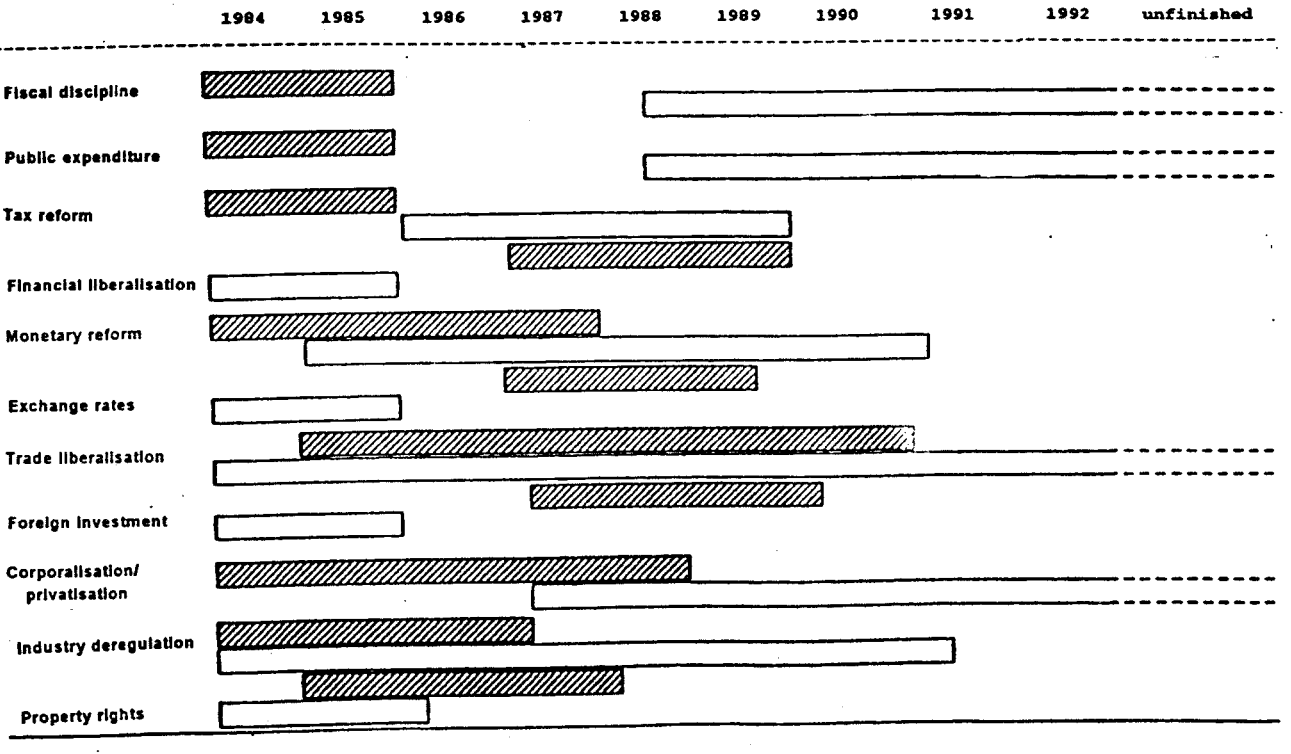
TABLE 6.3.1 ECONOMIC PERFORMANCE, NEW ZEALAND, 1983-1993

	Real GDP growth (% p.a)	CPI inflation (% p.a)	Unemployment rate (%)	Budget def/ GDP (%) (a)	(b)	Curr.a/c /GDP (%)	Real eff. exchange rate	Short-term int.rate (% p.a)
1983	1.0	7.3*	5.3	6.9	5.4	-4.4	105.7	13.1
1984	8.6	6.2*	4.5	9.0	7.0	-8.7	98.3	15.0
1985	1.2	15.4	3.5	7.2	6.4	-7.3	100.0	23.3
1986	0.6	13.2	4.0	4.2	3.2	-6.3	101.1	19.1
1987	-2.2	15.8	4.1	3.6	3.8	-5.4	116.8	21.1
1988	3.0	6.4	5.6	-0.8	2.1	-1.4	124.5	15.4
1989	-0.7	5.7	7.2	-2.7	1.8	-3.5	118.1	13.5
1990	0.5	6.1	7.9	-3.8	0.4	-2.9	114.7	13.9
1991	-1.8	2.6	10.3		3.6	-1.3	109.4	10.0
1992	0.5	1.0	10.3		3.5	-1.9	98.8	6.7
1993	3.0	1.4	9.8		2.3	-1.7	99.9	6.3

* Wage and price controls were in effect in 1983 and 1984.

Sources: Unless otherwise noted, OECD Economic Outlook, various issues. Budget deficits from Dalziel and Lattimore (1991); (a) includes asset transactions, (b) excludes them. Column (b) data for 1991-93 are from OECD Economic Outlook. Real effective exchange rate from IMF; increase represents appreciation.

Figure 6.3.1: PHASING OF REFORMS



Key: Actual reform path followed in New Zealand

Approximate recommended path for "big bang" type reform. This is a conceptual timetable only, derived from the generalised proposal for speedy reform in H Genberg, On The Sequencing of Reforms in Eastern Europe, Working Paper 91/13, IMF, 1991.

BIBLIOGRAPHY

Ahmad, Sultan (1994). "Improving Inter-Spatial and Inter-Temporal Comparability of National Accounts," Journal of Development Economics.

Alesina, Alberto and Allan Drazen (1991). "Why Are Stabilizations Delayed?", American Economic Review, 81, 5 (Dec), 1170-1188.

Amsden, Alice (1989). Asia's Next Giant. New York: Oxford University Press.

Bailey, Martin (1956). "The Welfare Cost of Inflationary Finance", Journal of Political Economy, 64, 2 (April), 93-110.

Balassa, Bela and associates (1982). Development Strategies in Semi-Industrial Economies. Baltimore: Johns Hopkins.

Bhagwati, Jagdish (1978). Foreign Trade Regimes and Economic Development: Anatomy and Consequences of Exchange Control Regimes. Cambridge, MA: Ballinger.

Blanchard, Olivier, Jean-Claude Chouraqui, Robert P. Hagemann and Nicola Sartor (1990). "The Sustainability of Fiscal Policy: New Answers to an Old Question", OECD Economic Studies, No 15 (Autumn), 7-36.

Bollard, Alan (1992). "New Zealand, 1984-1991", International Center for Economic Growth, San Francisco.

------ (1993). "The Political Economy of Liberalisation in New Zealand", NZ Institute of Economic Research (Inc), Wellington, NZ.

Bourguignon, Francois and Christian Morrisson (1992). Adjustment and Equity in Developing Countries: A New Approach. Paris: OECD.

Bruno, Michael (1991). "High Inflation and the Nominal Anchors of an Open Economy", Princeton Essays in International Finance.

------ and Stanley Fischer (1986). "The Inflationary Process: Shocks and Accommodation", in Y. Ben-Porath (ed), The Israeli Economy: Maturing Through Crisis. Cambridge, MA: Harvard University Press.

Bryant, Ralph, D. Henderson, G. Holtham, P. Hooper and S. Symansky (eds), (1988). Empirical Macroeconomics for Interdependent Economies. Washington, DC: Brookings Institution.

------, P. Hooper, C. Mann and R. Tryon (eds), (1993). Evaluating Policy Regimes: New Research in Empirical Macroeconomics. Washington, DC: Brookings Institution.

Buiter, Willem (1990). "Some Thoughts on the Role of Fiscal Policy in Stabilization and Structural Adjustment in Developing Countries", Chapter 14 in W.M. Buiter, Principles of Budgetary and Financial Policy. Cambridge, MA: MIT Press.

Caballero, Ricardo and Vittorio Corbo (1986). "Explicando la Balanza Comercial: Un Enfoque de Equilibrio General", Cuadernos de Economia (Dec).

Cagan, Phillip (1956). "The Monetary Dynamics of Hyperinflation", in Milton Friedman (ed), Studies in the Quantity Theory of Money. Chicago: University of Chicago Press.

Calvo, Guillermo and Carlos Vegh (1991). "Exchange-Rate Based Stabilization: The Dynamics of Non-Credible Policy", mimeo, IMF, Research Department.

Caygill, David (1989). "Economic Restructuring in New Zealand Since 1984", Per Jacobsson Lecture (IMF Press).

Chamie, Joseph (1994). "Population Databases in Development Analysis," Journal of Development Economics.

Coeymans, Juan Eduardo (1992). "Productividad, Salarios y Empleo en La Economía Chilena: Un Enfoque de Oferta Agregada," Cuadernos de Economía (Agosto).

Collins, Susan (1990). "Lessons from Korean Economic Growth", American Economic Review, 80, 2 (May), 104-107.

------ and W.A. Park (1989). "External Debt and Macroeconomic Performance in South Korea" in J.D. Sachs and S.M. Collins (eds) Developing Country Debt and Economic Performance, Vol 3. Chicago, Ill.: University of Chicago Press.

Conway, P. (1990). "How Successful is World Bank Lending for Structural Adjustment? ", mimeo, University of North Carolina.

Corbo, Vittorio (1985a). "Reforms and Macroeconomic Adjustment in Chile During 1974-84" World Development, 13 (8), 893-916.

------ (1985b). "International Prices, Wages and Inflation in an Open Economy: a model for Chile", Review of Economics and Statistics 67 (Nov), 564-573.

------ (1990), "Public Finance, Trade and Development: The Chilean Experience", in V. Tanzi (ed), Public Finance and Development. Washington, DC: IMF.

------ (1993). "Economic Reforms in Chile: An Overview", Documento de Trabajo #160, Instituto de Economia, Pontifica Universidad Catolica de Chile.

------ and Jaime de Melo (1987). "Lessons from the Southern Cone Policy Reforms", World Bank Research Observer, 2, 2 (July), 111-142.

------ and Jaime de Melo (1989). "External Shocks and Policy Reforms in the Southern Cone: A Reassessment", in G. Calvo et. al. (ed), Debt, Stabilization and Development. London: Blackwell.

------ and Stanley Fischer (1992). "World Bank Supported Adjustment Programs: Rationale and Main Results", in Corbo, Fischer and Webb, loc cit.

------ and Stanley Fischer (1994). "Lessons from the Chilean Stabilization and Recovery", in B. Bosworth et al (eds), The Chilean Economy: Policy Lessons and Challenges. Washington, DC: Brookings Institution.

------ and Patricio Rojas (1992). "World Bank Supported Adjustment Programs: Country Performance and Effectiveness", in Corbo, Fischer and Webb, loc cit.

------ and Patricio Rojas (1993). "Investment, Macroeconomic Stability and Growth: The Latin American Experience". Analisis Economico, 8, 1 (June), 19-35.

------ and Klaus Schmidt-Hebbel (1992). "Public Policies and Saving in Developing Countries", Journal of Development Economics, 36, 89-115.

------ and Andres Solimano (1991). "Chile's Experience with Stabilization Revisited" in M. Bruno et. al. (eds) Lessons of Economic Stabilization and Its Aftermath. Cambridge, MA: MIT Press.

------ and S. M. Suh (1992). Structural Adjustment in a Newly Industrialized Country: Lessons from Korea. Baltimore, MD: Johns Hopkins University Press.

------ Stanley Fischer, and Steven Webb (eds), (1992). Adjustment Lending Revisited: Policies to Restore Growth. Washington, DC: World Bank.

Corden, W.Max (1960). "The Geometric Representation of Policies to Attain Internal and

External Balance", Review of Economic Studies, 28, 1-22.
------ (1989). "Macroeconomic Adjustment in Developing Countries", World Bank Research Observer, 4 (1),
Cornia, G.A., Richard Jolly, and Frances Stewart (1987). Adjustment with a Human Face, Vol I, Protecting the Vulnerable and Promoting Growth. New York: Oxford University Press.
Dalziel, Paul and Ralph Lattimore (1991). A Briefing on the New Zealand Macroeconomy 1960-1990. Auckland, NZ: Oxford University Press.
De la Cuadra, Sergio and Salvador Valdés (1991). " Bank Structure in Chile" in G. Kaufman (ed) Banking Structures in Major Countries. Amsterdam: Kluwer Academic Publishers.
de Melo, Jaime and Sherman Robinson (1989). "Productivity and Externalities: Models of Export-Led Growth", manuscript, World Bank.
Devarajan, Shanta and Jaime de Melo (1987). "Adjustment with a Fixed Exchange Rate: Cameroon, Cote d'Ivoire, and Senegal", World Bank Economic Review, 1, 3 (May), 447-487.
Dollar, David (1992). "Outward-Oriented Developing Economies Really Do Grow More Rapidly: Evidence from 95 LDCs, 1976-85", Economic Development and Cultural Change, 40, 3, (April), 523-544.
Dornbusch, Rudiger (1980). "Home Goods and Traded Goods: The Dependent Economy Model", Chapter 6 in Open Economy Macroeconomics. New York, NY: Basic Books.
------ (1985). "Policy and Performance Links between LDC Debtors and Industrial Nations", Brookings Papers on Economic Activity, 2, 303-368.
------ (1990). "Policies to Move from Stabilization to Growth", World Bank Annual Conference on Development Economics, 19-48.
------ (1992). "The Case for Trade Liberalization in Developing Countries", Journal of Economic Perspectives, 6, 1 (Winter), 69-86.
------ and Sebastian Edwards (eds), (1992). The Macroeconomics of Populism in Latin America. Chicago, IL: University of Chicago Press.
------ and Stanley Fischer (1993). "Moderate Inflation", World Bank Economic Review, 7, 1 (Jan), 1-44.
Douglas, Roger (1990). "The Politics of Successful Structural Reform", Policy, 6, 1 (Autumn), 2-6.
Dunovan, D. (1981). "Real Responses Associated with Exchange Rate Action in Selected Upper Credit Tranche Stabilization Programs," IMF Staff Papers, 28, 698-727.
------- (1982). "Macroeconomic Performance and Adjustment under Fund-Supported Programs: The Experience of the Seventies", IMF Staff Papers, 29, 171-203.
Easterly, William and Deborah L. Wetzel (1989). "Policy Determinants of Growth: Survey of Theory and Evidence", World Bank PPR Working Paper #343.
Edwards, Sebastian (1986). "Monetarism in Chile, 1973-1983: Analytical issues and Economic Puzzles", in Economic Development and Cultural Change, 34, (April), 535-559.
------ (1989a). "The International Monetary Fund and The Developing Countries: A Critical Evaluation", Carnegie-Rochester Conference Series On Public Policy,

Vol 31, Autumn, 7-68.
------ (1989b). "On the Sequencing of Structural Reforms", NBER Working Paper No. 3138 (Oct).
------ (1993a). "Exchange Rates, Inflation and Disinflation: Latin American Experiences", NBER Working Paper No. 4320 (April).
------ (1993b). "Openness, Trade Liberalization, and Growth in Developing Countries", Journal of Economic Literature, 31, 3 (Sept), 1358-1393.
------ and Alejandra C. Edwards, (1987). Monetarism and Liberalization. The Chilean Experience. Cambridge, MA: Ballinger.
------ and Guido Tabellini (1991). "Explaining Fiscal Policy and Inflation in Developing Countries", Journal of International Money and Finance, 10, 5 (March supplement), S49-72.
------ and Sweder van Wijnbergen (1989). "Disequilibrium and Structural Adjustment", in H.B. Chenery and T.N. Srinivasan (eds), Handbook of Development Economics, Vol.II. New York: North-Holland.
Fernandez, Raquel and Dani Rodrik (1991). "Resistance to Reform: Status Quo Bias in the Presence of Individual-Specific Uncertainty", American Economic Review, 81, 5 (Dec), 1146-1155.
Fischer, Stanley (1986). "Exchange Rate versus Money Targets in Disinflation", in S. Fischer, Indexing, Inflation and Economic Policy. Cambridge, Mass: MIT Press.
------ (1987). "Issues in Medium-Term Macroeconomic Adjustment", World Bank Research Observer, 1,2 (July), 163-182.
------ (1988). "Real Balances, the Exchange Rate and Indexation: Real Variables in Disinflation", Quarterly Journal of Economics, 103, 1 (Feb), 27-50.
------ (1991). "Growth, Macroeconomics, and Development", in O.J. Blanchard and S. Fischer (eds), NBER Macroeconomics Annual.
Frank, C. et.al. (1975). Foreign Trade Regimes and Economic Development: South Korea. New York: Columbia University Press.
Frenkel, Jacob A. (1983). "Remarks on the Southern Cone", IMF Staff Papers, 30, 1 (March), 164-173.
Gelb, Alan (1989). "A Cross-Section Analysis of Financial Policies, Efficiency and Growth", manuscript, World Bank.
Giovannini, Alberto (1985). "Saving and the Real Interest Rate in LDCs", Journal of Development Economics (Aug).
Goldstein, Morris (1989). "'The International Monetary Fund and The Developing Countries: A Critical Evaluation', A Comment", Carnegie-Rochester Conference Series On Public Policy, Vol 31, Autumn, 69-76.
------- and Peter Montiel (1986). "Evaluating Fund Stabilization Programs with Multicountry Data: Some Methodological Pitfalls," IMF Staff Papers, 33, 2, 31-44.
Guitian, Manuel (1981). Fund Conditionality: Evolution of Principles and Practices. IMF Pamphlet Series no. 38, Washington, D.C.
Haberler, Gottfried (1959). "International Trade and Economic Development", reprinted in G. Haberler International Trade and Economic Development. San Francisco,

CA: ICS Press, 1988.
Haggard, Stephan and Robert Kaufman (eds), (1992). The Politics of Economic Adjustment. Princeton, NJ: Princeton University Press.
------ and Steven B. Webb (1993). "What Do We Know about the Political Economy of Economic Policy Reform?", World Bank Research Observer, 8, 2 (July), 143-168.
------ and Steven B. Webb (1994). Voting for Reform: The Politics of Adjustment in New Democracies. New York: Oxford University Press.
Hamilton, James D. and Marjorie A. Flavin (1986). "On the Limitations of Government Borrowing: A Framework for Empirical Testing", American Economic Review, 76, 4 (Sept), 808-819.
Haque, Nadeem U., Peter J. Montiel, and Steven Symansky (1991). "A Forward-Looking Macroeconomic Simulation Model for a Developing Country", in Mohsin S. Khan, P. Montiel and N. Haque (eds), Macroeconomic Models for Adjustment in Developing Countries. Washington, DC: IMF.
Harrigan, J. and P. Mosley (1991). "World Bank Policy Based Lending: An Evaluation," Journal of Development Studies, April.
Heckman, James (1978). "Dummy Endogenous Variables in a Simultaneous Equation System," Econometrica, 46, 931-60.
Helleiner, Gerald (1989). "The IMF, the World Bank, and Africa's Adjustment and External Debt Problems: An Unofficial View", World Development, 20, 6, 779-792.
Heston, Alan (1994). "A Brief Review of Some Problems in Using National Accounts Data in Level Comparisons and Growth Studies," Journal of Development Economics.
Kaplan, Jacob J. and Gunther Schleiminger (1989). The European Payments Union. Oxford: Clarendon Press.
Kapur, I. (1991). "Ghana: Adjustment and Growth, 1983-91". Occasional Paper #86, IMF, Washington, D.C.
Keynes, J.M. (1923). A Tract on Monetary Reform. Reprinted by the Royal Economic Society, London, 1971.
Khan, Mohsin (1990). "The Macroeconomic Effects of Fund-Supported Programs" IMF Staff Papers, 37 (2).
Kiguel, Miguel and Nissan Liviatan (1992). "The Business Cycle Associated with Exchange-Rate-Based Stabilization", World Bank Economic Review, 6, 2 (May), 279-305.
Killick, Tony (1984). "The Impact of Fund Stabilization Programs", in T. Killick (editor), The Quest for Economic Stabilization: The IMF and the Third World. New York: St. Martins Press.
Kim, K. S. and M. Roemer (1979). Growth and Structural Transformation. Cambridge, MA: Harvard University Press.
Krueger, Anne (1978). Foreign Trade Regimes and Economic Development: Liberalization Attempts and Consequences. Cambridge, MA: Ballinger.
------ (1984). "Problems of Liberalization", in A. Harberger (ed), World Economic Growth. San Francisco, CA: ICS Press.

------ (1985). "The Experience and Lessons of Asia's Super Exporters", in V. Corbo, A. O. Krueger, and F. Ossa (eds), Export-Oriented Development Strategies. Boulder, CO: Westview Press.
------ (1992). Economic Policy Reform in Developing Countries. Cambridge, MA: Blackwell.
------ (1993). Political Economy of Policy Reform in Developing Countries. Cambridge, MA: MIT Press.
Krugman, Paul (1979). "A Model of Balance-of-Payments Crises", Journal of Money, Credit, and Banking, 11, 3 (Aug), 311-325.
------ (1990). "Is Free Trade Passe?" Journal of Economic Perspectives, 1, 2 (Fall), 131-144.
------ (1992). "Adjustment in the World Economy", in P. Krugman, Currencies and Crises. Cambridge, MA: MIT Press.
------ (1993). "What Do We Need to Know about the International Monetary System?", Essays in International Finance #190, (July). Princeton University, International Finance Section.
Larrain, Felipe and Marcelo Selowsky (1991). The Public Sector and the Latin American Crisis. San Francisco, CA: ICS Press.
Leechor, Chad (1991). "Ghana's Adjustment Program", in V. Thomas et al, Structural Adjustment and the World Bank. New York: Oxford University Press.
Leith, J. Clark (1975). Foreign Trade Regimes and Economic Development: Ghana. New York: Columbia University Press.
Levine, Ross and David Renelt (1990). "A Sensitivity Analysis of Cross-Country Growth Regressions", manuscript, World Bank.
Little, Ian, Tibor Scitovsky and Maurice Scott (1970). Industry and Trade in Some Developing Countries: A Comparative Analysis. London: Oxford University Press.
Lucas, Robert (1988). "On the Mechanics of Economic Development", Journal of Monetary Economics, 22, 1, 3-12.
Maasland, Anne and Jacques van der Gaag (1992). "World-Bank Supported Adjustment Programs and Living Standards", in Corbo, Fischer and Webb (eds), op cit.
Mankiw, N. Gregory (1987). "The Optimal Collection of Seignorage", Journal of Monetary Economics, 20, 2 (Sept), 327-341.
McKinnon, Ronald (1973). Money and Capital in Economic Development. Washington, DC: Brookings Institution.
------ (1991). The Order of Liberalization. Baltimore, MD: Johns Hopkins Press.
McMillan, John and Barry Naughton (1992). "How to Reform a Planned Economy: Lessons from China", Oxford Review of Economic Policy, 8, 1, 130-143.
Michaely, Michael, Demetris Papageorgiou and Armeane M. Choksi (1991). Liberalizing Foreign Trade: Lessons of Experience in the Developing World. Cambridge, MA: Basil Blackwell.
Mondino, Guillermo, Federico Sturzenegger and Mariano Tommasi (1992). "Recurrent High Inflation and Stabilization: A Dynamic Game", mimeo, UCLA.
Morandé, Felippe (1988). "Apreciación del Peso y Entrada de Capitales Externos, ¿Cuál Viene Antes?" in F. Morandé and K. Schmidt-Hebbel (eds), Del Auge a la

Crisis de 1982, Instituto Interamericano de Mercados de Capital and ILADES, Georgetown University.

Mosley, Paul (1992). "A Theory of Conditionality", in P. Mosley (ed), Development Finance and Policy Reform. New York, NY: St. Martin's Press.

------ et.al. (1991). Aid and Power: The World Bank and Policy-Based Lending in the 1980s, (2 volumes). London: Routledge.

Nam, Chong H. (1985). "Trade Policy and Economic Development in Korea" Discussion Paper 9. Seoul: Korea University.

Nelson, Joan (ed), (1990). Economic Crisis and Policy Choice: The Politics of Adjustment in the Third World. Princeton, NJ: Princeton University Press.

Nishimizu, Mieko and John Page (1991). "Trade Policy, Market Orientation and Productivity Change in Industry", in J. de Melo and A. Sapir, Trade Theory and Economic Reform: North, South, and East. Cambridge, MA: Basil Blackwell.

Organization for Economic Cooperation and Development (1988). Structural Adjustment and Economic Performance. Paris: OECD.

Pastor, Robert (1987). "The Effects of IMF Programs in the Third World: Debate and Evidence from Latin America", World Development, 15, 249-262.

Patinkin, Don (1956). Money, Interest and Prices. Evanston, IL: Row Peterson & Co.

Przeworski, Adam (1991). Democracy and the Market: Political and Economic Reforms in Eastern Europe and Latin America. New York: Cambridge University Press.

Ramos, Joe (1986). Neoconservative Economics in the Southern Cone of Latin America, 1973-1983 (Chap. 8). Baltimore, MD: Johns Hopkins University Press.

Reichmann, T. and R. Stillson (1978). "Experience with Programs of Balance of Payments Adjustment: Stand-By Arrangements in the Higher Credit Tranches, 1963-72", IMF Staff Papers, 25, 278-292.

Rodrik, Dani (1989). "Policy Uncertainty and Private Investment in Developing Countries", NBER Working Paper #2999, Cambridge, MA.

------ (1990). "How Should Structural Adjustment Programs be Designed?", World Development, 18 (7).

------ (1993). "The Positive Economics of Policy Reform", American Economic Review, Papers and Proceedings, 83, 2 (May).

------ (forthcoming) Chapter in this volume.

Romer, Paul (1986). "Increasing Returns and Long-Run Growth", Journal of Political Economy, 94, 5 (Oct), 1002-1037.

------ (1990). "Endogenous Technological Change", Journal of Political Economy, 98, 5 (Part 2) (Oct), S71-S102

Sachs, Jeffrey D. (1987). "Trade and Exchange Rate Policies in Growth-Oriented Adjustment Programs", in V. Corbo, M. Goldstein, and M. Khan (eds) Growth-Oriented Adjustment Programs. Washington, DC: IMF and World Bank.

Salter, W.E.G. (1959). "Internal and External Balance: The Role of Price and Expenditure Effects", Economic Record, 35 (Aug). 226-238.

Sargent, Thomas (1982). "The Ends of Four Big Inflations", in Robert E. Hall (ed), Inflation: Causes and Effects. Chicago: University of Chicago Press.

------- (1983). "Poincare and Mrs. Thatcher", in R. Dornbusch and M.H. Simonsen (eds),

Inflation, Debt and Indexation. Cambridge, MA: MIT Press.
Scitovsky, Tibor (1990). "Economic Development in Taiwan and South Korea, 1961-1981", in L.J. Lau (ed) Models of Development. San Francisco, CA: ICS Press.
Schmidt-Hebbel, Klaus and Luis Serven (1993). "Dynamic Response to External Shocks in Classical and Keynesian Economics", in D. Currie and D. Vines (eds), North-South Linkages and International Macroeconomic Policy. Cambridge, U.K.: Cambridge University Press.
Serven, Luis and Andres Solimano (1992). "Private Investment and Macroeocnomic Adjustment: A Survey", World Bank Research Observer, (Jan).
Simonsen, Mario Henrique (1983). "Indexation: Current Theory and the Brazilian Experience", in R. Dornbusch and M.H. Simonsen (eds), Inflation, Debt, and Indexation. Cambridge, MA: MIT Press.
Solimano, Andres (1990). "Inflation and the Costs of Stabilization: Historical and Recent Experiences and Policy Lessons", World Bank Research Observer, 5, 2 (July), 167-186.
Srinivasan, T. N. (1994). "Data Base for Development Analysis: An Overview," Journal of Development Economics.
Stern, Ernest (1983). "World Bank Financing of Structural Adjustment", in John Williamson (ed), IMF Conditionality. Washington, DC: Institute for International Economics.
Stiglitz, Joseph E. (1993). "The Role of the State in Financial Markets", World Bank Annual Conference on Development Economics.
Suh, Sang-Mok (1992). "The Economy in Historical Perspective", in V. Corbo and S.M. Suh (ed), Structural Adjustment in a Newly Industrialized Country: The Korean Experience. Baltimore, MD: Johns Hopkins University Press.
Swan, Trevor (1963). "Economic Control in a Dependent Economy, Economic Record, 36, 51-66.
Tanzi, Vito (1977). "Inflation, Lage in Collection, and the Real Value of Tax Revenues", IMF Staff Papers, 24, 2 (March), 154-167.
Taylor, Lance (1988). Varieties of Stabilization Experience: Towards Sensible Macroeconomics in the Third World. Oxford: Clarendon Press.
Thomas, Vinod, K.M. Matin and John Nash (1990). Lessons in Trade Policy Reform. Policy Research Paper 2, World Bank, Washington, DC.
------ and John Nash (1991). Restructuring Economies in Distress: Policy Reforms and the World Bank. Oxford: Oxford University Press.
Thomas, W. John and Merilee S. Grindle (1991). Public Choices and Policy Change: The Political Economy of Reform in Developing Countries. Baltimore, MD: Johns Hopkins University Press.
Tsiang, S.C. (1985). "Foreign Trade and Investment as Boosters For Take-Off: The Experience of Taiwan", in V. Corbo, A. O. Krueger, and F. Ossa (eds), Export-Oriented Development Strategies. Boulder, CO: Westview Press.
Vegh, Carlos A. (1992). "Stopping High Inflation: An Analytical Overview", IMF Staff Papers, 39, 3 (Sept), 626-695.
Villanueva, Delano and A. Mirakhor (1990). "Strategies for Financial Reforms", IMF Staff Papers, 37, 3 (Sept), 509=536.

Viner, Jacob (1953). International Trade and Economic Development. Oxford: Clarendon Press.

Wade, Robert (1990). Governing the Market. Princeton, NJ: Princeton University Press.

Webb, Steven B. and Karim Shariff (1992). "Designing and Implementing Adjustment Programs", in Corbo, Fischer and Webb (op cit).

Westphal, Larry (1978). "Republic of Korea's Experience with Export-Led Industrial Development", World Development, 6 (3).

Wilcox, David W. (1989). "The Sustainability of Government Deficits: Implications of the Present-Value Borrowing Constraint", Journal of Money, Credit and Banking, 21, 3 (Aug), 291-306.

Williamson, John (1994). The Political Economy of Policy Reform. Washington, D.C.: Institute For International Economics.

World Bank (1980). "Lending for 'Structural Adjustment'", Memorandum to the Board, R80-17, February 5.

------ (1988). Adjustment Lending: An Evaluation of Ten Years of Experience. Policy and Research Series Paper 1.

------ (1989). World Development Report.

------ (1990). Adjustment Lending Policies for Sustainable Growth. Policy and Research Series Paper 14.

------ (1991). World Development Report.

------ (1992). Adjustment Lending and Mobilization of Private and Public Resources for Growth. Policy and Research Series Paper 22.

------ (1993a). The East Asian Miracle: Economic Growth and Public Policy. Oxford University Press.

------ (1993b). Adjustment in Africa: Reform, Results, and the Road Ahead, Oxford University Press.