

## II Overview of Adjustment

Under the IMF's mandate, resolving member countries' external financing problems must receive priority in IMF-supported programs; this objective, however, should be pursued with sensitivity toward the ultimate goal of economic policies, namely, improving living standards through higher growth. This was an important message of the last review of the conditionality attached to the use of IMF resources.<sup>4</sup> The review found that although, on average, growth strengthened moderately over the period covered, no country shifted to a distinctly more rapid pace of growth.

With this background, the present study investigates further the links between adjustment policies and growth by examining, from a medium-term perspective, how macroeconomic policies and core structural reforms—not all of which were implemented in the context of IMF-supported programs—have influenced the investment, saving, and employment performance of the eight countries.<sup>5</sup> A companion study, *Composition of Fiscal Adjustment and Growth*, examines issues related to the quality of fiscal adjustment in these countries, including the extent to which fiscal adjustment was undertaken in a manner that maintained expenditures with high social rates of return and implemented a growth-oriented tax system.<sup>6</sup> A brief overview of key developments in each country is given in Box 1.

The central question to be addressed is why, even in countries that took strong measures, the response of investment and growth has sometimes been slow.<sup>7</sup> In attempting to answer this question, one must bear in mind that adjustment policies had to be designed and implemented to take account of many con-

straints, including those imposed by the political process and administrative capacity.<sup>8</sup>

Adjustment policies can influence growth by affecting the degree of capacity utilization, the pace at which factor inputs are accumulated, and the efficiency with which those factors are used. The natural framework for considering these influences is through a combination of a growth model—in which the expansion of potential output is determined by increases in labor supply, physical and human capital, as well as improvements in productivity—and an open economy macroeconomic model, where changes in aggregate demand influence capacity utilization. The main links between the two components of this framework are saving and investment, which influence both the level of aggregate demand and the expansion in potential output. Consequently, the major focus of the study is on how adjustment policies influence growth through these two variables and through changes in total factor productivity.

An adjustment program generally includes a combination of stabilization measures and structural reforms. The former aim at restoring macroeconomic balance by bringing the level of demand and its composition (that is, tradable relative to nontradable goods) into line with output capacity and a sustainable external current account position. The latter comprise microeconomic and institutional reforms directed at fostering an efficient allocation of resources and removing obstacles to saving and investment. The effects of both types of policies are closely interlinked and are likely to have both short- and long-term consequences. On the one hand, the mix of macroeconomic policies affects long-term growth through its effects on saving and investment.

<sup>4</sup>See Schadler and others (1995) and Schadler (1995).

<sup>5</sup>The role of macroeconomic policies and reforms in growth has been the subject of many studies—see Appendix I. An early contribution on the role of IMF-supported adjustment programs is Khan and Knight (1985).

<sup>6</sup>Mackenzie and others (forthcoming).

<sup>7</sup>For this reason, no countries were included in which adjustment policies were especially weak. Nor are the transition economies represented, since their growth performance has been subject to a number of quite different influences.

<sup>8</sup>Asilis and Milesi-Ferreti (1994) provide a survey of (typically highly stylized) studies of how initial economic conditions, institutions, and political systems may interact with policy choices to influence the political sustainability of reforms. Uncertainty and conflict over the distributional consequences of adjustment generally play a key role in explaining delays in implementing stabilization in such models, suggesting that adjustment is more likely to be delayed the more polarized the society.

**Box 1. An Overview of Adjustment in the Eight Countries****Bangladesh**

After an extended period in the 1970s of political turmoil, heavy government intervention in the economy, and poor growth performance, the Government initiated an ambitious growth-oriented strategy in 1979. This strategy targeted increased saving and investment combined with extensive structural reforms; in the event, these targets were missed by wide margins on account of adverse shocks and policy slippages, so that macroeconomic imbalances continued to increase. A second phase of adjustment started in the mid-1980s; the combination of fiscal tightening and structural reforms, in particular unification of the foreign exchange market and trade liberalization, succeeded in reducing inflation and improving the external current account. Real per capita GDP growth remained low, however, in part because of continuing serious structural distortions.

**Chile**

A large drop in output in 1973 accompanied by hyperinflation led to the adoption of an economic program in 1974–75 involving a sharp tightening of fiscal policy, large corrective price increases, a flexible exchange rate policy, and significant structural reforms including a reversal of the previous expropriation of enterprises. Aiming to reduce inflation to world levels, the authorities fixed the exchange rate in mid-1979, but the inconsistency of this policy with wage indexation and ongoing inflation in nontradables led to a sharp real effective appreciation of the peso and a boom in consumption and imports financed by large external borrowing, accompanied by lax control of banking activity. A drop in the price of copper and an abrupt decline in access to external financing in the wake of the debt crisis led to a severe recession and a banking crisis in 1982–83. The medium-term stabilization and adjustment program adopted in 1983 included a flexible exchange rate, eliminating mandatory wage indexation,

restoring the financial system, and reducing the fiscal deficit. Further privatization of public enterprises was carried out and there was a major reform of the social security system. Since 1985 Chile has enjoyed strong economic growth.

**Ghana**

The Economic Recovery Program introduced in 1983 followed a protracted period of economic decline caused by massively interventionist policies, widespread price controls and exchange restrictions, and a large decline in the terms of trade. The first phase of the program (1983–86) was based on restrained financial policies, elimination of widespread domestic price controls and other regulatory restrictions, and large devaluations to correct a severely overvalued exchange rate—succeeded in eliminating the most severe macroeconomic imbalances. At the same time, a resumption of official external financing supported a pickup in public investment. The second phase (1987–91) completed the comprehensive liberalization of the trade and exchange system and featured a reform of the financial system as well as more vigorous efforts to restructure and privatize a large public enterprise sector.

**India**

In the second half of the 1980s, expansionary fiscal policies, including stepped-up public investment, brought about some pickup in growth, but also contributed to wider external current account deficits and rising external debt. Shocks to the balance of payments, associated with the 1990 Middle East crisis, and internal political problems triggered an outflow of capital and a major liquidity crisis in early 1991. A new government responded by depreciating the rupee, raising interest rates, cutting the public sector deficit, and implementing significant, but incomplete, structural reforms—most notably industrial deregulation, partial

On the other hand, structural reforms can have major consequences for macroeconomic stability. Transformation of tax and expenditure systems is often the keystone to sustainable fiscal adjustment, and financial, external, and labor market reforms can all influence how an economy responds to stabilization measures.

One additional feature of this broad framework is of particular importance to the discussion in this study: since investment and saving are inherently forward-looking decisions, they are heavily influenced by expectations about the future course of policies. Therefore, the effects of policies on private investment and saving can depend crucially on the

degree to which they are judged to be consistent and are expected to be sustained. For such reasons the last review of IMF conditionality emphasized that programs would benefit from being set in a medium-term context, with more focus on what constitutes a sustainable fiscal policy from both a financial and structural viewpoint.<sup>9</sup>

To help organize the discussion, specific “adjustment periods” for each country are used in certain sections of the study. The choice of such periods is somewhat arbitrary, especially since adjustment can

<sup>9</sup>Schadler and others (1995).

trade liberalization, and an opening up to foreign investment. In response, the balance of payments position strengthened substantially during 1992–94, aided by capital inflows.

#### *Mexico*

After the 1982 debt crisis and a cutoff from external financing, Mexico introduced an adjustment strategy based on fiscal tightening, frequent adjustments of the exchange rate, some moderate privatization, and after 1985, trade liberalization. Inflation remained high, however, while growth and private investment stagnated. A new disinflation strategy, introduced in December 1987, was based on further fiscal tightening, and the use of the exchange rate as the main nominal anchor supported by incomes policy agreements among labor, business and the government. Together with a successful restructuring of external debt, this strategy slowed inflation and paved the way for a resumption of access to international financial markets, and a surge of capital inflows. However, the real exchange rate appreciated, private saving declined sharply, and a large external current account deficit emerged, leading eventually to a new crisis in late 1994.

#### *Morocco*

During the 1970s, expansionary financial policies—prompted by the 1974 phosphate boom—resulted in large fiscal and external current account deficits and a rapid buildup of external debt. These imbalances added to a wide range of structural weaknesses. A succession of adverse exogenous shocks critically weakened the external position, leading to debt-servicing difficulties by the early 1980s. The subsequent adjustment strategy had several phases: through 1985, the emphasis was on fiscal adjustment by means of large cuts in capital expenditure (with most of the adjustment occurring in 1983–85), tight monetary policy, and active exchange

rate policy to improve competitiveness; the next phase (1986–93) emphasized greater trade liberalization and deregulation, extensive tax reforms, financial market reform, and reforms of pricing policies and state enterprises. In this phase, the nominal exchange rate was anchored to a currency basket, apart from small step devaluations in 1990 and 1992.

#### *Senegal*

During the late 1970s and early 1980s, a succession of droughts, deterioration of the terms of trade, and inappropriate policies resulted in large fiscal and external current account deficits and a rising external debt. After a period of unsuccessful stabilization efforts, sustained adjustment was achieved during 1983–88 founded on substantial fiscal consolidation and structural reforms. Together with more favorable terms of trade and weather conditions this led to an improved economic performance. But the gains were not long-lasting: in 1989–93, financial policies weakened, structural reform stalled, and external competitiveness continued to deteriorate in the face of adverse terms of trade shocks. In early 1994, adjustment efforts were renewed and the CFA franc was devalued by 50 percent.

#### *Thailand*

The expansionary public sector policies of the late 1970s resulted in growing fiscal and external imbalances and left the Thai economy in a vulnerable position when it faced the external shocks of 1980–82. Following a brief period when adjustment measures produced only marginal improvements, a major adjustment effort was undertaken in 1984–85, when the baht was devalued, significant fiscal consolidation began, and a decisive change was made in the orientation of trade and industrial policies toward export-led growth. Since 1987, Thailand has been in the midst of an investment- and export-led economic boom with large accompanying capital inflows.

be a protracted and continuous process and is by no means complete in many of the countries considered. The periods were chosen to correspond as closely as possible to a phase during which a distinct approach to macroeconomic and structural adjustment was being pursued (Table 1; see Box 1 for summaries of the policy strategy pursued in each case). The choice of periods does not necessarily correspond precisely to the timing of IMF-supported programs; in many cases there had been earlier programs that were either quickly interrupted or were followed by a re-emergence of external imbalances at a later stage (Chart 1). Moreover, some important policy changes took place within the identified peri-

ods (for example, the shift to exchange-rate-based stabilization in Chile in 1978); consequently, the discussion in some sections of the study will focus on different time periods.

## **Long-Term Trends in Growth and Investment**

Before discussing the response to adjustment policies, it is instructive to examine the long-term growth record in the eight countries (Charts 2 and 3). A comparison of broad period averages of growth rates across countries and over time, and the use of

**Table I. Adjustment Periods in the Eight Countries**

	Period I	Period II
Bangladesh <sup>1</sup>	1980/81–1984/85	1985/86–1993/94
Chile	1974–82	1983–89
Ghana	1983–86	1987–91
India <sup>2</sup>	1991/92–1992/93	...
Mexico	1983–87	1988–93
Morocco	1981–85	1986–93
Senegal	1984–88	1989–93
Thailand	1981–86	1987–93

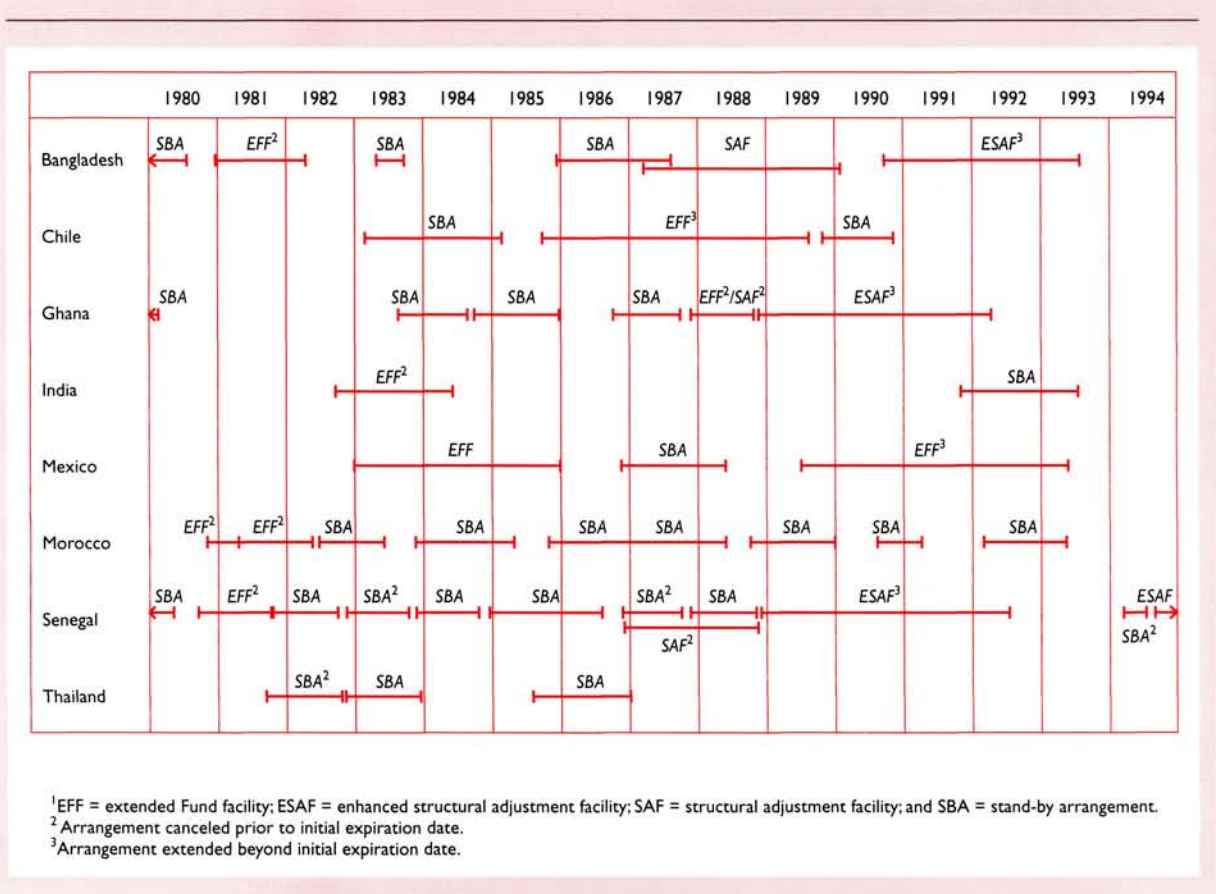
<sup>1</sup>Fiscal year runs from July to June.  
<sup>2</sup>Fiscal year runs from April to March.

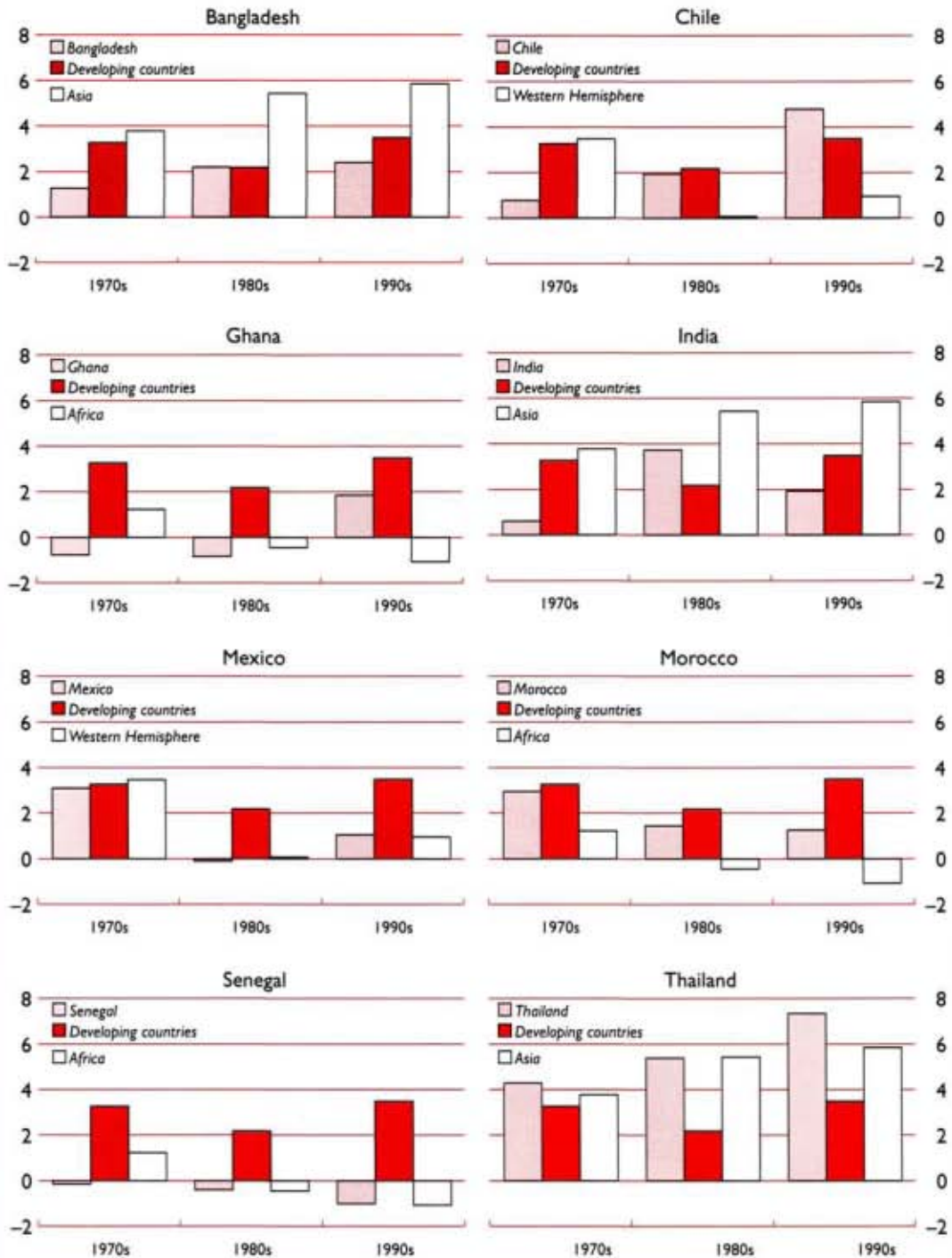
simple growth accounting exercises that decompose real GDP growth into the relative contributions from physical and human capital accumulation and a

residual, typically referred to as growth in total factor productivity (TFP), suggest a number of observations (Table 2).<sup>10</sup> First, the wide variations in

<sup>10</sup>Disentangling the underlying growth in potential output from cyclical developments and supply shocks is always difficult and can be especially complicated in the case of severe recessions (Chile, 1975 and 1982) or where supply shocks are large and frequent (Morocco and Senegal). TFP measures can also be a misleading indicator of underlying productivity developments if major structural changes make part of the capital stock obsolete. The growth accounting exercises involve imposing a common production function on all of the countries as well as a series of assumptions concerning the initial level of the capital stock and rate of depreciation; see the footnotes to Table 2 for details. The estimates for TFP in Chile, Mexico, and Thailand are broadly comparable to those reported in Bosworth and others (1994), Elías (1992), and Tinakorn and Sussangkarn (1994), respectively. A set of alternative estimates was also prepared using a production function that includes human capital, following an approach similar to Mankiw, Romer, and Weil (1992), but allowing for differences in efficiency because of changes in the age profile of the population. Both of the estimated TFP measures tend to overestimate cyclical movements in productivity (for example, because of lack of data on changes in man-hours worked).

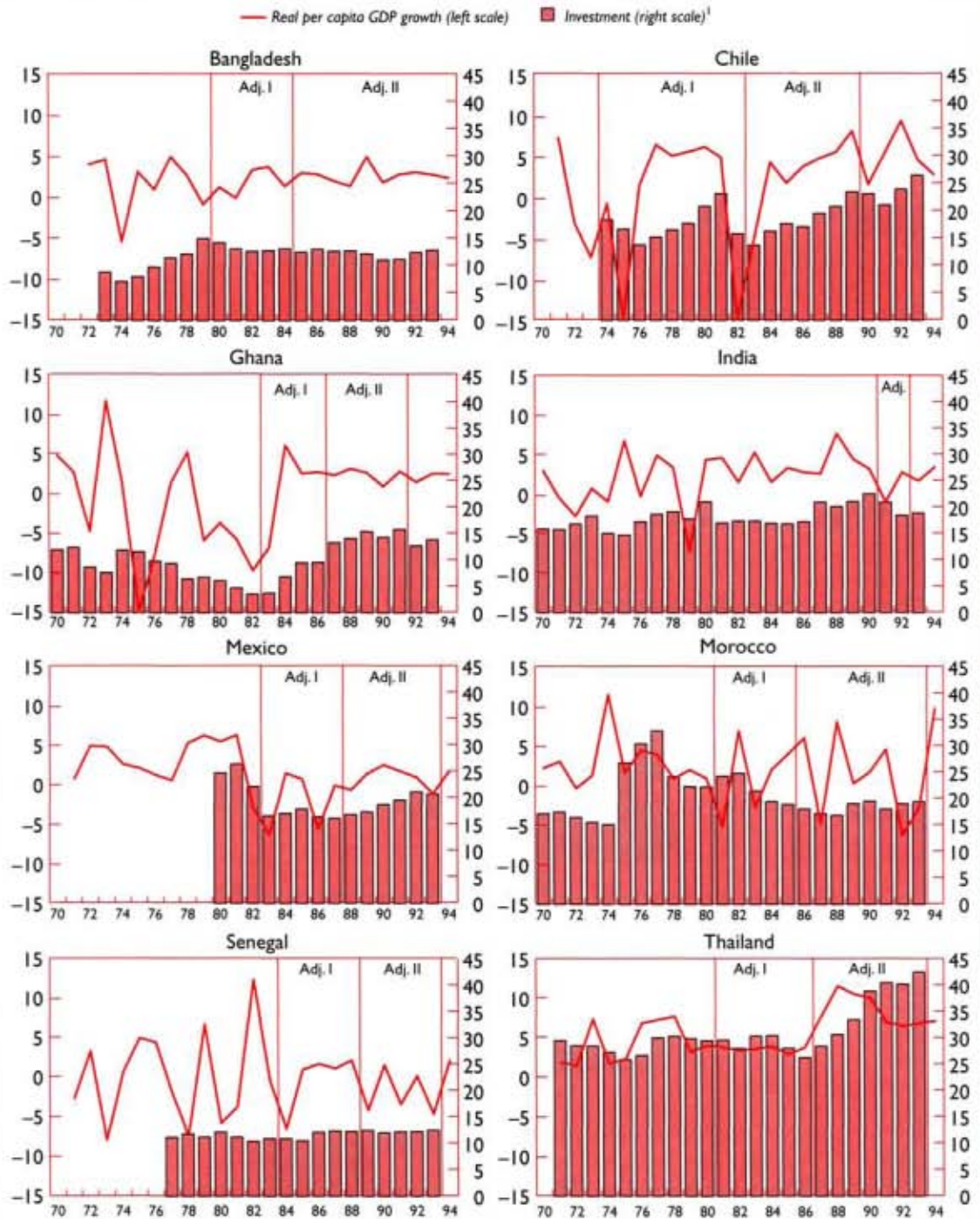
**Chart I. IMF Arrangements in the Eight Countries<sup>1</sup>**



**Chart 2. Real Per Capita GDP Growth, 1970–94***(Period averages; in percent)*

Sources: IMF staff estimates for individual countries, except Mexico for the 1970s. All other data from International Monetary Fund, World Economic Outlook, various issues.

**Chart 3. Real Per Capita GDP Growth and Investment Ratios**  
(In percent)



Sources: IMF staff estimates for individual countries, except per capita growth in Mexico during the 1970s, which is from International Monetary Fund, *World Economic Outlook*, various issues.

<sup>1</sup>Total fixed investment (public and private) at constant prices as a ratio to GDP, except for Ghana which is at current prices.

Table 2. Factors Influencing Growth, 1970-93

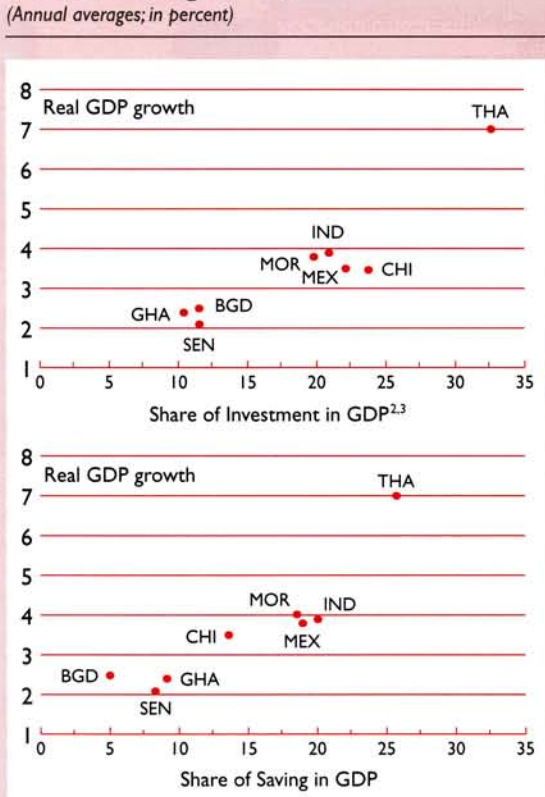
(Annual averages in percent, unless otherwise indicated)

	Bangladesh		Chile		Ghana		India		Mexico		Morocco <sup>1</sup>		Senegal		Thailand	
	1970	1983	1970	1983	1970	1983	1970	1983	1970	1983	1970	1983	1970	1983	1970	1983
Investment/GDP <sup>2</sup>	10.6	12.4	16.8	22.6	8.9	11.8	20.6	21.3	25.9	18.1	23.2	19.8	11.0	11.8	31.1	34.5
Savings/GDP <sup>3</sup>	2.9	7.1	9.4	17.0	8.3	10.2	19.5	20.7	18.0	20.1	16.4	21.2	9.9	6.3	22.7	29.3
Real GDP growth <sup>4</sup>	1.0	4.6	1.1	5.7	—	4.3	3.4	5.2	6.2	1.4	5.1	3.7	2.8	1.8	6.7	8.3
Contributions to growth from																
Capital	0.3	1.2	1.1	1.3	0.6	0.5	1.5	2.0	2.9	1.3	3.0	1.6	0.9	1.0	4.0	3.6
Labor	1.5	1.8	1.5	1.2	1.4	1.8	1.5	1.4	2.1	1.9	2.0	1.9	1.4	1.5	2.2	1.7
Total factor productivity (TFP) <sup>5</sup>	-0.8	1.6	-1.5	3.2	-2.1	1.9	0.4	1.8	1.2	-1.8	0.1	0.2	0.5	-0.8	0.4	3.0
Change in capital-labor ratio	-1.8	0.1	0.1	0.8	-0.8	-1.7	1.1	2.3	3.6	—	4.0	0.8	-0.1	—	6.0	5.3
Alternative measure of TFP growth <sup>6</sup>	-0.4	2.1	-1.0	3.4	-2.9	2.1	0.1	1.8	1.7	-1.7	-0.4	—	-1.4	-1.7	1.4	3.6
	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990	1970	1990
Indicators of human capital accumulation	0.93	0.92	1.07	1.22	0.89	0.89	1.04	1.11	0.87	1.06	0.88	1.00	0.92	0.90	0.89	1.18
Effective labor supply <sup>7</sup>	54	77	107	98	64	77	73	98	104	115	52	65	41	59	83	90
Primary school enrollment ratio (percent) <sup>8</sup>	2.0	2.4	5.1	6.1	2.1	3.6	1.5	2.5	3.6	4.9	0.9	1.9	0.6	1.7	4.0	5.0
Mean years of primary education																

Sources: IMF staff estimates; International Monetary Fund, World Economic Outlook, various issues; World Bank, World Tables; World Bank, Social Indicators; Barro and Lee (1993); Nehru and Dhareshwar (1993); and Sarel (1995).

<sup>1</sup>Averages for Morocco include an estimate for 1994, owing to a large drought-related decline in GDP and investment in 1992 and 1993.<sup>2</sup>Measured in constant prices, except Mexico, Chile during the first subperiod, and Ghana, which are in current prices. Due to lack of data, average for first subperiod for Bangladesh starts in 1973, Chile in 1974, Senegal in 1977, and Mexico in 1980. Bangladesh is gross fixed investment only.<sup>3</sup>Gross national savings.<sup>4</sup>GDP growth and the contributions are compound annual averages. Contributions to growth are calculated with a Cobb-Douglas production function; assigning weights of 0.4 and 0.6 to capital and labor, respectively. Contributions may not add to total growth because of rounding.<sup>5</sup>TFP residuals should be interpreted with some care, since they include cyclical fluctuations in factor utilization and can therefore be sensitive to the choice of subperiods. This is especially noticeable for Chile. They are also sensitive to the measurement of factor inputs, which may be a particular problem during periods of rapid structural reform. For example, measurement errors may account for the negative TFP growth estimated for Mexico during the 1980s.<sup>6</sup>Derived after taking account of changes in quality because of changes in age-efficiency of the labor force and education. Calculated with a Cobb-Douglas production function assigning weights of one third to capital, one third to labor, and one third to human capital. See Mankiw, Romer, and Weil (1992).<sup>7</sup>The effective labor supply is a relative measure, taken from Sarel (1995), which reflects the age structure of the population and the estimated productivity of different age groups. An effective labor supply equal to unity corresponds to the average demographic distribution in a sample of 119 countries; a higher number indicates that the population is more concentrated around high-productivity age groups.<sup>8</sup>Gross enrollment ratios, that is, the total number of enrollees in primary school relative to the total population at primary school age. This ratio may exceed 100 when children outside the primary school age group are enrolled in primary school.

**Chart 4. GDP Growth, Investment, and National Saving, 1970–93<sup>1</sup>**  
(Annual averages; in percent)



Source: IMF staff estimates.  
<sup>1</sup>BGD = Bangladesh; CHI = Chile; GHA = Ghana; IND = India; MEX = Mexico; MOR = Morocco; SEN = Senegal; and THA = Thailand.  
<sup>2</sup>Average from 1972 to 1993 for Bangladesh, from 1980 to 1993 for Chile and Mexico, and from 1977 to 1993 for Senegal.  
<sup>3</sup>Total investment at constant prices, except for Ghana which is in current prices. Gross fixed investment for Bangladesh.

investment and saving rates across the countries appear to account for an important part of the differences in growth rates. For example, capital deepening in Thailand has been considerable, because of high investment supported by high saving rates. At the other extreme, average investment and saving rates in Bangladesh, Ghana, and Senegal have been low (Chart 4). However, there have also been marked changes in particular countries' investment and saving performance over time, and these will be discussed further below.

Second, although human capital accumulation is difficult to measure accurately, indicators based on levels of education suggest that Bangladesh, Ghana, India, Morocco, and Senegal began with markedly lower human capital stocks, measured by the coverage of primary education. Third, changes in the age profile of the population can have important effects

on growth since productivity is likely to vary with age.<sup>11</sup> As discussed later, these demographic factors also appear to have had a substantial influence on saving rates. Over the last several decades, the demographic profiles least favorable to growth have been those of Bangladesh, Ghana, India, and Senegal (reflecting the large proportion of young in the population), whereas the age profile in Thailand has been especially favorable to growth.

The estimates of TFP growth are, by their nature, residuals; consequently, they may be subject to considerable margins of error especially during periods of substantial structural reform when output may be underestimated (because of changes in the production structure that are not adequately captured by national income accounts statistics) and net investment overestimated (because of large relative price shifts that render part of the existing capital stock economically obsolescent). For example, both factors were probably important in the case of Mexico, although the lack of data does not allow them to be taken into account in the empirical estimates.<sup>12</sup>

**Initial Conditions**

The economic structure of the eight countries was quite diverse (Table 3). Agriculture accounted for over one third of GDP in three of the countries (Bangladesh, Ghana, and India) in 1980; these countries also had relatively closed economies, with the ratio of imports and of exports to GDP typically less than 10 percent. By contrast, in the other five countries (Chile, Mexico, Morocco, Senegal, and Thailand) industry produced a larger share of GDP (some 30 percent or more) than agriculture, and they had more open economies. For a number of the countries (India, Thailand, and, increasingly, Chile and Mexico, were the exceptions) exports tended to be concentrated in a few primary commodities.

The magnitude of macroeconomic imbalances at the start of adjustment was greatly influenced by the size and nature of exogenous shocks in preceding years and by the initial policy responses to them (Table 4 and Chart 5).<sup>13</sup> Over half of the countries

<sup>11</sup>Sarel (1995) estimates an age-related productivity structure which suggests that, on average, workers reach peak productivity between their thirties and fifties.  
<sup>12</sup>In Mexico, the current methodology for estimating the national accounts, which has not been updated since 1980, is also thought to introduce a downward bias in GDP growth since oil has an excessive weight in total output.  
<sup>13</sup>Because conditions prior to the two adjustment periods in Chile were so different, they are discussed separately. Chile I refers to the adjustment period that began in 1974 following the advent of the Pinochet regime and Chile II refers to the stabilization period following the collapse of the exchange-rate-based stabilization strategy in 1982.



Table 3. Economic Structure in 1980

	GDP Per Capita (1987 US\$)	Structure of Production (In percent of GDP)		Merchandise Trade (In percent of GDP)		Major Export <sup>1</sup> (In percent of merchandise trade)	Broad Money (In percent of GDP)
		Agriculture	Industry	Exports	Imports		
Mexico	1,927	9	35	8	10	Oil (62)	29
Chile	1,586	8	42	17	20	Copper (45)	26
Morocco	781	18	31	13	20	Phosphate (42)	42
Thailand	718	26	32	20	26	Rice (17) <sup>2</sup>	23
Senegal	668	27 <sup>3</sup>	27 <sup>3</sup>	18	33	Groundnuts (39) <sup>3</sup>	28
Ghana	435	60	12	7	6	Cocoa (72)	19
India	262	38	26	5 <sup>4</sup>	9 <sup>4</sup>	Manufactures (67)	39
Bangladesh	142	52	17	5 <sup>4</sup>	18 <sup>4</sup>	Jute (69) <sup>4</sup>	16

Sources: World Bank, *World Tables*; International Monetary Fund, *International Financial Statistics*; and IMF staff estimates.

<sup>1</sup>Includes derivatives or closely related products of the commodity.

<sup>2</sup>1981; manufactures account for 30 percent of merchandise exports.

<sup>3</sup>1979.

<sup>4</sup>1980/81.

Table 4. Initial Macroeconomic Imbalances and Structural Distortions

Country	Severe External Financing Constraint During Initial Adjustment?	Followed by Rescheduling of Debt?	Initial Fiscal Imbalance	High Inflation	Size of Initial External Imbalances	Adverse External Shocks	Extent of Structural Distortions
					(In preadjustment period)		
<b>Most severe initial macroeconomic problems</b>							
Chile I	No	No	Large	Yes	Small	Large	Intermediate
Chile II	Yes	Yes	Small <sup>1</sup>	No	Large	Large	Small
Ghana	Partial <sup>2</sup>	No	Intermediate	Yes	Small <sup>2</sup>	Intermediate	Large
India	Yes	No	Intermediate	No	Intermediate	Intermediate	Large
Mexico	Yes	Yes	Large	Yes	Large	Small	Intermediate
Morocco	Yes	Yes	Large	No	Large	Large	Intermediate
Senegal	Yes	Yes	Intermediate	No	Large	Intermediate	Large
<b>Other countries</b>							
Bangladesh	No	No	Intermediate	No	Intermediate	Small	Large
Thailand	No	No	Small	No	Intermediate	Large	Small

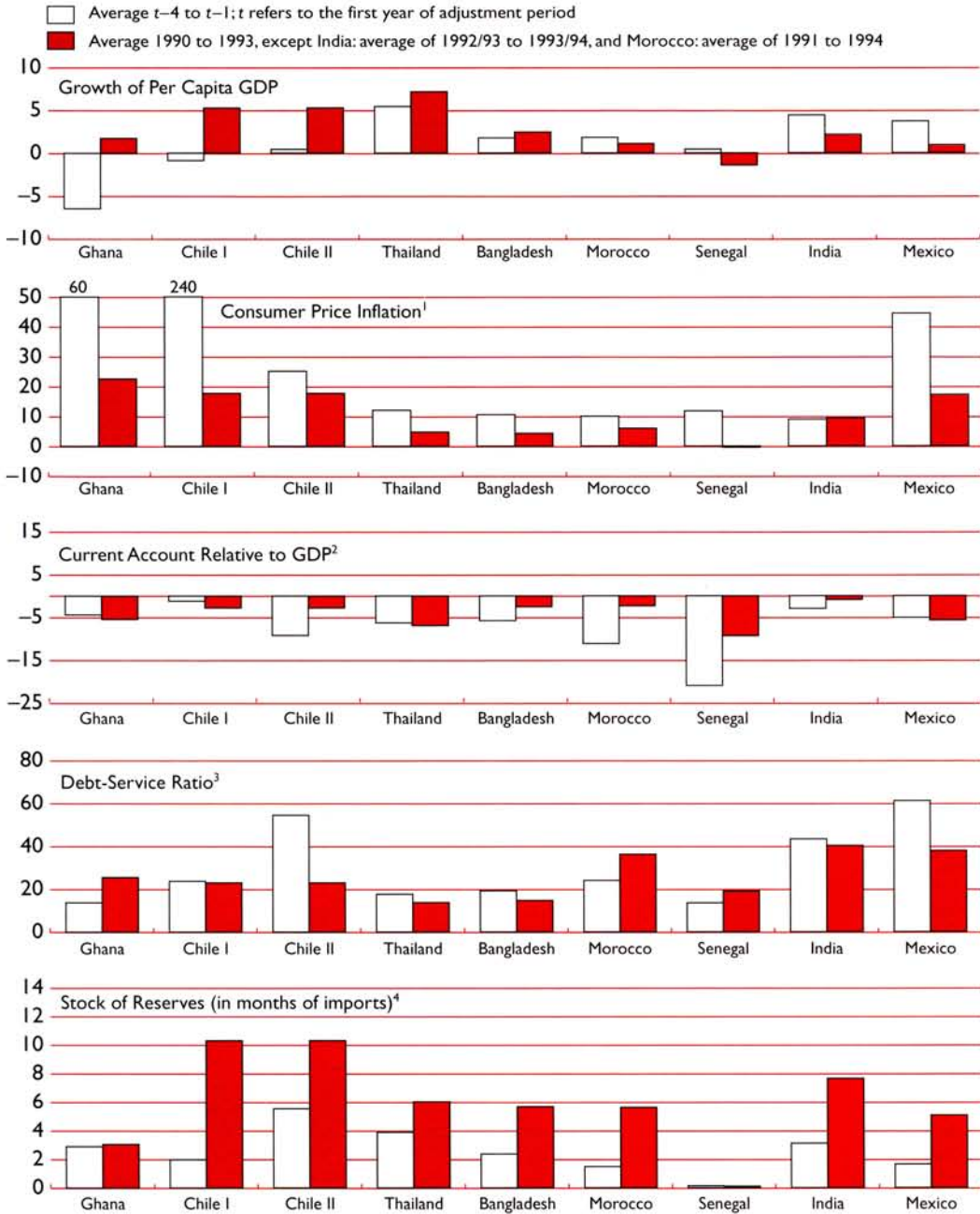
Note: Preadjustment period refers to the four-year period preceding the start of the first adjustment period. For Chile II the preadjustment period is 1979–82. Size of initial external imbalance refers to the external debt-GDP ratio and the current account deficit (as percent of GDP) in the preadjustment period. "Large" indicates that the debt ratio was 40 percent or higher and the current account deficit ratio was 5 percent or higher. "Intermediate" indicates that the debt ratio was between 20 percent and 40 percent and/or the current account deficit ratio was between 3 percent and 5 percent. "Small" indicates that these ratios were below 20 percent and 3 percent, respectively. Adverse external shock refers to the aggregate size of shocks related to the terms of trade, changes in interest rates on external debt, and global demand (see McCarthy, Neary, and Zanalda (1994)). "Large" is defined as a cumulative shock during the four-year period with an impact effect of more than 4 percent of GDP. "Intermediate" is a cumulative shock between 2 percent and 4 percent, and "small" is a shock of less than 2 percent. Fiscal imbalance refers to the ratio of the average central government fiscal deficit to GDP during the period. "Large" indicates a deficit of 10 percent or higher, "moderate" indicates a deficit between 5 percent and 10 percent, and "small" a deficit below 5 percent. High inflation indicates whether average annual consumer price index inflation was at least 20 percent during the period. Structural distortions refer to the extent of structural distortions in the 1970s as discussed in Section VIII.

<sup>1</sup>Does not include central bank quasi-fiscal deficits.

<sup>2</sup>Prior to the Economic Recovery Program in 1983, Ghana's access to external financing was severely curtailed and extensive foreign exchange rationing was in place. However, official external financing increased substantially once the program was adopted.

**Chart 5. Indicators of Domestic and External Economic Performance During Preadjustment Period and During 1990–93**

(In percent, unless otherwise specified)



Sources: IMF staff estimates; and International Monetary Fund, *World Economic Outlook*, various issues, and *International Financial Statistics*.

<sup>1</sup> Average of CPI inflation rates at end of period whenever possible. For Bangladesh, Ghana, and Morocco, average of annual averages.

<sup>2</sup> Current account balance excludes official grants.

<sup>3</sup> Scheduled debt service (after rescheduling, if applicable) in percent of exports of goods and services; merchandise exports for India and Thailand; goods and services plus private transfers for Bangladesh and Morocco. For Morocco and Mexico, the first average is t-3 to t-1, and for Bangladesh, it is t-1 only, due to the lack of data.

<sup>4</sup> Gross reserves. For Bangladesh, the first average is t-2 to t-1.

(especially Chile I, Morocco, Senegal, and Thailand) were subjected to large adverse external shocks in the preadjustment period, resulting primarily from a combination of higher oil prices, declining commodity export prices, and rising world interest rates (Chart 6). The nature of the crisis and the severity of the associated external financing constraints were typically heavily influenced by the initial policy response to the macroeconomic problems that resulted from these shocks. In most cases, expansionary policies, mainly in the form of large fiscal deficits, had contributed to higher inflation or rising external debt burdens or both that eventually proved unmanageable (Chile I, Ghana, India, Mexico, Morocco, and Senegal). External financing constraints were manifested early in the process in Chile I (1970–73) and in Ghana (before 1983), and the initial policy response was a massive intensification of import and exchange controls. Consequently, demand pressures in these cases were largely reflected in very high inflation rather than increased foreign borrowing. By contrast, in Chile II, the initial macroeconomic imbalance reflected a massive boom in private sector demand fueled by a surge in private credit and heavy external borrowing.

Most of the countries suffered from extensive structural distortions, stemming from excessive government intervention in the economy. Distortions were the most severe in Bangladesh, Ghana, India, and Senegal, which had a history of inward-oriented development policies, relying on high and complex trade barriers, official price controls, and large public sectors. Only Thailand and Chile II had relatively small distortions when they began their adjustment efforts.

Most of the countries began adjustment with their external positions under pressure, in the form of low reserves, accumulating arrears, or debt-service burdens that implied a large net transfer of resources abroad (the latter most notably in the case of the market borrowers that lost access to international financial markets—Chile, Morocco, and, especially, Mexico). By the early 1990s, however, these positions had improved in most cases. First, official reserves rose considerably, to well above the equivalent of three months of imports except in Ghana and Senegal.<sup>14</sup> Second, by 1993 only Senegal was accumulating external arrears—in all other countries there was no outstanding stock of arrears. Third, in half of the countries, current account positions had improved—typically with the largest improvements in those cases where initial imbalances were largest (see Chart 5). In countries that registered a widening

of current account deficits, this was accompanied in most cases by a sizable increase in capital inflows. At the same time, scheduled debt-service ratios (after taking account of debt and debt-service restructuring) fell in over half of the countries, most notably in Chile and Mexico.

## The Response of Growth to Adjustment

At the risk of some oversimplification, and anticipating some of the results discussed in Sections III–IX, the growth response following the adoption of adjustment policies in the eight countries can be summarized as follows. In considering these overall developments, the intrinsic difficulties of drawing strong conclusions about the effects of policies on growth and distinguishing these effects from other influences, including changes in the external environment and other exogenous shocks, should be recognized.

### Responses in the Short Term

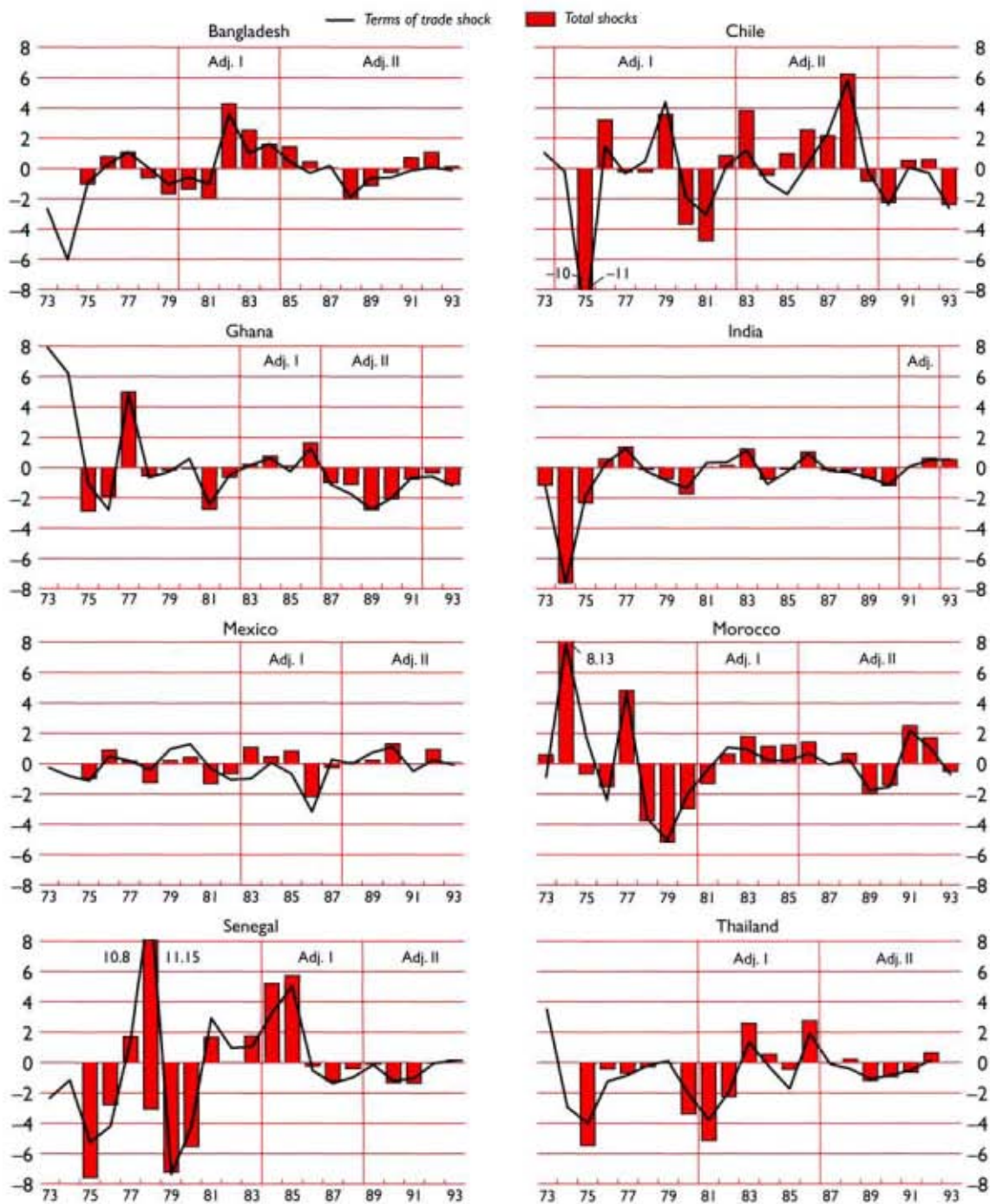
- In several countries (most notably Chile in both 1975 and 1982 and Mexico in 1982–83) output and investment rates initially declined severely, reflecting in part the reversal of previous investment booms, as well as a sharp deterioration in measured productivity that was probably due in large part to a decline in capacity utilization. Employment data is sketchy for many countries, but unemployment was especially severe in Chile, reaching an unprecedented 20 percent in 1982. Where inflation was high (Chile, Mexico, and Ghana), it generally appears to have exacerbated the poor initial growth performance. Although it is difficult to identify the direction of causation, this accords with evidence from broader cross-country studies, which suggest that episodes of macroeconomic instability, including high inflation, are typically associated with lower growth.

- Most other countries (India, Morocco, Senegal, and Thailand) experienced more moderate initial slowdowns in growth, while no discernible slowdown took place in Bangladesh. Private investment as a share of GDP typically fell for several years, while cuts in public investment were part of the fiscal consolidation in most cases (Table 5 and Chart 7). However, the investment decline in Thailand was relatively shallow and short-lived.

- Following a prolonged period of economic decline and severe import compression, growth in Ghana picked up quickly, once the Economic Recovery Program was implemented in 1983, reflecting a marked turnaround in productivity and a mod-

<sup>14</sup>Senegal has access to the common pool of reserves shared by all the members of the CFA franc zone.

**Chart 6. Size of External Shocks<sup>1</sup>**  
(In percent of GDP)



Sources: International Monetary Fund, *World Economic Outlook*, various issues; and IMF staff estimates.

<sup>1</sup>The total shock indicates the combined impact effect, in percent of GDP, of changes in the trade-weighted terms of trade, fluctuations in world interest rates affecting debt-service payments, and changes in global demand. A positive number implies a favorable shock. See McCarthy, Neary, and Zanalda (1994).

**Table 5. Response of Private Investment During Adjustment Periods***(Percentage changes in GDP over the indicated period; in constant prices, unless otherwise indicated)*

Country	Investment Decline from Peak to Trough (In percent of GDP)	Duration of Investment "Pause" Between Decline and Start of Recovery Corresponding period	Magnitude of Investment Takeoff (In percent of GDP)
Bangladesh	2.8 (1980–90)	Prolonged stagnation	Weak recovery (1990–93)
Chile <sup>1</sup>	9.3 (1981–83)	No pause (steep decline followed by sustained recovery)	12.0 (1983–93)
Ghana <sup>2</sup>	3.1 (1985–86)	No pause, but early recovery after 1983 interrupted by a decline in 1986	Weak, uneven recovery
India <sup>3</sup>	3.1 (1990/91–1992/93)	At least 2 years	Recovery appears to have begun in 1994/95
Mexico	4.4 (1981–83)	About 4 years (1983–87)	5.5 (1987–93)
Morocco	2.9 (1982–85)	About 3 years (1985–88)	Weak, uneven recovery (1989–93)
Senegal <sup>1</sup>	No significant decline	No pause	No significant recovery
Thailand	3.4 (1983–86)	About 1 year (1986)	14.8 (1986–93)

Source: IMF staff estimates.

<sup>1</sup>Nongovernment investment.<sup>2</sup>Current prices.<sup>3</sup>Excludes inventories and that part of statistical discrepancy attributed to investment in the national income accounts. Including these items would show a sharper initial decline. Although full data are not yet available, a variety of evidence points to a resurgence of private investment in India during 1994/95 (see Chopra and others (1995)).

erate pickup in (mainly public) investment, financed in part by higher official external financing.

### Responses in the Medium Term

- Simple time-series comparisons as well as the results of panel regressions based on a control-group approach using data for a large number of countries suggest that Thailand, Chile, and, to a lesser extent, Ghana, have sustained growth higher than that achieved prior to the adoption of adjustment policies. Although cyclical recovery was obviously part of the story, especially in Chile, the improvements in productivity have persisted for long enough to suggest that other influences, including structural reform, were also at work. Chile and, even more emphatically, Thailand were also the two countries that achieved large and sustained improvements in private investment, supported by higher domestic sav-

ing as well as capital inflows—suggesting a shift to a path where higher saving and higher growth were mutually supporting.

- In many other countries (including India, Mexico, and Morocco), the initial recovery in private investment was slower; in many cases, an investment "pause" of from two–four years occurred before private investment began to respond to improved macroeconomic balances and structural reform measures (see Table 4).

- In Mexico, the recovery in private investment, albeit delayed, was eventually quite significant. However, this recovery did not translate into substantially higher rates of recorded output growth. Moreover, the eventual resumption of capital inflows coincided with a collapse in private saving, leading to large current account deficits that eventually proved unsustainable. The limited output response occurred despite major progress in several key struc-

**Chart 7. Share of Private and Public Investment in GDP**

(In percent; constant prices unless otherwise indicated)

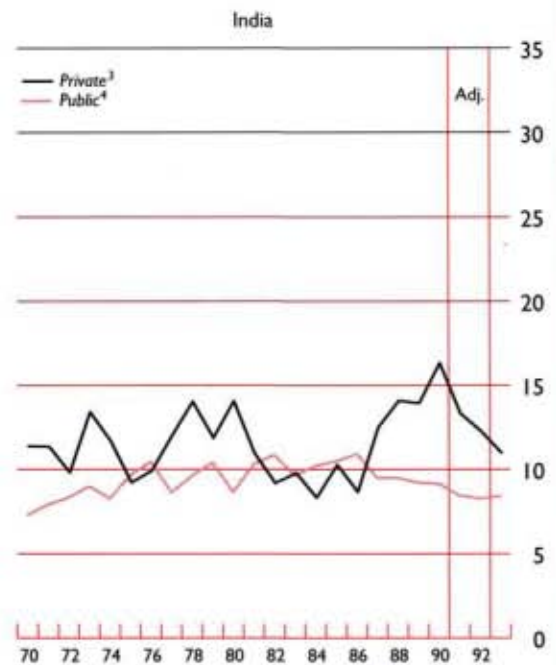
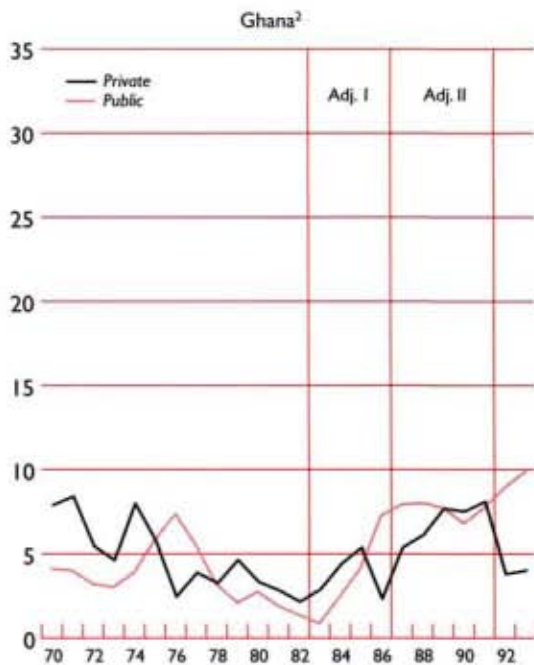
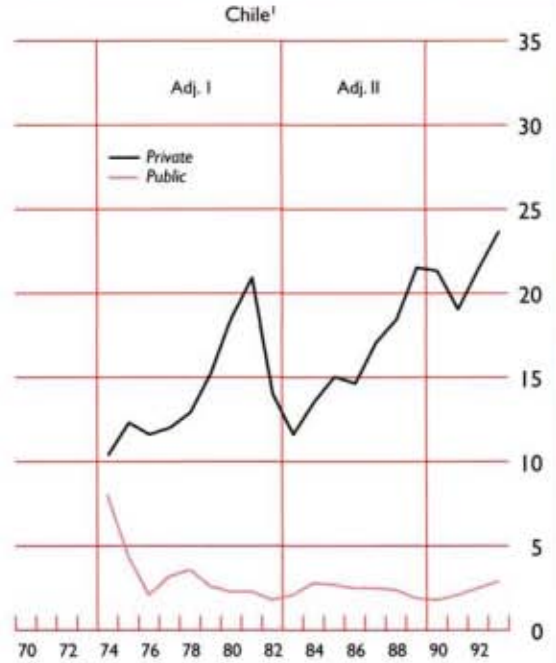
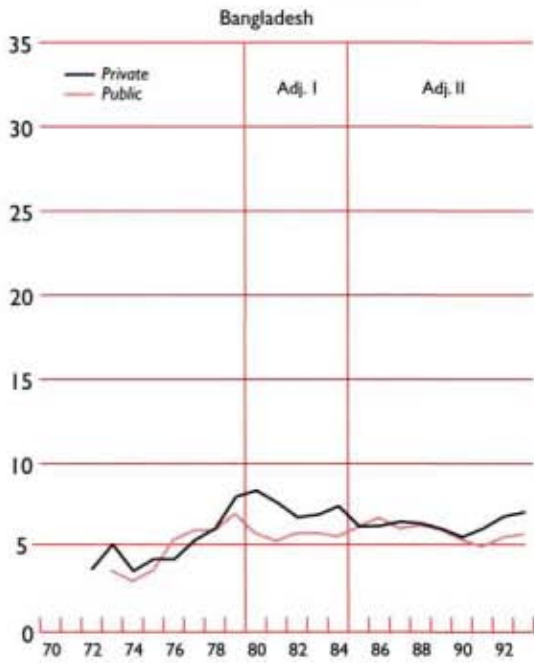
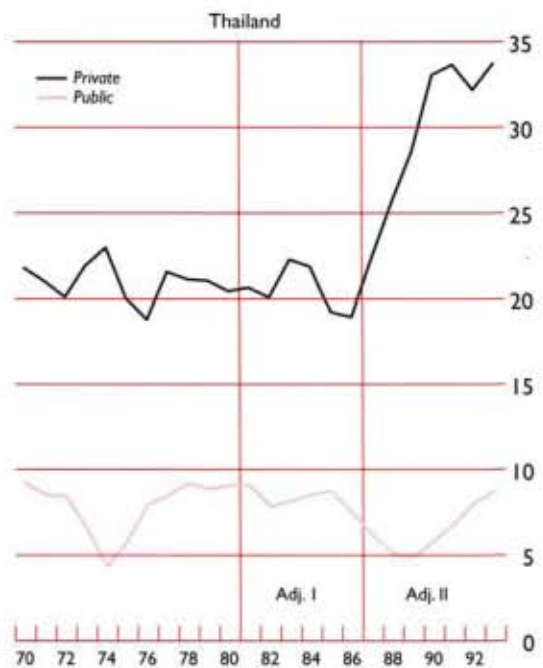
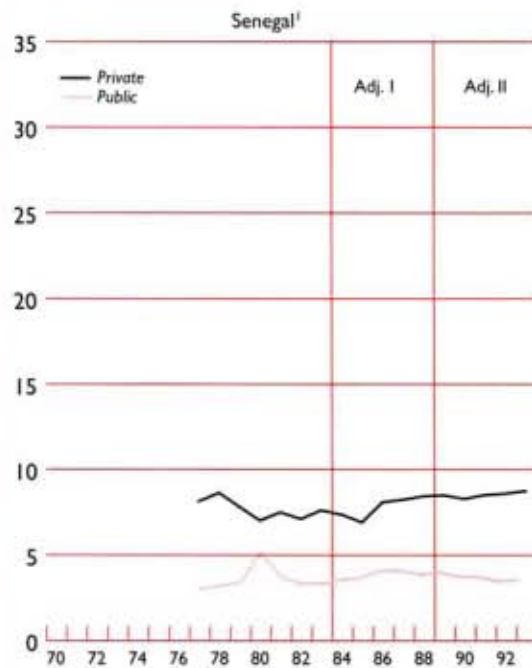
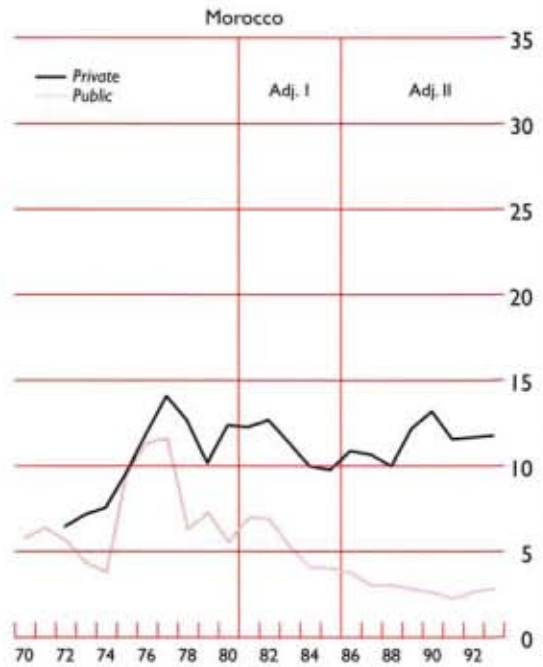
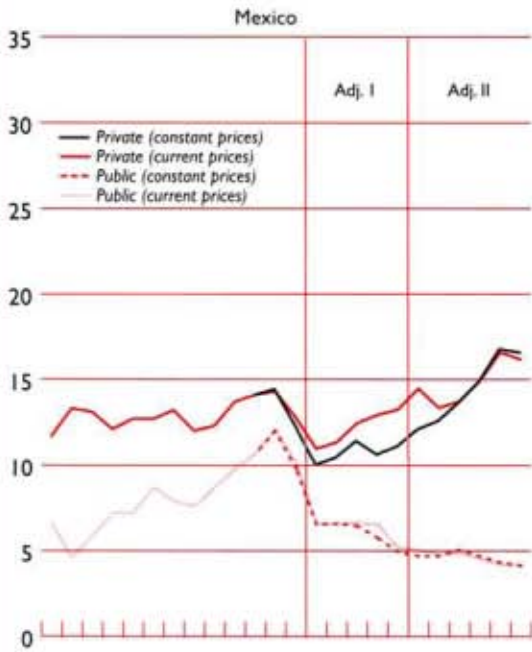


Chart 7 (concluded)



Source: IMF staff estimates.

<sup>1</sup> Nongovernment (private) and government (public) investment.

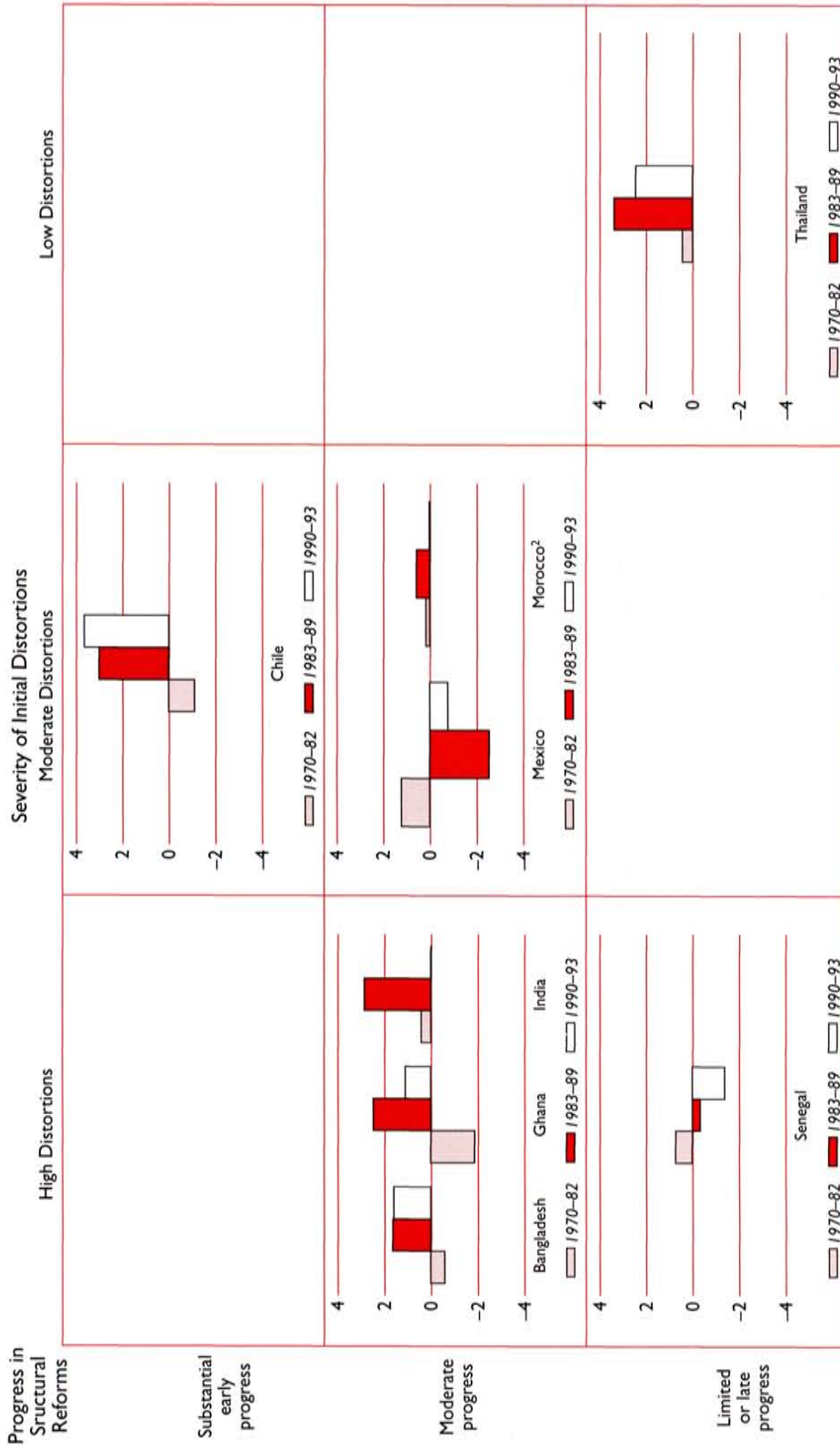
<sup>2</sup> Current prices.

<sup>3</sup> Includes private inventories and a statistical discrepancy.

<sup>4</sup> Includes public inventories.

**Chart 8. Structural Reforms and Trends in Total Factor Productivity<sup>1</sup>**

(Total factor productivity contribution to GDP growth; annual averages in percent)



Sources: IMF staff estimates; International Monetary Fund, *World Economic Outlook*, various issues; World Bank, *World Tables*; World Bank Social Indicators database; Barro and Lee (1993); Nehru and Dhareshwar (1993); and Sarel (1995).

<sup>1</sup>The total factor productivity contributions should be interpreted with care, because they include cyclical changes in factor utilization.

<sup>2</sup>For Morocco, the third average includes the year 1994, during which the economy recovered from the effects of the severe drought of 1992-93.



tural areas and was especially striking in light of the tendency—suggested by some recent cross-country studies and reaffirmed for the other countries in the study that experienced high-inflation episodes (Chile and Ghana)—for output growth and measured productivity to recover quite strongly after inflation falls (see Section IV). Without claiming to have a complete answer, important contributory factors, in addition to the measurement problems discussed earlier, appear to have been the late or incomplete nature of structural reforms in the agricultural sector and the market for infrastructural services as well as a persistence of high margins on financial intermediation. Several measures in these areas were implemented relatively recently and have not yet had a major impact on output.<sup>15</sup>

- Despite no initial slowdown in investment or output growth and notwithstanding the progress that has been made toward macroeconomic stability, Bangladesh has not yet achieved a shift to a markedly higher growth path.

<sup>15</sup>There are signs that, prior to the recent crisis, the reforms were beginning to yield significant gains, most notably in the manufacturing sector, where average output per worker rose at an annual rate of 6 percent during the period 1988–94.

- The recovery in growth was weakest in Senegal, especially after the track record of macroeconomic stability is taken into account.

- It has typically been difficult—in this and other studies—to establish robust empirical evidence on the links between productivity growth and structural policies, in part because it is hard to distill complex structural policy measures into a few quantifiable variables.<sup>16</sup> Nevertheless, an examination of overall trends in productivity growth suggests that those countries that made the most substantial progress in removing structural distortions (Chile) or where such distortions were not severe to begin with (Thailand) generally experienced the most rapid and sustained improvements in measured TFP (Chart 8). Other countries that experienced considerable initial productivity gains were those that began with severe structural distortions and made moderate progress in removing them (notably Ghana and, to a lesser extent, Bangladesh and India). Countries that began with severe distortions and made only limited progress with structural reforms (Senegal) tended to have sluggish TFP growth.

<sup>16</sup>These issues are discussed in more depth in Section VIII.