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Global Economic Prospects  
and the Developing Countries

1991

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and the Developing Countries*

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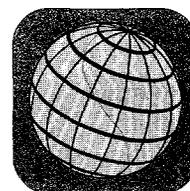
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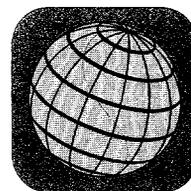
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## Preface

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This book provides a detailed review of global economic prospects for development. The analysis covers both industrial and developing countries, focusing especially on the economic links that bind them in the global economy. This study complements the *World Development Report 1991: The Challenge of Development* (forthcoming) by presenting the analytical underpinnings to its discussion of international economic trends, as well as a more detailed exposition of the external circumstances that define the global context for developing countries. Alternative scenarios of the global economic environment are analyzed for their policy implications, particularly from the perspective of developing countries. Because of this focus on international dimensions, the study does not elaborate on the role of policies in developing countries for accelerating their development, although they are clearly of greater relevance to the growth prospects of individual developing countries. Domestic policies are analyzed in considerable detail in the *World Development Report 1991*.

Each year, the global economic prospects study will focus on one of the key economic linkages between developing countries and the rest of the world.

This year, the special emphasis is on trade in primary commodities.

Chapter 1 reviews structural factors affecting the world economy, focusing on the interdependence between industrial and developing economies and on how this has helped shape economic growth and development.

Chapter 2 explores this issue further in relation to one international market—the international market in primary commodities.

Chapter 3 reports on the state of the world economy today and examines the challenges it faces in the coming decade. These include the outlook for international trade policy, especially the outcome of the Uruguay Round, policies affecting real interest rates, the shortage of external capital flows to developing countries, and expectations about oil prices.

Chapter 4 uses alternative scenarios of the future to examine the outlook for the world economy and prospects for development in the 1990s.

This book on global economic prospects is a product of the staff of the International Economics Department of the World Bank.



## Abbreviations, acronyms, and data notes

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<b>ACP</b>	African, Caribbean, and Pacific	<b>MUV</b>	Manufactures unit value of exports from G-5 countries
<b>ASEAN</b>	Association of South East Asian Nations	<b>NIE</b>	Newly industrializing economies
<b>CMEA</b>	Council for Mutual Economic Assistance	<b>ODA</b>	Official development assistance
<b>DM</b>	Deutsche mark	<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>EC</b>	The European Community	<b>OPEC</b>	Organization of Petroleum Exporting Countries
<b>ERM</b>	Exchange rate mechanism	<b>PPP</b>	Purchasing power parity
<b>FDI</b>	Foreign direct investment	<b>SDR</b>	Special drawing right
<b>G-3</b>	Germany, Japan, and United States	<b>SPA</b>	Special Program of Assistance for Africa
<b>G-5</b>	France, Germany, Japan, United Kingdom, and United States	<b>UNCTAD</b>	United Nations Conference on Trade and Development
<b>G-7</b>	Canada, France, Germany, Italy, Japan, United Kingdom, and United States	<b>UNCTC</b>	United Nations Centre on Transnational Corporations
<b>GATT</b>	General Agreement on Tariffs and Trade	<b>UNIDO</b>	United Nations Industrial Development Organization
<b>GDP</b>	Gross domestic product	<b>WDR</b>	<i>World Development Report</i>
<b>GDR</b>	German Democratic Republic		
<b>GNP</b>	Gross national product		
<b>IDA</b>	International Development Association		
<b>LBO</b>	Leveraged buyout		
<b>LIBOR</b>	London interbank offered rate		

### Data notes

Appendix A classifies countries by income, region, and analytical group. Because of data limitations, the following countries are not included in any regional or analytical group totals: Albania, Cuba, Democratic Republic of Korea, and the USSR.

The following norms are used throughout:

- *Dollars* are current U.S. dollars unless otherwise specified.
- *Billion* is 1,000 million.
- Data for periods through 1989 are actual; data for 1990 are estimated; and data for 1990–2000 are projected.
- All growth rates are based on constant price data unless otherwise indicated, and have been computed with the use of the least squares method. See the technical note to the World Development Indicators for details of this method (World Bank, 1991).

## Summary

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The increasing interdependence of the global economy over the last four decades has favored economic growth. World trade has grown faster than GDP, foreign investment has increased rapidly, new technologies have revolutionized international communication and altered long-standing patterns of productivity and employment, and international financial markets have expanded enormously in scale and diversity of instruments.

But not all developing countries have benefited from these developments. Some exploited opportunities for trade and specialization effectively, maintaining rapid rates of economic development; others remained wedded to strategies that slowed growth. From 1965 to 1989, the aggregate real GNP of developing countries (defined in this study as all low- and middle-income countries) grew at an average annual rate of 2.5 percent per capita. For the economies of East Asia, per capita growth was more than double the average, at about 5.2 percent a year, whereas in Sub-Saharan Africa per capita growth was virtually imperceptible at 0.4 percent a year.

The key conclusions of this study are highlighted in the sections that follow.

### **Economic links with the world economy are important**

The ways countries have exploited economic links with the rest of the world have strongly influenced these differences in growth performance. East Asian economies that fostered an open trade environment and maintained their creditworthiness were able to establish competitive industries that gained the most from buoyant international trade and capital flows. Moreover, these economies adjusted rapidly to sudden adverse changes in the external environment as, for example, after the two oil shocks of 1973 and 1979.

The economies of Latin America and Sub-Saharan Africa, by contrast, continued to depend heavily on primary commodity exports and suffered from slug-

gish growth in export demand and steady declines in their terms of trade in the 1980s. In many cases, these countries were slow to respond to this deterioration in terms of trade, and their reliance on excessive external borrowing and inappropriate trade and macroeconomic policies accentuated their vulnerability to external factors. The adjustments required were deeper and more painful, and the supply response to changed incentives was lethargic because of the large debt overhang, the dominant role of the public sector, and the inadequacy of complementary physical, social, and institutional infrastructure.

While the growth performance of individual developing countries has varied widely because of differences in economic policies and resource endowments, the growth rate of developing countries as a group has tended to move closely with the growth rate of industrial countries (Figure 1). This reflects strong linkages between the industrial and developing economies, through international trade, interest rates, capital flows, and commodity prices.

### **International policies will affect the prospects of developing countries**

Recognition of these close links between industrial and developing economies is important for assessing the developing world's prospects. How supportive of rapid growth will these factors be in the coming decade? The answer depends on policies in four areas of international economic management:

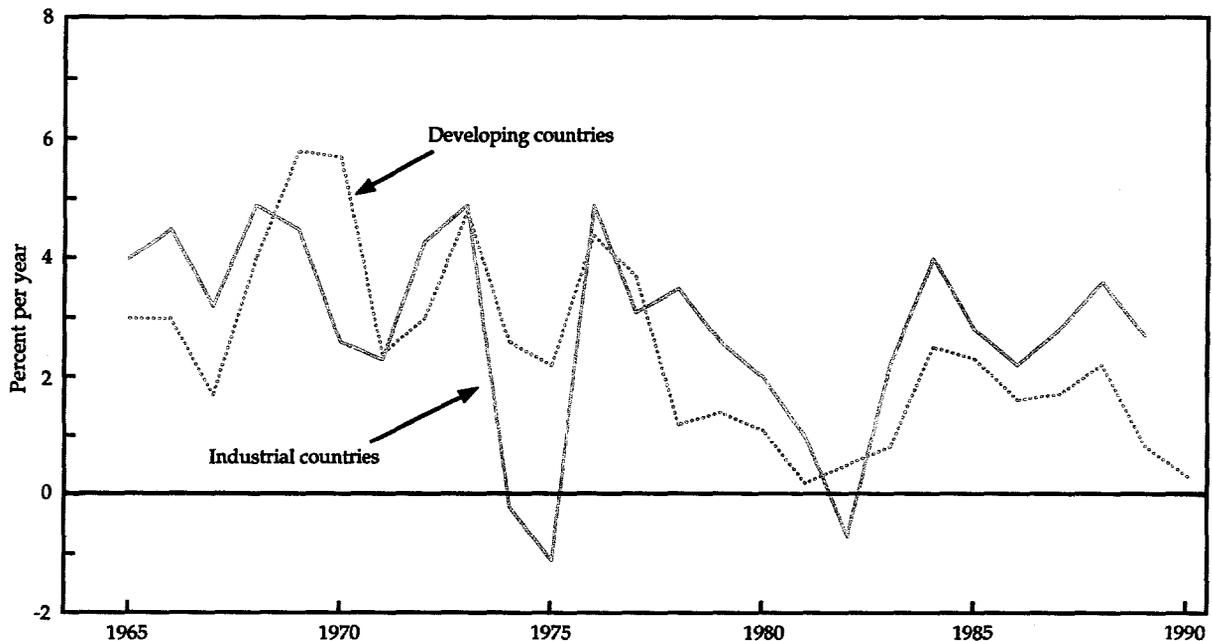
- International trade policy, in the context of the Uruguay Round
- Policies affecting real interest rates
- Debt management policy, notably efforts to increase capital flows to countries with a debt overhang
- The extent and duration of instability in oil markets.

Each of these is considered in turn below.

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*GDP per capita growth rates in industrial and developing countries have followed each other closely*

**Figure 1 Growth of real GDP per capita in industrial and developing countries, 1965–90**



Source: World Bank data.

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### *International trade*

The outcome of the Uruguay Round is critical to the future of the multilateral trading system and the welfare of the world community. Protection in industrial countries has increased in recent years, and unilateral actions to curb imports have proliferated. The emergence of regional trading arrangements could pose dangers to multilateral trade liberalization. Failure to reach agreement in the Uruguay Round could mean an acceleration in these trends, and perhaps even a retrogression into trade war. Closer regional integration need not lead to discriminatory trading practices. If it does, however, long-term global prospects could be diminished, and many developing countries outside these blocs could be hurt severely. A successful result to the Uruguay Round would nip such tendencies in the bud. It would also add vigor to forces favoring increased

interdependence and would contribute substantially to growth, employment, and welfare in the world, especially in developing countries.

### *Interest rates*

Real interest rates in the 1990s are likely to remain near their high levels of the 1980s. The global demand for capital is expected to stay strong. Industrial countries will continue to need capital to restore, replace, and upgrade infrastructure. In addition, several new claims on world savings have emerged concurrently: the social and infrastructure needs of unified Germany and Eastern Europe, the postwar reconstruction of Kuwait and Iraq, and the expected surge in investment as Europe moves to a single market in 1992. A recovery of private savings (in partial response to higher real interest rates and increased uncertainties) will serve only to moderate the up-

ward pressure on the cost of capital. And, so far, it does not appear that an increase in public sector savings will make up the difference.

#### *External capital*

Although the debt crisis erupted a decade ago, its effects will continue to be felt through the next decade. Even if net flows of capital to developing countries were to grow nearly 10 percent a year, aggregate net financial transfers to these countries would be only slightly positive by 1995 because of their large stock of debt and high real interest rates. Moreover, such a rate of increase in net flows would require an acceleration in foreign direct investment and private lending to developing countries. For this to occur, developing countries would need to emphasize a rapid return to creditworthiness and a deep commitment to private sector development. And this, in turn, will require prudent macroeconomic and debt management policies, increased efficiency of the public sector, and greater encouragement of private investment, both domestic and foreign. Simulations suggest that an additional \$25 billion of export-oriented foreign direct investment a year during the 1990s could increase the growth of output of developing countries by about one percentage point a year during this period.

Even with larger inflows of external capital, the heavy burden of debt and debt service will constrain the prospects of many developing countries in the next decade. So far, the debt crisis has been contained through a reduction of commercial debt and debt service, an easing of terms on Paris Club reschedulings, and a continuation of other programs of debt relief and restructuring.

But the debt crisis is far from over. Several countries have accumulated substantial arrears, and the limited availability of incremental external finance has hindered their adjustment efforts.

More needs to be done to ease the debt burden of developing countries that undertake strong adjustment programs. In particular, official involvement will continue to be necessary to encourage commercial debt and debt service reduction in the more severely indebted countries. A strong argument could also be made for the reduction of official debt or debt service for middle-income countries in which high levels of official debt create uncertainty, inhibit private and foreign investment, and weaken the resolve to undertake adjustment. For severely indebted

low-income countries, bilateral creditors may wish to consider additional debt forgiveness (\$6 billion was forgiven in 1988–90) and a deepening of the concessionality of other debt relief measures. Finally, debt relief measures need to be accompanied by increased access to industrial country markets. Creditworthiness, once acquired, needs sustenance through increased opportunities for trade and investment.

#### *Oil markets*

Iraq's invasion of Kuwait created fresh uncertainty for the world economy. Although the period of exceptionally high oil prices was short-lived, the effect of the Gulf crisis on ten developing countries (Bangladesh, Egypt, India, Jordan, Morocco, Pakistan, the Philippines, Sri Lanka, Sudan, and Turkey) was especially severe because of resettlement costs and large drops in workers' remittances and tourism receipts. In the short term, a key uncertainty will be OPEC's ability to restrict production. In the longer term, the export of oil is likely to become increasingly concentrated in a few countries in the Gulf, making the oil market more vulnerable to supply disruptions. The recent crisis in the Middle East was a rude reminder of that vulnerability. Moreover, sharp declines in oil prices, especially if combined with rising interest rates, can be just as disruptive for highly indebted oil exporters.

#### **Linkages determine the patterns of exposure to external risk**

The outcomes at the global level in these four areas will have a significant bearing on the growth prospects of developing countries through their effect on: the growth of industrial country markets; the international cost of capital; the terms of trade; and the availability of external capital, particularly export-oriented foreign direct investments.

Growth in industrial countries affects growth in developing countries. A one percentage point a year increase in OECD growth could boost the growth rate of developing countries by as much as 0.7 percentage point (Table 1). But the size of this effect can be expected to vary by region. For example, Sub-Saharan Africa would benefit relatively little from higher growth in industrial countries because the income elasticities of demand for its exports are low and because the erosion of export capacity during the

**Table 1 Estimated impact of changes in the external environment on GDP growth in developing countries**  
(percentage point deviation per year)

Region	Increment in GDP growth if OECD growth increases 1 percentage point	Increment in GDP growth if real LIBOR increases 100 basis points
All developing countries	0.7	-0.2
Sub-Saharan Africa	0.5	-0.2
East Asia	1.0	-0.2
South Asia	0.7	0.0
Europe, Middle East, and North Africa	0.8	-0.1
Latin America	0.5	-0.4

Source: World Bank data (see Box 4.3).

1980s reduced its ability to respond to increased external demand. In contrast, East Asia's diversified industrial base and significant levels of capital goods exports make the region's economic performance particularly sensitive to the health of industrial economies.

International real rates of interest are also of importance to developing countries, especially to those holding large volumes of external debt at variable interest rates. Simulations suggest that every one percentage point increase in real LIBOR (the London interbank offered rate) could reduce the growth rate of developing countries as a group by as much as 0.2 percentage points a year; for severely indebted countries, it could mean that growth is reduced by as much as 0.4 percentage points a year (Table 1).

Developing regions and analytical groups of countries differ greatly in their degrees of exposure to terms of trade risks. For example, exporters of manufactures are likely to face terms of trade that remain essentially unchanged during the 1990s. For this group, the broad product composition of exports is nearly the same as that of imports, providing a natural hedge against terms of trade risk. This result contrasts most sharply with the outcome for low-income Africa (excluding Nigeria), where the terms of trade risk is not only large but skewed downward.

The fourth source of risk to developing countries is the availability of external capital. Should external circumstances improve, it would tend to mean more external financing (and larger external current account deficits) for developing countries, although the aggregate debt service ratio would fall. That the bulk of the additional finance will need to come from private sources, including foreign direct investment, is a cornerstone of the analysis. In Latin America and East Asia—and to a lesser extent, Europe, the Middle East, and North Africa—the scale of foreign direct investment and other private flows will be sensitive

to the state of the world economy in the 1990s. By contrast, Sub-Saharan Africa relies on official development assistance, and its global supply is likely to remain fairly rigid. Thus, the composition of Africa's sources of external finance reinforces the composition of its production, exports, and debt in limiting Africa's growth opportunities in the medium term.

#### Despite the slow start, global prospects in the 1990s are encouraging

The 1990s started slowly. Economic growth in the G-5 economies fell from 3.3 percent in 1989 to 2.7 percent in 1990 (Table 2), inflation continued to edge upward, the fiscal deficit in the United States remained stubbornly high, and symptoms of financial stress in U.S. and Japanese banks became increasingly evident. The short-term outlook for industrial countries suggests that growth will weaken further, to 1.5 percent in 1991.

**Table 2 International economic parameters of importance to developing countries in the 1990s**  
(average annual percentage change, except LIBOR)

Indicator	1990-2000				
	1980-89	1990	1991	Baseline	Expected mean <sup>a</sup>
GNP <sup>b</sup>	3.0	2.7	1.5	2.9	2.6
Real LIBOR <sup>c</sup>	5.5	5.3	4.3	3.7	4.5
Export prices of manufactures <sup>d</sup>	3.1	6.9	8.2	3.9	4.6

a. Average of scenarios weighted by their subjective probabilities of occurring (see Table 4.1).

b. G-5 GNP.

c. G-5 average of six-month rates, using SDR weights; in percent.

d. Expressed in U.S. dollars.

Source: World Bank data.

But the recession in the United States is expected to be short as slimmer inventories, declining oil prices, a depreciating dollar, and lower interest rates restore the momentum of demand. A stronger U.S. economy, together with relatively healthy growth in Japan and Germany, is expected to raise the G-5 growth rate to 2.7 percent in 1992. Although the current slowdown in industrial countries is not in itself likely to damage long-run prospects in developing countries, it increases the difficulties of dealing with the more serious structural issues facing the global economy.

For the longer term, this study examines scenarios based on alternative assumptions about the quality of international economic management and uses model-based results to derive consequences for industrial and developing countries. The *baseline forecast* incorporates a menu of feasible and appropriate adjustments to the present tensions in the world economy. Under this scenario, the G-5 economies grow at almost 3 percent a year on average in the 1990s, close to the level achieved in the 1980s. Real interest rates average 370 basis points, and labor productivity grows at 2 percent a year. The U.S. economy, after a slow start, rebounds to 2.9 percent GNP growth in the second half of the decade. Europe performs better than it did in the 1980s, stimulated by German unification and the creation of a single market in the European Community. And Japan maintains a steady growth rate of 3.7 percent a year, somewhat below the 4 percent a year it achieved between 1980 and 1989. However, the analysis of alternative scenarios points to a preponderance of downside risks, with the result that the expected mean values of key economic indicators are less favorable than those of the baseline forecast (Table 2).

For developing countries, the baseline scenario incorporates external circumstances for develop-

ment that are, on the whole, moderately better than in the "lost decade" of the 1980s. World trade is expected to grow a little faster and real interest rates to be a little lower. But the terms of trade for primary producers will be considerably worse on average. What is more, for developing countries the 1990s started poorly, with GDP per capita barely rising in 1990. Nevertheless, with improved domestic policies and a supportive international trading environment, developing countries could expect their growth to average about 3 percent per capita in the 1990s, up from 1.6 percent in the 1980s (Table 3).

But to support this acceleration in growth, imports of developing countries would need to grow significantly faster than output to recover from the severe compression of imports during the 1980s because of the debt crisis. This need would be particularly strong for the severely indebted middle-income countries, whose imports were reduced sharply during the 1980s. Faster import growth, in turn, would need to be supported by effective debt relief measures, open industrial country markets for the exports of developing countries, and strong domestic policy measures in developing countries to promote exports and attract export-oriented foreign direct investment. The resulting higher levels of real net imports of goods and nonfactor services, when sustained over the decade, would also contribute toward reducing the number of poor people in developing countries from 1.1 billion in 1985 to 825 million in the year 2000.

#### **An analysis of alternative scenarios attaches considerable uncertainty to the forecast**

Scenarios around this baseline are used to explore the sources and magnitude of uncertainty in the 1990s and suggest how and why different groups of coun-

**Table 3 Growth prospects for the different developing regions under the baseline scenario**  
(average annual percentage change)

Region	GDP			GDP per capita		
	1965-89	1980-89	1990-2000	1965-89	1980-89	1990-2000
All developing countries	4.7	3.7	4.9	2.5	1.6	2.9
Sub-Saharan Africa	3.2	2.0	3.6	0.4	-1.2	0.5
East Asia	7.2	7.9	6.7	5.2	6.2	5.2
South Asia	4.2	5.4	4.7	1.8	3.0	2.6
Europe, Middle East, and North Africa	4.2	2.5	3.6	2.2	0.4	1.5
Latin America	4.3	1.7	3.8	1.8	-0.4	2.0

Source: World Bank data.

tries could be affected. The *downtside scenario* takes a less sanguine position than the base case, asking what would happen if various adjustments to present tensions (even though feasible and appropriate) were not accomplished. And the outer flanks of the probability distribution are explored through low and high scenarios, identifying the extremes of what is here called the management dimension in the world economy.

The *low-case scenario* examines the possibility that greatly amplified uncertainties and turbulence in both international trading and financial systems may lead to a much higher level of real interest rates, stagnation in industrial countries, high and unstable oil prices, continued declines in real nonoil commodity prices, and continued inertia in private financial flows to developing countries. In such circumstances, the chances are high that structural adjustment programs in many developing countries would not be sustained.

At the other end of the spectrum is the *high-case scenario*, in which challenges confronting the world economy are met convincingly and successfully. This instills confidence and reduces uncertainty in international markets, spurring further integration of the global economy. International prices of importance to developing countries—real interest rates, exchange rates, real commodity prices—are predictably stable, and investors have confidence that long-run environmental and demographic concerns are being taken in hand. The real cost of borrowing declines and real commodity prices rise in this case, promoting economic convergence among developing countries and between developing and industrial countries.

The plausible range of growth estimates for developing countries in the 1990s is therefore wide: from less than 3 percent a year to well over 6 percent. This range translates into a 40 percent difference in the level of real income by the year 2000.

### **Regional disparities in growth will continue**

The 1980s saw a sharp divergence in economic performance across developing regions. The analysis of alternative scenarios shows that the chances of significantly reducing these disparities are remote in the 1990s. The unlikelihood of convergence (added to the uncertainty about aggregate growth) intensifies the risk that the number of absolute poor in the world will rise greatly.

In Sub-Saharan Africa structural adjustment programs in a number of countries have produced the first tentative signs of economic recovery. But the recovery is expected to be fragile, and conditions in many African economies will remain precarious. Although better than what was achieved in the past, per capita incomes are expected to rise by only about 0.5 percent a year in the medium term. And per capita consumption could first decline in several countries before rising, unless there is a larger-than-projected infusion of external aid.

Latin America's economic growth is also expected to climb, from 1.7 percent during 1980–89 to 3.8 percent in the 1990s. If some of the large economies in the region that are undertaking fundamental reforms—particularly Argentina, Brazil, and Mexico—manage to stay the course, the growth payoffs could be significant. For the other severely indebted Latin American economies, increased net flows will be crucial for the resumption of growth. To attract these flows, countries will need to adopt domestic policies favoring macroeconomic stability and structural reform. To achieve stability will require continued official support for commercial debt and debt service reduction, with corresponding increases in new long-term finance to support stabilization and structural adjustment over the medium term.

The Europe, Middle East, and North Africa region includes the frontline states in the recent Middle East crisis. Of these, Egypt, Jordan, and Turkey have already faced major adjustment problems and high levels of external debt. To these problems have been added the costs of settling returning migrant workers from Iraq and Kuwait, a drastic decline in tourism earnings, and reduced revenues because of the shut-down of oil pipelines (in Turkey). While ongoing adjustment programs are expected to stabilize these economies and rekindle growth, these countries will require further external financial assistance in easing their burden of debt.

Growth prospects in Eastern Europe are expected to brighten in the second half of the decade as the dust from the present political and economic turmoil settles and economic reforms begin to yield results. The need for substantial investments in social and physical infrastructure is unlikely to be met by domestic savings alone, and external aid from industrial countries is expected to play a part. Private capital inflows into Eastern Europe will be modest at first, as investors wait to see the outcome of the reform process; but in the latter half of the decade,

flows of private direct foreign investment could be large. As a result, unsteady economic performance during the first half of the decade may lead to relatively slow growth of about 4 percent a year in the second half.

Per capita incomes in the newly industrializing economies of East Asia, including Indonesia, Malaysia, and Thailand, are expected to continue to grow at rates significantly above the average for developing countries. Many of these countries will benefit from closer trading relations with Japan and from substantial levels of foreign direct investment from Japan and Europe. As a result, East Asian countries can be expected to maintain the rapid advance of their technological capabilities through the 1990s. But this rate of progress will be more difficult to maintain as these countries approach the level of other industrial nations. In the case of China, the rapid rates of growth of the 1980s are unlikely to be repeated in the 1990s; nevertheless, growth is likely to remain well above the average for developing countries.

For South Asia, the 1990s pose higher risks than have decades past. How India handles its current economic and political difficulties is expected to have a significant bearing on its performance for the decade as a whole. Other South Asian economies are also going through a difficult period that will influence medium-term prospects. As a whole, the region

is not expected to do as well in the 1990s as it did in the 1980s.

### **Interdependence implies mutual responsibility of governments**

The alternative global scenarios suggest that the divergent patterns of growth observed in the 1980s will probably continue into the next decade. Global forces—the level and composition of economic activity, the openness to trade, appropriate financial flows, and transfers of technology—will continue to influence development prospects in the aggregate. This is true even though the prospects for individual countries will be governed primarily by how well each uses its own resources, and so by the quality of its own policy design and implementation.

Policy in the industrial countries also has implications for the prospects of developing countries. A policy mix that places greater reliance on monetary rather than fiscal policy may be less favorable to developing countries if it leads to higher interest rates or disruptive swings in exchange rates. In recognition of the close interdependence between industrial and developing countries, governments, whether in national or multilateral settings, clearly need to take account of developing country concerns when formulating policies that will affect the world economy.

# 1

## *Interdependence and uncertainty: Structural factors affecting the world economy*

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The network of economic links binding nations to one another has become remarkably strong in recent decades. Some of these links—trade, finance, investment, technology, migration—are well known, but others, such as the environment and public health, are only beginning to be appreciated. Analyzing these links and the relationships between them is critical for an understanding of the world economy, although the complexity of some of the issues—and sometimes a lack of data—make this difficult. But focusing on even a few of the more easily measured links, such as trade, finance, and investment, offers considerable insight into the world economy today and enables more informed judgment on the prospects for the future.

Each decade since World War II has marked a milestone in the evolution toward stronger interdependence in the world economy. Trade has accelerated since the 1950s, foreign investment has grown rapidly since the 1960s, international financial markets have virtually exploded since the 1970s, and many countries in Latin America, Sub-Saharan Africa, and Eastern Europe began to adopt outward-oriented policies in the 1980s.

The evidence is compelling. Today, almost one-fifth of world output is traded; a quarter century ago, it was one-eighth. Almost two-thirds of international trade is in manufactures. The share of services, now about 18 percent, is growing, while the share of raw materials (excluding fuel), now at 5 percent, is declining.<sup>1</sup>

Large amounts of capital now move around the world. Gross capital flows were close to \$1 trillion in 1987, equivalent to 40 percent of total merchandise exports; about 11 percent was direct foreign investment and more than 60 percent was short-term capital. But very little found its way to developing countries. For them, private commercial flows virtually ceased, official flows remained at \$35 billion, and direct investment (at \$25 billion) was less than a

quarter of the global total, half of it in the form of reinvested profits.

The economies of industrial and developing countries are closely intertwined. Industrial countries account for 70 percent of world trade and world output. But they depend on developing countries for a quarter of their export sales, a fifth of their primary commodity imports, and almost half of their petroleum consumption. Developing countries, for their part, rely on industrial countries for more than 60 percent of their trade and 47 percent of their primary commodity imports.<sup>2</sup> Trade between developing countries is also on the rise; they sold a third of their exports to each other in 1989, compared with one quarter a decade ago.

Together, these growing interconnections between markets and economies in the postwar years present a striking contrast to the past. In the previous four decades (1913–50), wars, autarky, and a severe depression impeded the growth of trade and international finance. In some ways, the decades since the 1950s may be viewed as a return to the pre-1913 era, when goods, labor, and capital were relatively free to move around the world. Governments of industrial and developing countries together lent their support for the establishment of a legal and institutional framework that encouraged trade and commerce between nations. This new order helped shape the world economy. It offered developing countries greater opportunities for trade and specialization, better access to foreign capital and technology, new avenues for international migration, and international forums for negotiating and consulting on multilateral issues.

This study suggests that increased integration has acted as a strong, reliable force for growth. But it finds that this force is weakening and under threat. If allowed to weaken further, international trade and finance could be disrupted, stalling growth for many years. Rising uncertainty in international financial

**Table 1.1 Growth of world trade and GDP, 1950–88**

(average annual percentage change, 1980 prices)

Item	1950–60	1960–70	1970–80	1980–88
World trade	6.5	8.3	5.2	4.0
World GDP	4.2	5.3	3.6	3.0
Difference	2.3	3.0	1.6	1.0

Source: World Bank data.

and commodity markets could be accentuated. And the prospects for developing countries could be jeopardized.

The study is structured chronologically. Chapters 1 and 2 review the past—the evolving structure of the world economy and the growing complexity of international linkages. Chapter 3 assesses the present by briefly reporting on the state of the world economy today and then spotlighting the challenges likely to confront the world economy in the next decade. Chapter 4 looks to the future, examining alternative scenarios for the world economy as they might unfold, based on the analysis of the previous three chapters.

### The growth of international trade

All through the period 1950–90, international trade grew faster than output. The rapid growth of world trade in the 1950s and 1960s was due partly to a recovery from the stagnation of the interwar years. It was spurred by buoyant growth in industrial countries, reduced barriers to trade, low world inflation, modest real rates of interest, and expanding real resource transfers to developing countries. But many of these trends were reversed in the 1970s and 1980s. The growth of international trade slowed markedly, and the gap with world output growth narrowed (Table 1.1). Nevertheless, the growth of world trade between 1950 and 1980 was still the highest recorded in history. The previous high was between 1830 and 1873, when world trade grew between 4 and 5 percent annually (Lewis 1980).

Progressive liberalization of trade policies between 1947 and 1974 helped. Average tariffs in industrial countries fell from about 40 percent to 3 percent (Laird and Yeats 1988). These reductions helped developing countries export more, despite the simultaneous erosion of trade preferences accorded to individual countries (Balassa 1980). Even so, the average effective rate of protection against imports from developing countries was more than

twice that against imports from industrial countries (UNCTAD 1968). Even today, tariffs in several industrial countries are higher for a range of products of special interest to developing countries—leather, textiles, clothing, footwear, and certain agricultural items.

The forces for trade liberalization have weakened since the mid-1970s, when industrial countries began to establish new barriers to trade. The use of nontariff barriers grew in significance. By 1986, almost 16 percent of OECD imports were covered by nontariff barriers. Voluntary export restraints and quotas consistently slipped through the proscriptions of various GATT articles, antidumping actions became highly arbitrary, and rules relating to origin and local content proliferated (Messerlin, forthcoming). Twenty of the twenty-four OECD economies are, on balance, more protectionist now than they were ten years ago (Henderson 1991). Because nontariff barriers are most often imposed in sectors in which developing countries are internationally competitive—leather products, textiles, clothing, footwear, travel goods, and beverages (Laird and Yeats 1990, Tables 4.4 and 4.5)—they affect developing countries more than they do industrial countries (Laird and Yeats 1990, Tables 4.6 and 4.7).

The protectionist trend in developing countries has been similar. Analysis of a sample of 82 developing countries in 1987 revealed that 28 percent of all imports were subject to nontariff barriers. But this is almost certainly an underestimate, because it ignores a variety of regulations that effectively operate as nontariff barriers. These include import licensing, foreign exchange controls, price controls, procurement restrictions, finance requirements, and technical standards.

A reduction of nontariff barriers was one of the goals of the Uruguay Round, but the outcome of these negotiations remains uncertain. With the future of multilateral trade relations in doubt, the

**Table 1.2 Intraregional trade, 1988**  
(percent)

Region	As share of world trade	As share of region's trade
European Community	20	56
North America	6	42
East Asia <sup>a</sup>	5	28

a. Japan, Hong Kong, Korea, Singapore, Taiwan (China), and ASEAN.

Source: World Bank data.

growth of regional trading blocs in Europe, North America, and East Asia has assumed added significance (Table 1.2). Trade within these regions has accelerated in recent years, although trade between them grew more strongly for the period 1980–89 as a whole (Table 1.3).

Recent developments foretell an increase in trade within blocs. As a first step toward economic and monetary union, the European Community (EC) is preparing to dismantle national barriers and permit the free flow of goods, services, labor, and capital by 1992. More than half the fiscal, technical, and physical barriers have already been removed (IMF 1990,60). All EC members, apart from Greece and Portugal, have joined the exchange rate mechanism (ERM), and 1993 has been fixed as the target year for full monetary union. Most of the impetus for European integration has come from governments, but more recently the private sector has recognized the importance of integration for strengthening the competitive position of European firms in international markets.

In the western hemisphere, the United States concluded a free trade agreement with Canada in January 1988 and it has scheduled talks this year with Mexico to explore a similar arrangement. Other Latin American countries have also expressed an interest in opening discussions on intraregional integration. In East Asia, Japanese foreign direct investment has forged close trading and financial links between Japan and other countries in the region. Export promotion efforts in this region first centered on the North American and European markets and then on intraregional trade. In Eastern Europe, the tendency has been in the opposite direction. Political and economic reforms have severed trade and financial ties within the Council for Mutual Economic Assistance (CMEA), and countries are seeking ways to participate more fully in the world economy.

**Table 1.3 Growth of trade within and between regions, 1980–89**

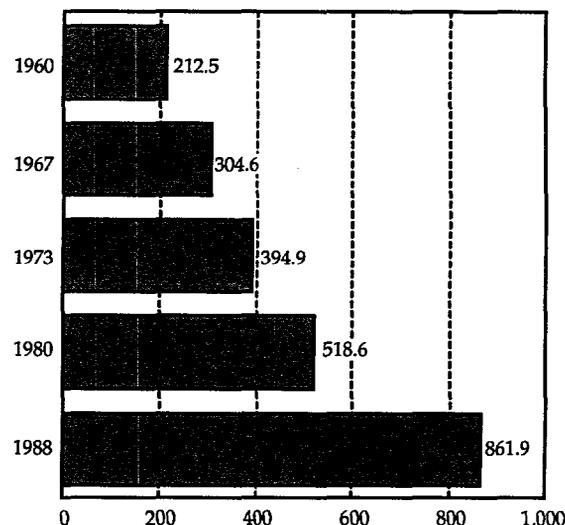
(average annual percentage change)

Region	European community	North America	East Asia
European Community	5.2	—	—
North America	8.2	9.7	—
East Asia	12.4	12.8	12.9

Source: World Bank data.

Flows of foreign direct investment have been increasing

**Figure 1.1 World stock of foreign direct investment, selected years, 1960–88**  
(1980 prices)



Source: U.S. Department of Commerce (1991) and World Bank data.

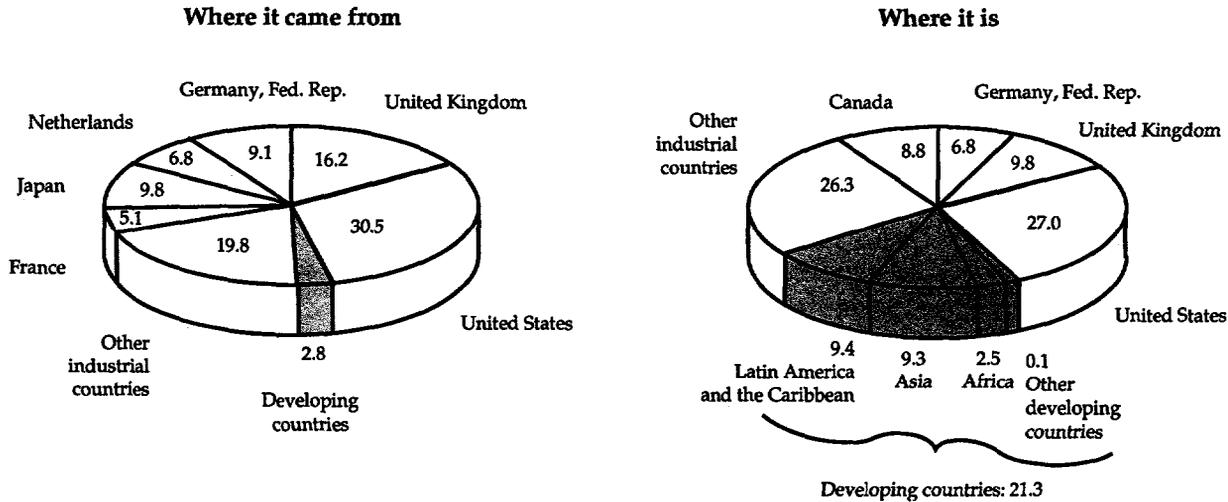
### Foreign direct investment, technological change, and globalization

The integration of the world economy through trade has been reinforced by increasing flows of foreign direct investment (FDI) and the growing involvement of transnational enterprises (Figure 1.1).<sup>3</sup> The stock of FDI grew by 66 percent between 1980 and 1988, and most of it (97 percent) is held by industrial countries. Transnational enterprises have been the principal force behind this rapid rise in FDI, beginning in the 1960s when U.S. enterprises invested heavily in Europe. Since then, however, a greater plurality has emerged. The United States, once the leading source of foreign investment, became the largest recipient. Outflows from the United Kingdom edged ahead of those from the United States during the first half of the 1980s, and the stock of Japanese foreign investment almost doubled from 1980 to 1988, although it was still only 9.8 percent of the world stock in 1988 (see Figure 1.2).

In 1988, developing countries were host to one-fifth (21.3 percent) of the world's stock of FDI, a substantial decline from their position two decades earlier, when they held almost one-third (30.6 percent).<sup>4</sup> Two-fifths of the current stock is in Latin America and the Caribbean, although growth of the

*Developing countries are host to one-fifth of all foreign direct investment*

**Figure 1.2 Originating countries and host countries and regions of world stock of foreign direct investment, 1988**  
(percent)



Source: U.S. Department of Commerce (forthcoming).

stock in this region slowed from 11.6 percent a year in 1973–80 to 8.7 percent in 1980–87.<sup>5</sup> Over the last two decades, FDI has grown fastest in Asia, between 13 percent and 16 percent a year, with most of it in East and South East Asia. The total stock of FDI in Africa between 1980 and 1987 grew at about the same rate as in the rest of the world, but Africa's share of worldwide FDI is less than 3 percent.

The sectorial composition of FDI in developing countries has gone through three distinct phases. Before World War II, most FDI was in mining, plantation agriculture, and, to a lesser extent, public utilities. In the 1950s and 1960s, the focus shifted to manufacturing. Most FDI was in large developing countries (such as Argentina and Brazil), where raw materials were plentiful and domestic markets well protected. In the 1970s and 1980s, policy reforms in several developing countries emphasized exports of manufactures. FDI aligned itself accordingly, growing rapidly in the assembly and light manufacture of labor-intensive products, such as textiles, clothing, and electronics. It also flowed to service industries (banking, insurance, tourism) in which specialized skills were in short supply locally.

The increase in the number of transnational enterprises and the rapid growth of their assets have added an important dimension to world trade. Even in the early to mid-1980s, the share of intrafirm trade

in the international trade of major industrial countries varied between 30 percent and 40 percent (Table 1.4). The costs of operating globally have fallen substantially. The use of computers and telecommunications has improved inventory management and coordination and has reduced uncertainty. In some sectors, new technologies have helped reduce the minimum economic scale of production: in the automobile industry, the size of an efficient plant has fallen from 250,000 cars a year to between 100,000 to 150,000 cars; in steel, it has dropped from almost 5 million tons of output a year to less than 2 million. Products are smaller and weigh less; as a result, transport costs have fallen substantially. The weight of U.S. merchandise exports per real dollar has fallen on average by 3.5 percent a year since 1970

**Table 1.4 Share of intrafirm transactions in international trade**  
(percent)

Item	United States 1985	Japan 1983	United Kingdom 1981
Exports	31.0	31.8	30.0
Imports	40.1	30.3	n.a.

Source: UNCTC (1988).

(Greenspan 1990); not surprisingly, the share of U.S. foreign trade carried by air has doubled since 1970.

Globalization and technological change have brought with them new opportunities for developing countries. In the textiles industry, yarn supplied from Java (Indonesia) is converted to cloth in Rajasthan (India), tailored in Bangkok (Thailand) according to fashions designed in Taipei (Taiwan, China), and eventually sold in Dusseldorf (Germany). Similarly, semiconductors manufactured in the United States are used to assemble printed circuit boards in several developing countries, including El Salvador, Indonesia, Malaysia, Mexico, and the Philippines, and shipped back to California's Silicon Valley for further processing. In the steel industry, mineral ore is shipped from Brazil to Mexico, where it is converted into steel plates that are used by car and equipment manufacturers in the western United States (Peters 1990).

The greater internationalization of production has sharpened technological competition. In the United States, for example, the number of patents registered by residents of other countries has increased steadily (Table 1.5). Large research and development costs have placed international firms under intense pressure to expand their shares of global markets.

At the same time, greater flexibility in production has allowed companies with global reach to adapt products to local market requirements. It has also encouraged enterprises to cooperate in joint ventures, to share research, and to cross-license new products. Such technology-driven arrangements have helped accelerate the diffusion of technology and innovation to developing countries and can lead to significant productivity gains. A striking example is the complex set of interlinkages between automobile manufacturers in the world (Figure 1.3). Products today use so many different technologies that few companies can remain at the frontier of technological change without interfirm alliances that span countries and regions.

**Table 1.5 U.S. patents granted to U.S. and non-U.S. residents, 1910-12 and 1977-90**  
(percent)

Country of origin	1910-12	1977-90 <sup>a</sup>
United States	89	65
Non-United States	11	35

a. Up to June 1990.

Source: Cantwell (1989); and U.S. Patent and Trade Office, September 1990.

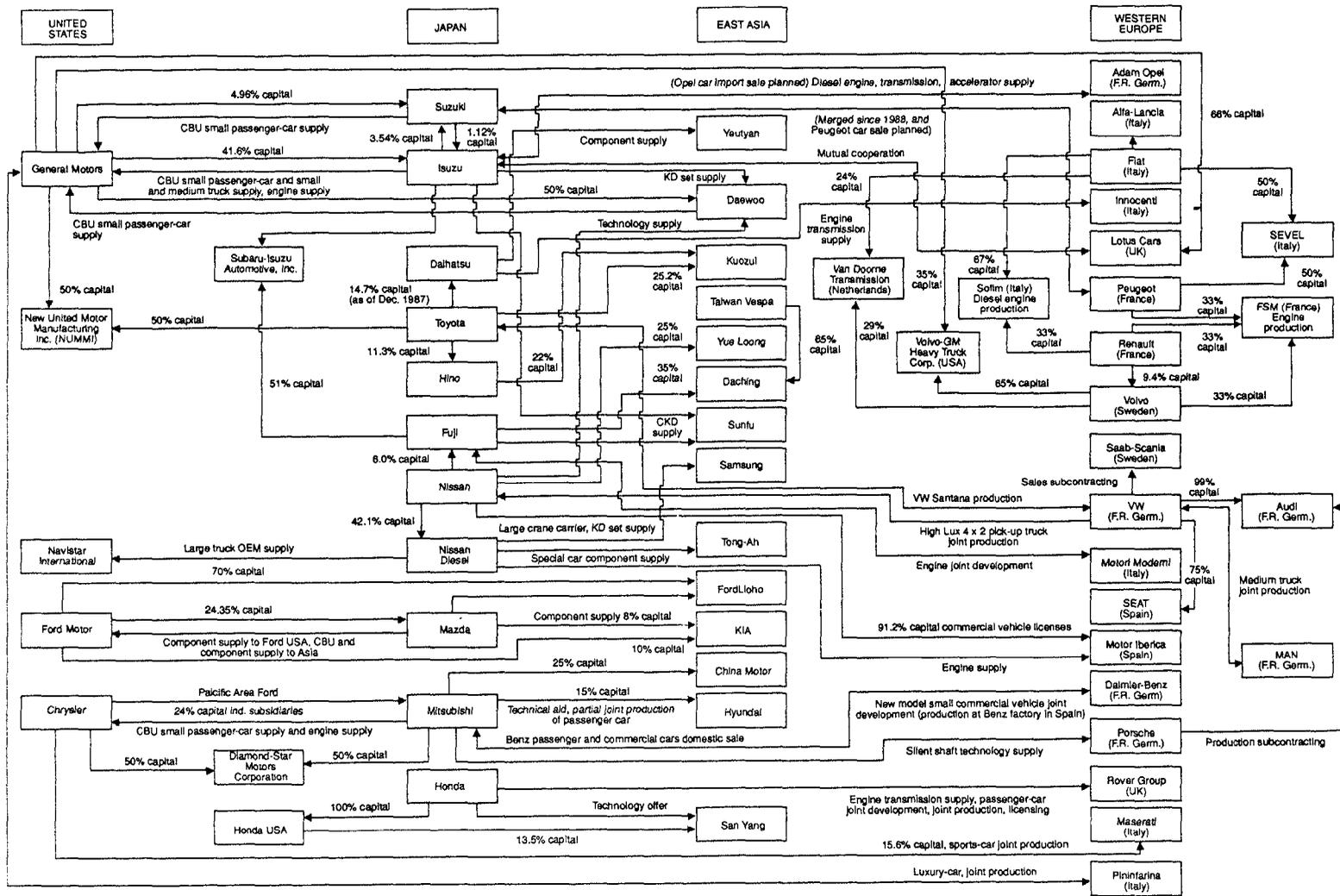
## Increased financial integration

The explosive expansion of international financial activity in the 1970s and 1980s is a special case of the growth of transnational enterprises specializing in finance (Figure 1.4). International lending grew twice as fast as world trade over the last two and a half decades. In the wake of the two oil shocks in the 1970s, international banks played a pivotal role in recycling petrodollars from OPEC to industrial and developing countries. A significant share of the increase in international lending has come from Japanese banks. In 1978, they accounted for 26 percent of the total assets of the hundred largest banks in the world; by 1986, their share had grown to 40 percent (UNCTC 1988).

With the advent of the international debt crisis, two distinct trends emerged. First, international lending fell and the international market for securities began to grow vigorously, spurred by the deregulation of capital movements during the 1970s in the major industrial economies. The value of cross-border offerings of equity-related securities grew from \$200 million in 1983 to \$20.3 billion in 1987 (U.S. Congress, Office of Technology Assessment 1990). Today the market for international securities is larger than the market for international loans. The total outstanding stock of securities was valued at \$19.5 trillion in 1988, almost four times larger than in 1982; in comparison, the assets of international banks amounted to \$17 trillion in 1988, roughly twice their size in 1982 (UNCTAD 1990b, Table 27).

Second, most developing countries were no longer able to borrow from external commercial sources. In 1987, gross capital flows between countries amounted to about \$1 trillion. But most of these capital flows were between industrial countries. For developing countries, disbursements from external borrowing declined from almost \$110 billion in 1980, when commercial bank lending to developing countries was at its height, to \$91 billion by 1989.<sup>6</sup> Net transfers to developing countries went from a positive \$37 billion in 1980 to a negative \$1 billion in 1989.<sup>7</sup> Access to the international securities market has also been limited for most developing countries. Exceptions have been countries in Asia—Indonesia, Korea, Malaysia, Thailand, and, to a lesser extent, China and India. In 1990, three Latin American countries—Chile, Mexico, and Venezuela—gained tentative access to the international bond market, signifying that the worst of the debt crisis may be over for these countries. Finally, international portfolio investment in developing countries has grown rapidly, from nearly negligible levels a few years ago

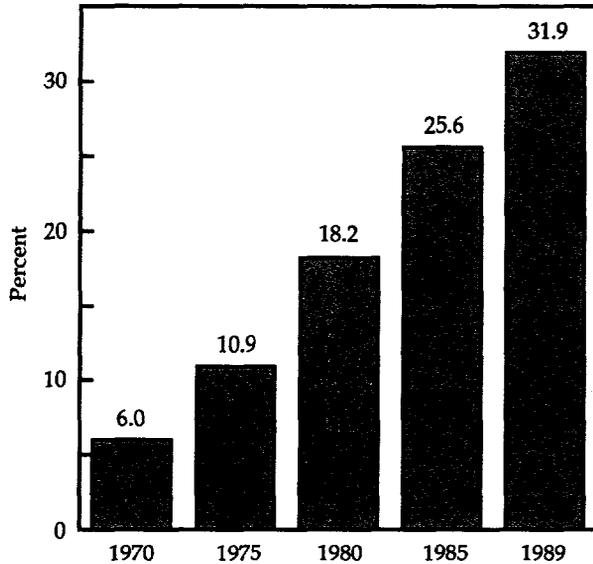
**Figure 1.3 Interfirm linkages among car makers in the United States, Japan, Western Europe, and Asia**



Notes: F.R. Germ. = Federal Republic of Germany; UK = United Kingdom; USA = United States of America.  
 CBU = completely built-up; CKD = completely knocked down; KD = knocked down; OEM = original equipment manufacturer.  
 Source: Adapted from Japan Automobile Industry Association, *The Motor Industry of Japan*, (Tokyo, 1988) as cited in UNIDO (1989). Figure III. 2.

*International banking grew rapidly,  
especially in the 1980s*

**Figure 1.4** Assets of international banks as a percentage of world GDP, selected years, 1970–89



Source: IMF, *International Financial Statistics*.

to about \$2 billion in 1990. While Asian countries and a few countries in Latin America received the bulk of these resources, Eastern Europe (primarily Hungary) also received a small amount.

Thus, most developing countries have not directly benefited from the globalization of international finance. But it has affected them in one particular respect. Along with the increased efficiency of financial transactions has come heightened uncertainty, especially in foreign exchange markets. Since the breakdown of the Bretton Woods system of fixed exchange rates in 1971, interest rates have become less stable and fluctuations in international exchange rates have grown in frequency and amplitude (Figure 1.5). This greater uncertainty in international financial markets has spawned innovations in financial instruments that permit individuals, corporations, and governments to manage risk efficiently. Floating-rate notes, note issuance facilities, Eurocommercial paper, multicurrency options, and commodity-linked financing are some of the instruments introduced recently.

Borrowers and lenders can also hedge their interest and exchange rate risks by using interest and currency swaps, as well as futures and options markets. Swap transactions have expanded dramatically

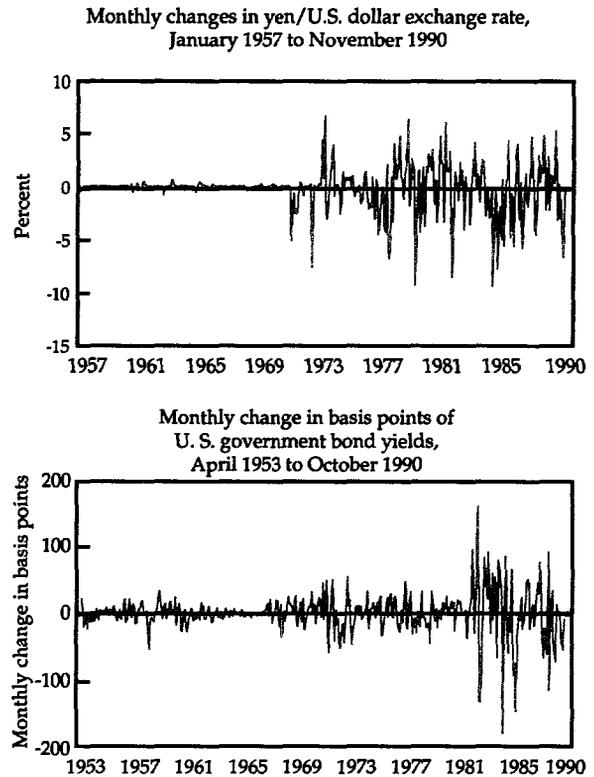
since they were introduced in the late 1970s. Outstanding interest rate swaps alone exceeded \$1 trillion in 1988, compared with \$170 billion in 1985, and outstanding currency swaps amounted to \$317 billion in 1988. Few developing countries, however, have the creditworthiness or the institutional capacity to use these markets to manage their external assets and liabilities. But with assistance from international financial institutions such as the World Bank, this capability is being developed, albeit slowly.

#### International links and economic performance

It is hardly surprising, given the strong linkages between industrial and developing countries, that per capita growth rates of the two groups have followed each other closely (Figure 1.6)—even though their terms of trade have tended to move in opposite directions (Figure 1.7). In recent years, however, for

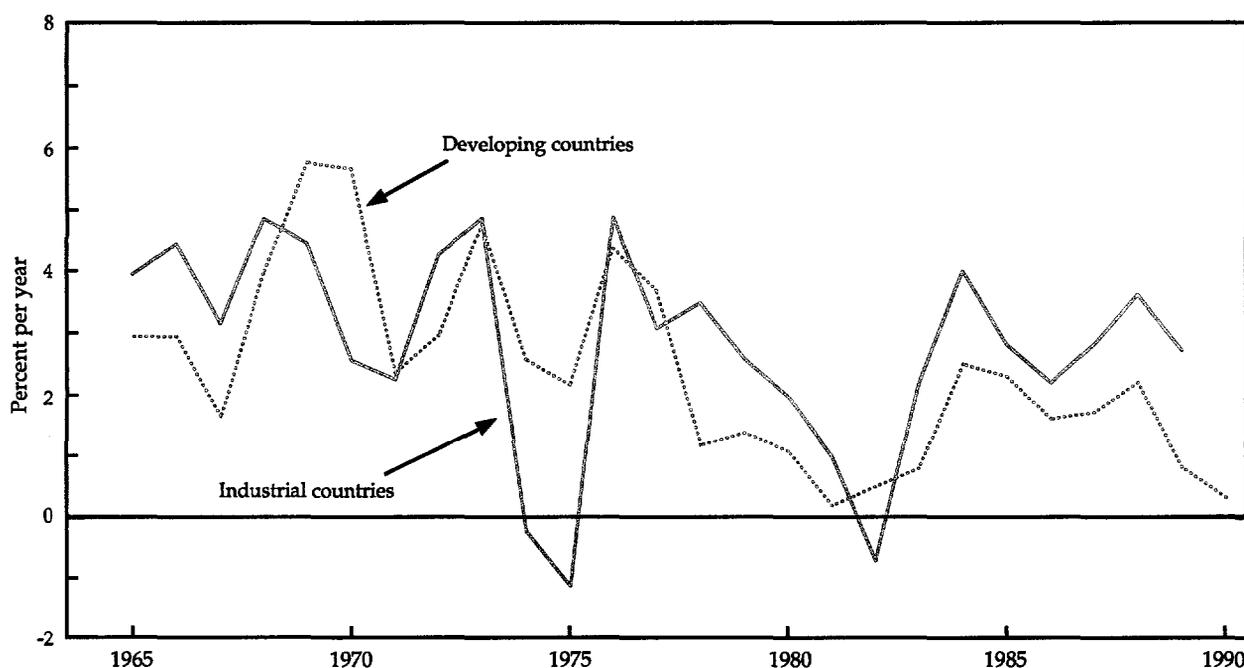
*Interest rate and exchange rate  
variability has increased*

**Figure 1.5** Variability of interest and exchange rates



Source: World Bank data.

Figure 1.6 Growth of real GDP per capita in developing and industrial countries, 1965–90



Source: World Bank data.

the first time in decades, the per capita growth rate of developing countries has fallen significantly below that of industrial countries (Figure 1.6). This trend, at a time when the external circumstances were conducive to rapid growth, reflected the poor performance of several developing economies that were suffering from large debt burdens and less favorable trade prospects.

It should be noted, however, that Asia, which recorded higher-than-average growth rates in the 1980s, also accounts for two-thirds of the population of all developing countries. And more than 70 percent of Asia's population resides in China and India, which grew substantially above the average rate for developing countries. So the majority of people in the developing world live in countries that experienced relatively rapid rates of growth in the 1980s. To reflect this, Table 1.6 includes estimates of population-weighted growth rates of GDP per capita for developing countries as a group (see also Appendix B). They show that growth, estimated thus, actually improved in the 1980s when compared with the 1973–80 period.

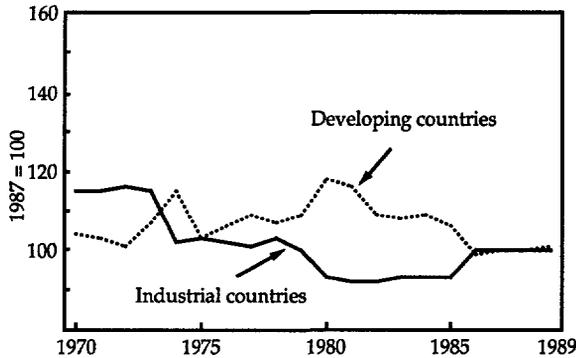
The important concern, therefore, is not so much the growth of developing countries in aggregate dur-

ing the 1980s, but the sharp divergence in economic performance across developing regions. At the one extreme, East Asian countries recorded an average per capita GDP growth rate over two and a half times that of industrial countries as a whole (Table 1.6). At the other were countries in Sub-Saharan Africa and Latin America, which recorded declines in income per capita during the period. For these two regions, the 1980s have come to be known as the "lost decade."

Three factors explain these regional differences in economic performance. First, individual economies showed varying degrees of vitality as they entered the 1980s. The East Asian economies enjoyed domestic stability and a strong export performance; many countries in Sub-Saharan Africa and Latin America, however, began the decade with underlying macroeconomic imbalances temporarily hidden by external borrowing at unsustainable levels. When real interest rates rose in the 1980s, developing economies with high levels of external debt at variable interest rates faced an external payments crisis. In Latin America, where over two-thirds of long-term debt in 1980 was at variable rates, interest payments grew by 50 percent in the first three years of the decade,

Terms of trade have moved in opposite directions for developing and industrial countries...

**Figure 1.7 Terms of trade in industrial and developing countries, 1970–89**



Source: World Bank data.

reaching \$26 billion by 1983. Aggregate net resource transfers turned substantially negative, reaching \$25 billion by 1988, prompting some countries to re-schedule their debt and debt service payments, starting with Mexico in 1982.

Second, primary commodities were nearly the sole exports of Sub-Saharan Africa and Latin America, accounting for 98 percent of African exports in 1981 and 83 percent of Latin American exports in 1980. For

**Table 1.6 Growth of real GDP per capita in industrial and developing countries, 1965–89**  
(percent per year)

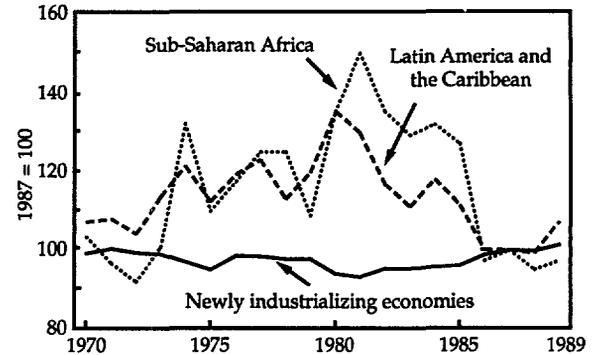
Country group	1965–73	1973–80	1980–89
Industrial countries	3.7	2.3	2.3
Developing countries	3.9	2.5	1.6
Sub-Saharan Africa	2.1	0.4	-1.2
East Asia	5.3	4.9	6.2
South Asia	1.2	1.7	3.0
Europe, Middle East, and North Africa	5.8	1.9	0.4
Latin America	3.8	2.5	-0.4
<i>Memorandum item</i>			
Developing countries (weighted by population) <sup>a</sup>	3.0	2.4	2.9

a. Using population shares as weights when calculating aggregate GDP growth for developing countries.

Source: World Bank data.

...and regional differences have been large

**Figure 1.8 Terms of trade for selected developing regions, 1970–89**



Source: World Bank data.

East Asia, the ratio was less than 40 percent (UNCTAD 1990a). With the sharp downtrend in commodity prices during the 1980s, Latin America and Sub-Saharan Africa faced a large decline in their terms of trade. Furthermore, world trade in primary commodities grew more slowly than for manufactures. The dual disadvantages of declining terms of trade and slowly growing export volumes meant that export earnings remained virtually stagnant during the 1980s. In stark contrast, the terms of trade for the newly industrializing economies of East Asia were stable (Figure 1.8), and expanding markets for their exports of manufactures were an added benefit.

Third, and most important, were the differences in policy responses to the changes in external circumstances. When the debt crisis broke, there were fears that East Asia would go the way of Latin America. But the adjustment programs in Indonesia, Korea, Malaysia, and Thailand were timely and successful. Only the Philippines eventually had to reschedule its debt. Countries in Sub-Saharan Africa and Latin America were not as successful: policies were slower to change; the adjustments required were deeper and more painful; and the supply response was more lethargic because of a large debt overhang, a relatively dominant public sector impervious to market incentives, and the inadequacy of complementary physical, social, and institutional infrastructure. In Latin America, only Bolivia, Chile, and Mexico have managed to sustain adjustment, and apart from Chile, growth has been modest. In Africa, Ghana and Mauritius, two early adjusters, have achieved promising results.

## Conclusion

The closing years of the 1980s saw a growing number of countries in Latin America, Sub-Saharan Africa, and more recently, Eastern Europe implement major policy reforms. Some of these programs are tentative, others sweeping. Some have achieved a measure of success, others have just begun. Despite their diversity, they share one common feature: a recognition of the importance of international trade and finance for improving growth and per capita incomes. There is considerable evidence to show that some developing countries have exploited the benefits of international trade, finance, and investment better than others (World Bank 1986 and 1987). Trade in goods, services, and financial securities has helped economies extend their domestic opportunities for converting domestic resources into goods and services for investment and consumption.

Economies that chose to limit their links with the world economy have not fared as well. This contrast in performance held whether the international economic environment was relatively stable, as in the 1950s and 1960s, or unstable, as in the 1970s and 1980s. Instability in international markets may have diminished the benefits from interdependence or made them more volatile, but it has not eliminated them altogether. Countries that emphasized international trade and foreign direct investment, notably in

East Asia, tended to do better during the turbulent 1980s than did others.

## Notes

1. The category raw materials excludes food and beverages (Table 2.1).
2. The reference to primary commodity imports in this paragraph excludes fuel imports. The data are from UNCTAD (1990a).
3. The definition of direct foreign investment varies among countries. The OECD defines FDI as when a single investor controls directly or indirectly 10 percent or more of the ordinary shares (or equivalent) in an enterprise in another economy or has an effective voice in the management of the enterprise through other means. The stock of foreign direct investment is measured at book value, and includes share capital and reserves plus net intercompany loans.
4. Figures are for 1988, the latest year for which data is available. Rutter (1989) and U.S. Department of Commerce (1991).
5. This is the case when the stock of FDI is measured in U.S. dollars. When measured in SDRs, the stock of FDI in Latin America increased. But since most FDI in the region is from the United States, the U.S. dollar is the more appropriate unit of measurement.
6. This excludes short-term borrowing.
7. Net transfer is defined as disbursements less actual principal repayments and interest payments.

# 2

## *Interdependence and uncertainty in international markets: The role of primary commodities*

Chapter 1 described the pattern of economic interdependence in the world and how it has affected developing countries. This chapter examines this issue more narrowly as it relates to a single international market—the market for primary commodities. For many small countries, primary commodities represent such a large share of their GDP and exports that the prices these commodities fetch can make a difference to their overall economic performance. How these countries fare in the coming decade will depend to some extent on how primary commodity prices behave. To help answer this question, this chapter examines the role of primary commodity trade in the world economy, trends in primary commodity prices, and countries' responses to commodity price shocks.

### **International links: The role of primary commodities**

World trade in primary commodities is much smaller than in manufactures and is growing more slowly (Table 2.1). Traded volumes of oil and related energy products,<sup>1</sup> arguably the most important component of primary commodity trade, did not increase during the 1980s. International trade in raw materials has also been growing slowly. Only for food and beverages has international trade grown at a rate comparable to that of manufactures. For developing countries, however, primary commodities play a much larger role than these figures suggest. Take Africa, for example. In forty-eight of fifty-five countries on the continent, the three leading commodity exports accounted for more than half of total exports (Figure 2.1).<sup>2</sup> In Latin America and the Caribbean, primary commodity exports constituted more than 50 percent of total exports in twenty-nine of forty-seven countries.

For most of these commodity producers, the final destination of their produce is usually industrial countries. But the standard paradigm—that industrial countries export manufactures and import com-

modities, while the developing world imports manufactures and exports commodities—is inappropriate. In fact, industrial economies dominate world exports of nonoil commodities only slightly less than they dominate exports of manufactures (Table 2.2). At the same time, developing countries, particularly in East Asia, are becoming increasingly important exporters of manufactures.

Furthermore, fast-growing developing countries are slowly becoming the principal sources of incremental demand for nonfuel primary commodities. For example, Asia accounted for most of the world's growth in nonfuel commodity imports over the last two decades. While the rest of the world reduced its imports of nonfuel commodities during 1969–88 by almost \$6 billion (in constant 1985 U.S. dollars), Asia increased its imports by \$11 billion. Most of this increase was in agricultural imports, especially

**Table 2.1 The role of primary commodities in international trade**  
(percent)

Category	Share, 1989 <sup>a</sup>	Average annual growth, 1980–89 <sup>b</sup>
Merchandise	82	4.3
Manufactures	60	4.9
Commodities	22	1.7
Fuels <sup>c</sup>	9	0.0
Other raw materials	5	2.1
Food and beverages	8	4.7
Services <sup>d</sup>	18	4.5
Total	100	4.3

a. Based on current U.S. dollar measures.

b. Based on real 1980 U.S. dollar measures.

c. Includes crude oil, natural gas, petroleum coke, liquid natural gas, and nongas liquids.

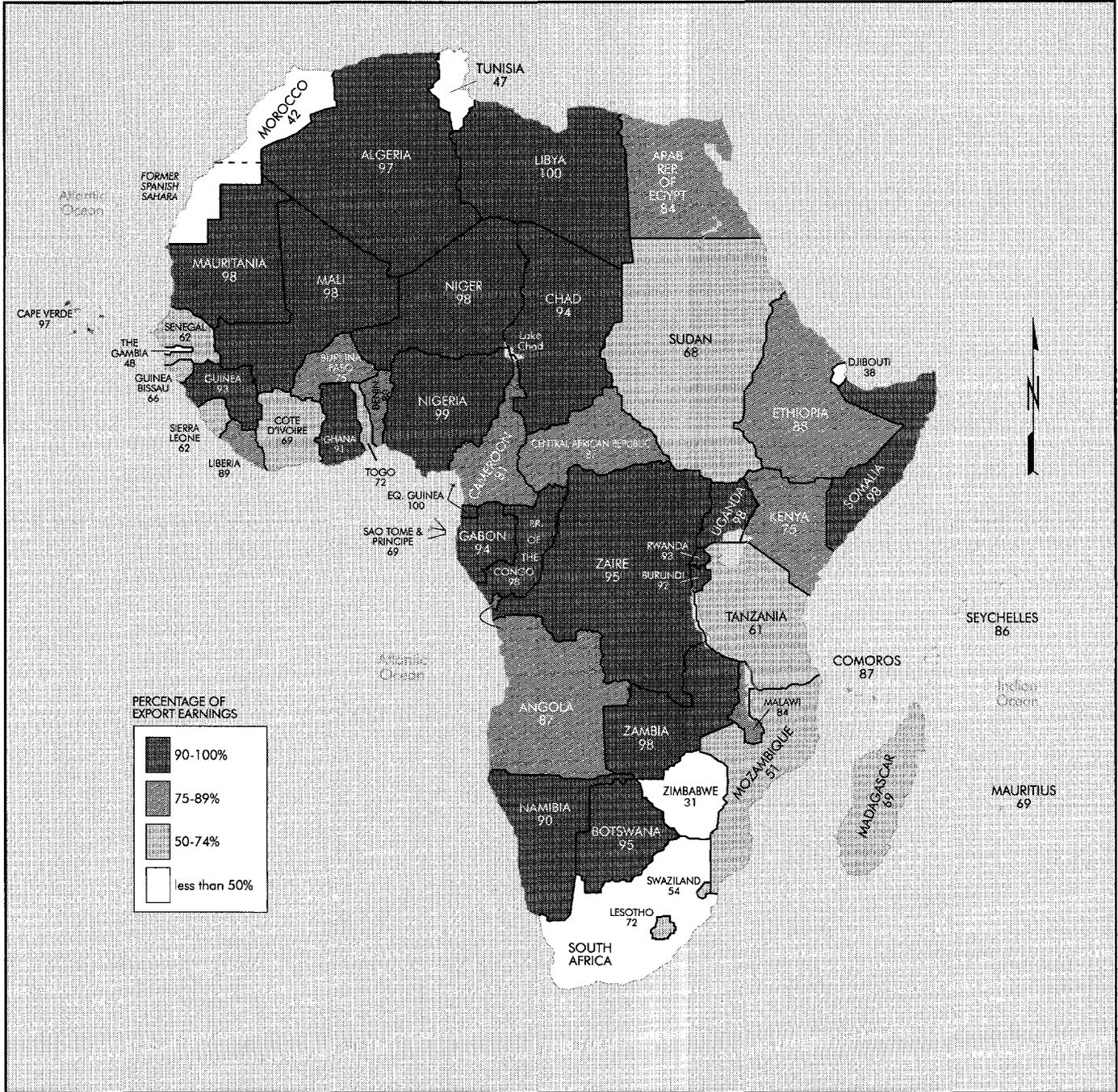
d. Deflated by the U.S. dollar price index for world merchandise exports.

Source: GATT and World Bank data.

African countries are heavily dependent on primary exports

Figure 2.1 Share of commodities in total exports of Africa, 1983-84

IBRD 22877



JANUARY 1991

Source: United Nations (1990).

**Table 2.2 Country and commodity composition of exports of nonfuel primary commodities and manufactures, 1986**  
(percent)

Country group	By country group		By commodity category <sup>a</sup>	
	Nonfuel primary products	Manufacturing	Nonfuel primary products	Manufacturing
Industrial economies	70	88	15	79
Developing economies	30	12	28	50
Asia	10	6	24	65
Latin America	9	2	42	32
Sub-Saharan Africa	3	0	45	11
Europe, Middle East, and North Africa	7	4	20	53
World	100	100	17	74

a. The rows do not add to 100 because fuel is excluded.

Source: World Bank data.

foodgrains. And because of changes in taste that come with rising incomes, one of the fastest growing foodgrain imports was wheat, a principal export of the United States, Canada, and Australia.

The emerging importance of Asia in world demand for primary commodities, and the dominance of industrial countries as producers, illustrates well the changing mosaic of interdependence in international markets. It also serves as a useful backdrop against which to view the long-term trend in the relative prices of primary commodities and manu-

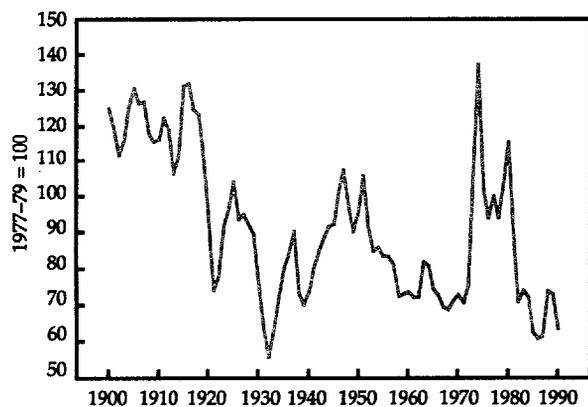
factures (Figure 2.2). This trend depicts a steady fall in the purchasing power of a given basket of nonfuel commodities between 1900 and 1930 and an abrupt decline of about 40 percent between 1973 and 1990.

Commodity markets also interact with each other and, in the process, alter the commodity links between economies. An interesting example is the complementarity between oil and other raw materials that appears to have motivated the sharp fall in steel consumption in industrial countries (Figure 2.3). Nowhere is this more apparent than in the automobile industry, where, since 1973, research has focused on improving fuel efficiency. Lowering the weight of cars—a promising avenue for increasing fuel efficiency—has led to an increasing substitution of plastic for steel. Since 1974, the weight of the average U.S. automobile has decreased by about 15 percent, or 550 pounds, because of reduced use of carbon steel and cast iron. At the low production volumes favored by contemporary market conditions and strategies, plastic is the more attractive material. In Western Europe, plastic use increased from 35 kilograms per automobile in 1970 to 98 kilograms recently. Furthermore, a set of steel-stamping dies for a fender cost about \$2 million in 1986; a set of plastic forming tools for the same component cost \$250,000 (Clark and Flemings 1986).

Statistical tests suggest that the downward trend in the use of raw materials is neither cyclical nor a once-and-for-all downward shift in demand. Rather, the era of high oil prices after 1973 appears to have set in motion forces that are accelerating the rate of metal-saving technical progress for most metals, except possibly aluminum and zinc. But this conclusion may be premature. The relationship between raw

*Prices of primary commodities have declined in relation to the prices of manufactures*

**Figure 2.2 Price of nonfuel primary commodities in relation to the U.S. wholesale price index, 1900–90**

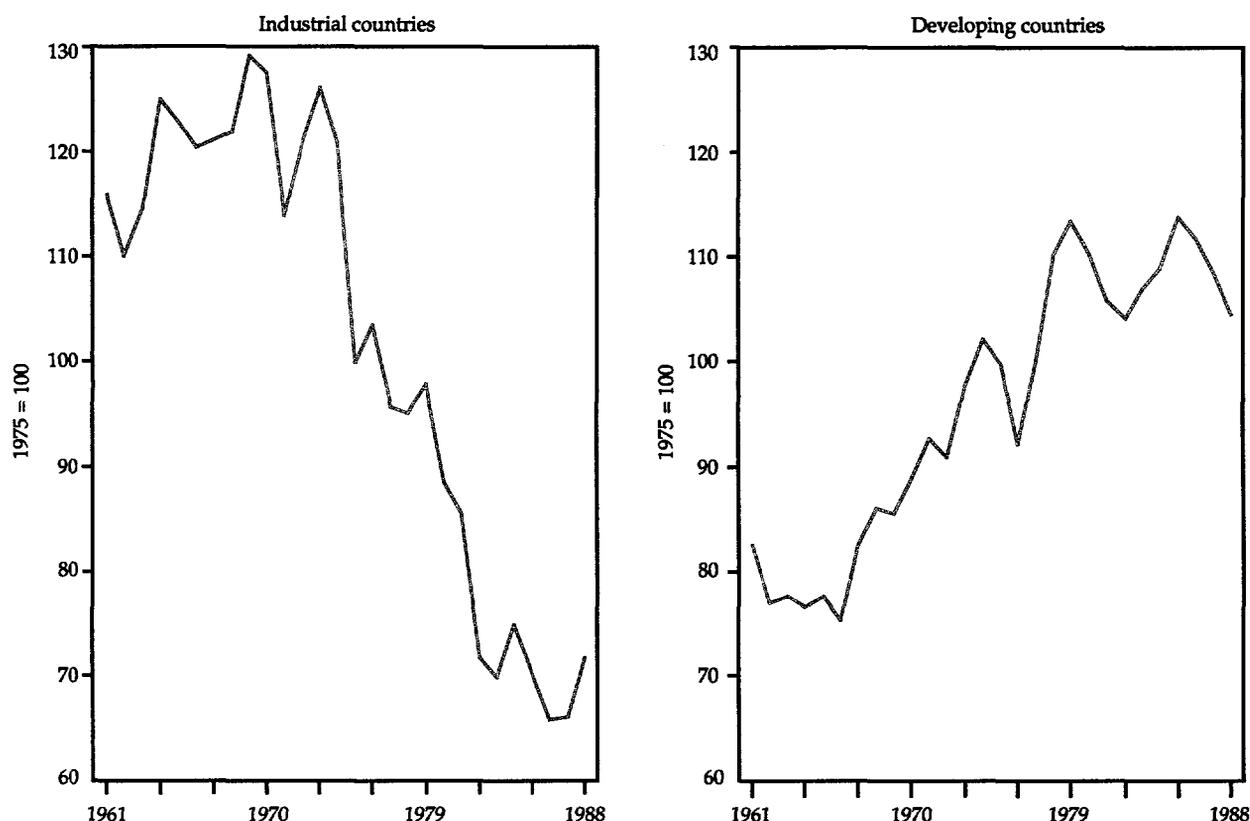


Source: World Bank data; Grilli and Yang (1988).

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*The steel intensity of GDP has declined in industrial countries but increased in developing countries*

**Figure 2.3 Steel intensity of GDP in industrial countries, 1961–88**



Source: B. J. Choe (1990).

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material use and industrial country production could reassert itself. Recent evidence suggests that this was beginning to occur in the late 1980s, as lower energy prices and faster growth in industrial countries rekindled demand for raw materials.

While the intensity of raw material use in industrial countries has fallen, growth in raw material consumption in developing countries has continued to outstrip GDP growth. These changes could reflect two factors. First, the share of manufacturing in developing countries has increased steadily since World War II, a trend that continued into the 1970s and 1980s despite rising energy prices. Second, lower investment in developing countries since 1973 has slowed the rate at which they have been able to absorb new materials-saving technology. But world demand for raw materials will remain sluggish, particularly if the advance in materials-savings technology continues at its current pace. The intensity of raw

material use in developing countries is also expected to slow and may even decline as new technologies are disseminated from industrial to developing countries.

Viewing commodity markets from the supply side reveals two striking developments. First, the importance of unprocessed commodities in the exports of developing countries has diminished over the last two and a half decades. Excluding petroleum, the share of primary-stage commodities in the total exports of developing countries declined from 71 percent to 52 percent between 1965 and 1987 (Table 2.3). Virtually all broad commodity categories have been affected, although agricultural materials have undergone the most spectacular decline.<sup>3</sup>

Second, industrial countries have bought a smaller share of their unprocessed commodity imports from developing countries over the years (Table 2.3). One reason is the declining competitiveness of develop-

**Table 2.3 Share of unprocessed commodities in developing countries' exports and share of developing countries in industrial countries commodity imports, 1965 and 1987**  
(percent)

Commodity	Share in developing countries' exports		Share of developing countries in industrial countries' commodity imports	
	1965	1987	1965	1987
Foods	78.2	75.8	49.1	45.2
Agricultural materials	73.1	25.2	43.6	36.2
Ores, minerals, and metals	53.7	38.1	52.0	47.9
Petroleum	81.7	78.7	79.8	67.6
All commodities (except petroleum)	71.0	51.7	48.1	43.8

Source: Yeats (1991).

ing countries in the international market for unprocessed commodities. Nowhere has this been more apparent than in Africa (Table 2.4). Indeed, over the last two decades, Africa's dependence on a few commodities—coffee, cocoa, and cotton—has increased. But it does appear that the decline in Africa's world market share in most primary commodities decelerated during the 1980s and was even reversed in a few cases. Agricultural policies in the industrial world have probably also played a role. Subsidized exports from industrial countries have tended to displace developing countries from their traditional markets. In addition, the expanding European Community diverted trade from developing countries to local European producers. Finally, the rapid growth in processed commodity exports from developing countries would account for some of their loss in market share for unprocessed commodities.

**Table 2.4 Sub-Saharan Africa's share in world exports of selected commodities, selected years, 1969–89**  
(percent)

Commodity	1969–71	1979–81	1987–89
Cocoa	59.7	43.9	37.2
Coffee	29.9	25.5	20.3
Tea	14.8	19.2	21.0
Sugar	5.8	4.9	5.6
Groundnut oil	62.0	22.6	23.9
Palm oil	18.9	2.9	2.8
Cotton	15.5	10.2	12.5
Tobacco	8.2	11.6	13.1

Source: World Bank data.

### Uncertainty in commodity markets

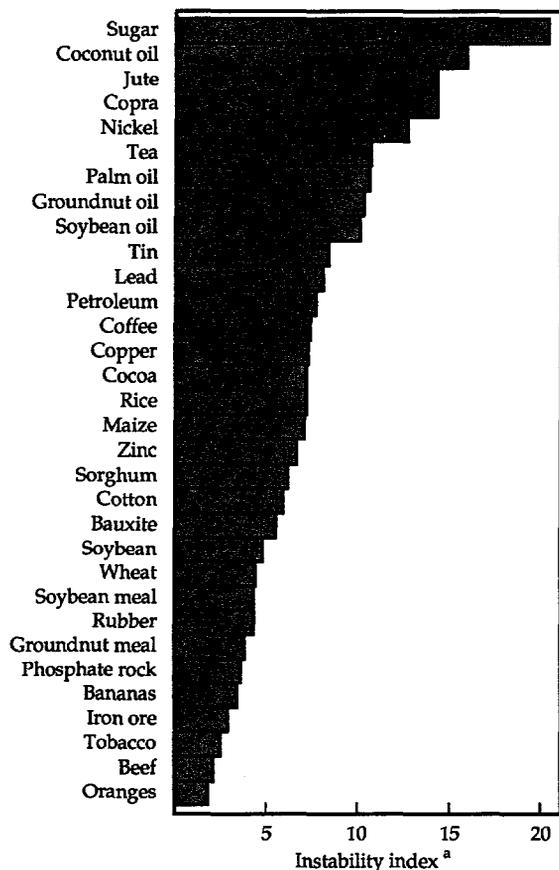
The instability of commodity prices is a fact of life for commodity exporters and importers. Its causes are manifold. For most commodities, economic activity in the industrial countries continues to be an important—often the most important—determinant. Studies show that a one percentage point annual increase in industrial country production—other things remaining unchanged—raises nonoil commodity prices by 2 percent in real terms (Gilbert 1990). Ups and downs in industrial country production have important consequences for commodity exporters, particularly exporters of metals and agricultural raw materials. For food and beverages, however, demand is relatively stable, but the vagaries of the weather lead to variations in supply and unstable prices.<sup>4</sup> For example, a significant proportion of the price variability in the international market for vegetable oil arises from the effects of weather on the U.S. soybean crop or the effects of policy on U.S. stockpiles.

Measures of commodity price instability show significant differences among commodities. The instability index used in Figure 2.4, for example, shows that the index for the least stable price (sugar) is more than eleven times that for the most stable (oranges). Moreover, for five of the seven metals shown in Figure 2.4, price instability indices are above the median.

Has price instability increased over time? The evidence on agricultural commodities suggests that the answer is a qualified "yes" (Table 2.5). For bananas, coconut oil, groundnut oil, and palm oil, price instability appears to have increased unambiguously since the 1960s; and for coffee, copra, cotton, maize, tea, and wheat, price instability was higher in the 1970s and 1980s than it was in the 1950s and 1960s. For cocoa, rice, rubber, and sugar, however, the evi-

Price instability is a fact of life for commodity exporters and importers

Figure 2.4 Price instability of selected primary commodities, 1980-89



a. See footnote to Table 2.5.  
Source: World Bank data.

dence is mixed. But regression analysis of ten-year moving coefficients of variation shows that the trend of instability has been positive for all these crops except cotton and rubber.<sup>5</sup>

The evidence of greater commodity price variability and steadily declining relative commodity prices suggests that primary commodity producers, especially if they are poor and indebted, face serious problems. Industrial countries manage such commodity price swings using instruments unavailable in most developing countries, such as, domestic credit markets, storage facilities, or insurance.

Developing countries have tried to manage commodity price risk through measures to stabilize international prices or domestic producer prices. International price stabilization agreements have not proved very successful. Covering commodities such

Table 2.5 Variability of world prices for selected agricultural commodities, 1950-89

Commodity	1950-59	1960-69	1970-79	1980-89
Bananas	2.2	3.0	3.3	3.4
Cocoa	8.7	7.5	9.7	7.2
Coconut oil	5.2	3.8	13.3	15.9
Coffee	6.3	3.0	11.7	7.4
Copra	6.4	4.0	14.4	14.3
Cotton	4.0	1.5	6.7	5.9
Groundnut oil	3.9	3.1	7.8	10.3
Maize	2.0	3.3	7.5	7.1
Palm oil	4.3	4.6	8.4	10.5
Rice	11.4	3.4	14.9	7.2
Rubber	9.1	4.3	6.3	4.3
Sugar	7.8	21.7	25.4	20.4
Tea	6.2	2.2	6.9	10.7
Wheat	1.7	1.6	12.0	4.4

Note: Data presented in this table are derived from the following instability index:

$$\frac{100}{n-2} \sqrt{\sum \left( \frac{x_t - x^*}{x_t^*} \right)^2}$$

where  $n$  is the number of observations and  $x^*$  is the trend forecast value of  $x$ . The same index is used as the basis for Figure 2.4.

Source: World Bank data.

as coffee, cocoa, rubber, sugar, and tin, they have operated through a variety of instruments, including quotas on production, consumption, exports, and imports, as well as buffer stocks and funds. Such schemes have suffered from two types of shortcomings. First, prices or price bands have not been adjusted to ensure long-run equilibrium in demand and supply. It has proved extremely difficult to set appropriate prices and to adjust them regularly to changing market conditions. Second, the inability to reconcile the different interests of the countries involved has led to evasion of rules, smuggling, free-riding, and myriad other problems. Both shortcomings have contributed to the virtual demise of these agreements in recent years.

Several countries have attempted to buffer domestic producer prices for primary commodities from the volatility in international prices. These schemes take various forms depending on whether the commodity is an export or an import, whether it is storable or not, whether the country's share in the world market is large or small, and whether the objective is to stabilize prices for consumers or producers. Among the mechanisms used are buffer stocks or funds, variable rate tariffs, subsidies, price bands, quantity controls, and marketing boards. The success of domestic price stabilization schemes depends on forecasting long-run prices accurately, insulating the

scheme from the government budget, and sterilizing any impact from the scheme on the national economy. Also, the scheme must have compatible goals. On most counts, the record has been poor. Since commodity prices are essentially random variables, it is not surprising that efforts to set prices or price bands consistent with world prices have met with little success. And such schemes have frequently mutated gradually into vehicles for taxing producers or for providing budgetary subsidies. In the end, many of these schemes have failed because of the complexity of the task or the absence of clear, compatible goals.

Recent innovations in financial market instruments, a third mechanism for managing commodity risk, show greater promise than the other two but have been little used in developing countries. Instruments such as commodity swaps, complementing commodities futures and options, can offer opportunities to hedge long-term commodity risks. Such instruments can add a new dimension to well-designed domestic buffer or price stabilization schemes by helping distribute the risk to the international financial system. Their use, however, has been limited by anxieties about the credit risk involved in transactions with the exporting countries.

Finally, the expansion of local processing capacity in several developing countries has tended to reduce the instability of their export earnings. In the case of agricultural raw materials, as well as ores, minerals, and metals, prices for final stage processed commodities not only rose faster than prices for unprocessed commodities, but they were also more stable (Figure 2.5; Yeats 1991). But countries considering reforms in trade and regulatory policies to expand domestic processing capacity need also to contend with biases in the structure of protection in industrial countries. The structure of tariffs and the coverage of nontariff barriers in industrial countries reflect a clear tilt against processed commodities (Figure 2.6).

### Commodity price shocks and adjustment responses

While a limited set of measures or instruments is adequate for dealing with the variability of commodity prices, large commodity price shocks constitute a more serious type problem. The 1970s, a period of major commodity price shocks, provide a rich history from which to draw lessons. Not only did the price of petroleum increase eight-fold in real terms over the decade, but the prices of food, timber, and a variety of other commodities departed significantly from their trend. Many of the economic problems of

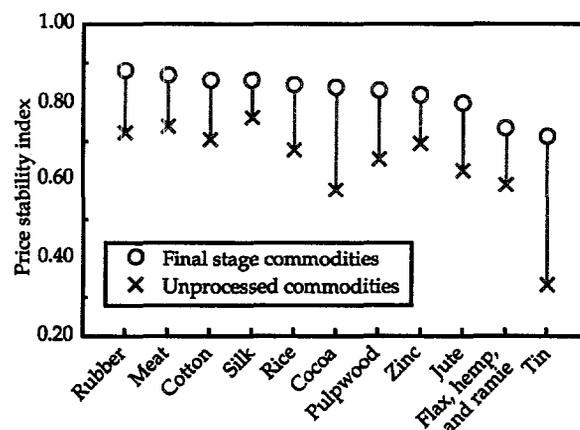
the 1980s can be traced to these shocks and to the policy responses they provoked.

Many studies have analyzed the policy responses of developing economies to trade shocks in the 1970s.<sup>6</sup> All concluded that although economies with relatively liberal trade policies experienced the largest terms of trade shocks, these economies were also the fastest to adjust and resume growth. Countries that failed to introduce domestic or external adjustment policies, relying instead on additional external financing, eventually labored under heavy debt burdens to the detriment of growth in the 1980s. Broadly speaking, successful adjusters such as Chile, Korea, and Thailand limited foreign borrowing, quickly re-established macroeconomic balance, and instituted structural reforms designed to improve the competitiveness and flexibility of their economies. Among countries that experienced a positive terms of trade shock, Indonesia presents a good example of successful adjustment. It managed its financial surpluses cautiously and maintained competitiveness through appropriate macroeconomic policies. It also initiated structural reforms to diversify its economic base and improve the responsiveness of its economic system.

Other countries pursued just the opposite set of policies. Argentina, Côte d'Ivoire, and the Philippines ran up substantial budget and balance of payments deficits that they financed through external borrowing. They also delayed structural reforms and

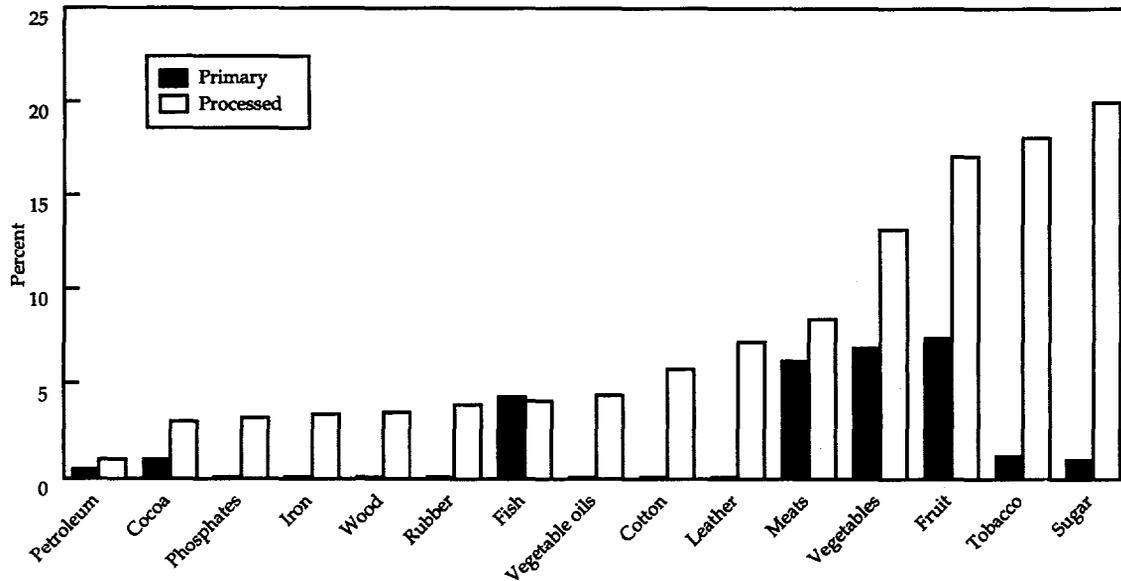
*Prices of final stage commodities were more stable than those of unprocessed commodities*

**Figure 2.5 Price stability of selected final stage and unprocessed commodities, 1965–87**



Source: Yeats (1991).

Figure 2.6 Average tariffs in industrial countries for selected primary and processed commodities



Note: Tariff rates are those in effect when the Uruguay Round discussions began in 1986.  
Source: Yeats (1987).

attempted to resolve their macroeconomic problems through restrictive trade and pricing policies. Some countries failed to prudently manage an improvement in their terms of trade. Mexico, Nigeria, and Venezuela, for example, translated financial surpluses that accrued from positive changes in terms of trade into heavy public spending and leveraged future income streams with large-scale foreign borrowing. The resulting overvaluation of their currencies combined with poor structural policies poorly equipped them to deal with the economic downturn in the early 1980s.

### Conclusion

The volatility and decline in real primary commodity prices, especially during the last decade, have posed serious problems for low-income primary producers. Attempts to stabilize international or domestic producer prices have met with little success. And while new financial instruments designed to hedge commodity price risks hold promise, many developing countries are considered an unacceptable credit risk for commercial financing and so have been unable to use them.

Domestic policies have also had an important role to play. As the experience of several African countries during the 1970s demonstrated, inappropriate policies can lead to lost market share and increased dependence on a few primary commodity exports. At the same time, policies in industrial countries have tended to accentuate the difficulties of primary goods-producing countries. Nevertheless, primary commodity exporters that expanded efficient local processing capacity benefited from the more stable prices for processed commodities. Finally, the evidence suggests that in dealing with large commodity price shocks, countries with relatively open trade policies adjusted faster and resumed growth more quickly than countries with high trade barriers that hindered the transmittal of new price signals to the domestic economy.

### Notes

1. Related energy products include such products as natural gas, petroleum coke, liquefied natural gas, and nongas liquids.
2. The countries where the three leading commodity exports account for less than half of total exports are

Djibouti, Gambia, Morocco, South Africa, Tunisia, Western Sahara, and Zimbabwe (U.N. 1990).

3. Agricultural materials consist of such commodities as wood, rubber, leather, silk, jute, wool, cotton, flax, hemp, and ramie.

4. Variable levies applied by industrial countries tend also to contribute to commodity price instability by transferring the adjustment burden to suppliers.

5. A linear regression analysis testing for a time trend in ten-year moving coefficients of variation in prices for 1949–87 for all the commodities shown in Table 2.6 yield coefficients that are significantly above zero at a 95 percent confidence level using a two-tailed test. See Hazell, Jaramillo, and Williamson (1989).

6. See in particular Balassa (1981), Balassa and McCarthy (1984), Mitra (1986a and 1986b), and Lal and Wolf (1986).

# *Global economic performance: The current situation and main contingencies for the 1990s*

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# 3

The first two chapters focused on the increased interdependence of markets and economies. The discussion highlighted the importance of international trade, finance, and investment as forces shaping the international economic environment, presenting both challenges and opportunities to developing countries. This chapter examines how these forces can be expected to evolve during the 1990s and assesses their implications for developing countries and the world economy. It also provides the foundations for the alternative scenarios of future developments that are presented in Chapter 4.

But any discussion of the contingencies likely to affect global economic performance in the future needs to begin by mapping the initial conditions and surveying the current status of the global economy. This is done in the first section; the next section then examines the main contingencies expected to influence global economic performance in the 1990s.

## **The current situation**

Two years ago, in 1989, the world economy was in the midst of its longest peacetime expansion of the last four decades—inflation was under control, the debt crisis was being weathered, and the end of the cold war was in sight. The collapse of *dirigiste* regimes in Eastern Europe and the march toward a single market in Western Europe held the promise of new investment opportunities and a rejuvenation of international trade. And policy actions in the major industrial countries were correcting the large trade and budget imbalances that had characterized much of the 1980s.

But two years can be a long time. Today, rising uncertainties from different, yet related, directions portend difficulties to come. The latest uncertainty—the crisis in the Gulf—proved to be short-lived. But numerous other problems also surfaced in the past two years, before the Gulf crisis overshadowed them: the slowdown in the U.S. economy, problems in the

U.S. and Japanese financial systems, the mounting costs of resource transfers from western to eastern Germany, the difficulties in reforming the economic policies of Eastern Europe, the rapid deterioration of the Soviet economy, disappointing progress in the Uruguay Round, and a slowdown in the growth rate of developing countries.

Individually, none of these dark economic clouds would be sufficient to dampen the short-term prospects for the world economy. But together they present compelling evidence that the world economy is in for a turbulent period in the short term.

## *Industrial countries*

The deterioration in the global economy that started in 1989 continued into 1990. Growth of world output fell to about 2.1 percent in 1990, down from 3.3 percent in 1989. A big factor was the further slowdown in the GDP growth of industrial countries, from 3.3 percent in 1989 to an estimated 2.6 percent in 1990 (Figure 3.1). Much of this slowdown reflected a continued decline in the growth rates of the United States, Canada, and the United Kingdom (Table 3.1). The deceleration in the U.S. economy, brought on by anti-inflationary monetary policies in late 1989 and early 1990, was exacerbated by a large fiscal deficit and the fragile condition of the financial system. But just when it seemed that the United States was heading for a soft landing, the sharp increase in the price of oil following the invasion of Kuwait tipped the economy into recession.<sup>1</sup>

Fortunately for the global economy—and unusual by the standards of the past—Japan and Germany were not at the same point in their economic cycles as the United States, the United Kingdom, or Canada. While these three economies were slowing in 1990, Japan and Germany continued to grow strongly. In Japan, this was due to vigorous private sector investment; in Germany, it was the result of increased government spending as a result of unification. The

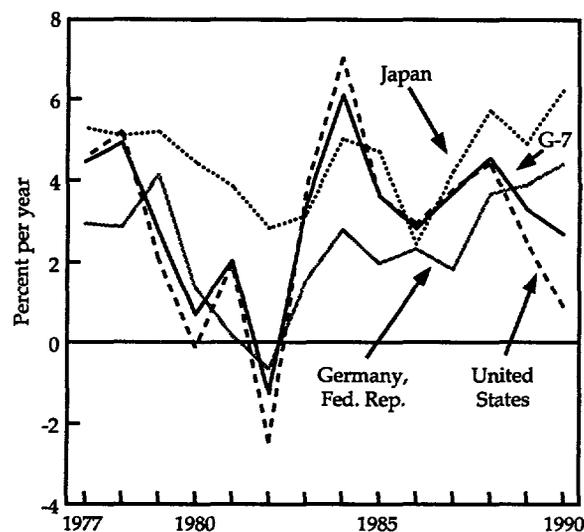
strength of the German and Japanese economies prevented a more rapid spread of recessionary impulses to the rest of the world economy.

To revive the U.S. economy, the Federal Reserve Board eased its monetary stance in the second half of 1990 and the first half of 1991, and lowered interest rates. In Japan and Germany, the trend was in the opposite direction, as tight monetary policies raised short-term rates. The initial result was a depreciation of the U.S. dollar against the German mark and the Japanese yen during most of 1990. This depreciation of the dollar, together with higher oil prices and less restrictive monetary policy, kept U.S. inflation at 4.1 percent. In the first few months of 1991, however, the dollar appreciated against the German mark, helping to further reduce the U.S. inflation rate. In Japan, tight factor market conditions meant that inflation remained at 1.9 percent, even though the Bank of Japan maintained its restrictive monetary stance. In Germany, the consumer price index grew more slowly than the GDP deflator, signaling higher inflation in the year ahead (Figure 3.2).

A diagnosis of the overall health of the industrial world in 1991 reveals some troubling signs: lower growth, symptoms of financial stress in the United States and Japan, continued fiscal imbalances in the G-3, and sharp changes in real exchange rates among

Growth in the major industrial countries dipped in the past two years, except for Japan and Germany. . .

**Figure 3.1** GDP growth rates of major industrial countries, 1977–90



Source: World Bank data.

**Table 3.1** Key indicators of recent economic performance in industrial countries, 1987–90  
(annual percentage change, except where otherwise stated)

Indicator	1987	1988	1989	1990
<i>Output and employment</i>				
Real GDP	3.3	4.5	3.3	2.6
Real GNP per capita	2.7	3.8	2.6	2.1
Employment	1.8	2.0	1.8	1.3
Unemployment rate <sup>a</sup>	7.5	6.9	6.4	6.2
<i>Monetary and fiscal</i>				
Inflation <sup>b</sup>	3.0	3.3	4.3	5.0
Unit labor costs	0.1	0.1	2.0	2.2
G-7 fiscal balance <sup>c</sup>	-3.3	-2.7	-2.4	-2.5
Six-month LIBOR <sup>d</sup>	7.3	8.1	9.3	8.4
<i>Trade</i>				
Export volume	5.1	8.9	6.8	5.9
Import volume	7.1	9.1	7.6	6.0
Terms of trade	0.9	1.4	-0.2	-0.2

a. Averages of national unemployment rates weighted by labor force and expressed as a percentage of total labor force.

b. Based on the consumer price index.

c. As a percentage of GNP.

d. London interbank offered rate on six-month U.S. dollar deposits.

Source: World Bank and IMF data.

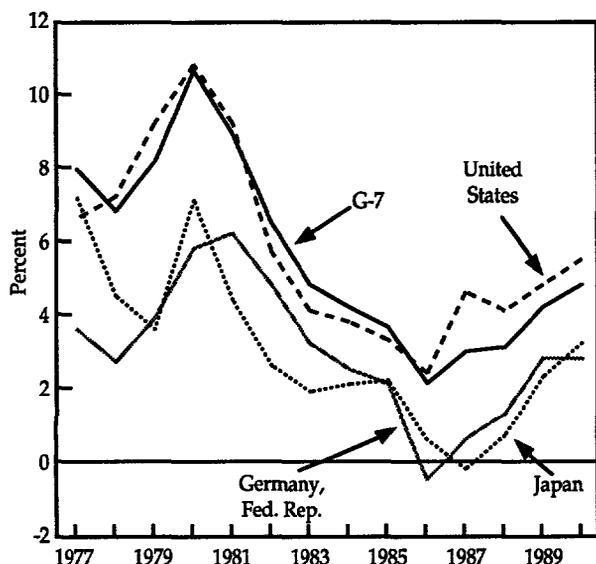
the major currencies. And circumstances will probably get worse in 1991 before they get better in 1992. Growth in the G-7 is expected to decline further in 1991 to 1.4 percent, held back by virtually no growth in the United States, the United Kingdom, and Canada (Table 3.2). But the U.S. recession is expected to be short, and growth is expected to resume by the second half of 1991. Slimmer inventories and declining oil prices are likely to raise domestic demand. Moreover, by 1992 the effect of easier monetary policy is expected to restore momentum to the economy. Japan and Germany, despite their inherent strength, are not immune from the influence of a slowly growing U.S. economy in 1991. Their growth rates, albeit high by the standards of other industrial countries, are nevertheless expected to decline substantially in 1991 before reviving in 1992.

#### Developing countries

GDP growth in developing countries fell from 2.9 percent in 1989 to 2.3 percent in 1990, their poorest performance since the depths of the last world recession in 1982 (Table 3.3). But this aggregate statistic presents a misleading picture of the state of the developing world. In fact, economic performance in several developing regions improved in 1990. East

... and inflation has begun to edge upwards

**Figure 3.2 Inflation in G-7 countries, 1977-90**



Source: World Bank and IMF data.

Asia led the world, raising its growth rate from 5.5 percent in 1989 to 6.7 percent in 1990. Latin America (excluding Brazil) rebounded from -0.2 percent to 2.0 percent, and the Middle East and North Africa improved from 2.6 percent to 3.2 percent. But these gains were overshadowed by large declines in Brazil, Eastern Europe, and Eastern and Southern Africa. In Brazil, a stabilization program coincided with a sharp fall in the terms of trade, and GDP growth fell by almost eight percentage points—from 3.6 percent in 1989 to -4.3 percent in 1990. In Eastern Europe, rapid and fundamental economic reforms dislocated production, and GDP growth plummeted from 0.5 percent in 1989 to -9.1 percent in 1990. And in Eastern and Southern Africa, drought and civil war slowed growth from 4.5 percent to 0.8 percent.

The economic performance of most developing countries during 1990 was colored by the sharp increase in the price of oil. The terms of trade moved against developing countries as a whole by 0.2 percent; in 1989, they had registered a gain of 1.9 percent. Sub-Saharan Africa (excluding Nigeria) suffered the worst decline. Nonoil commodity prices fell sharply in the second half of 1990, hurting export revenues. For Eastern and Southern Africa, the terms of trade plunged almost 14 percent; in Western Africa, oil exports held the fall to only 1.8 percent. Experience in other regions was mixed. In Brazil, the terms of

trade fell 5.3 percent. In India, the decline was less (2.2 percent), but serious enough to slow growth and warrant immediate stabilization measures. In Eastern Europe, the increase in the price of oil accounted for most of the sharp decline of 6.6 percent. But in East Asia, the terms of trade remained fairly stable.

In the next two years, growth in developing countries is likely to quicken as the unusual circumstances of 1990 recede. The economies of Eastern Europe are expected to contract less in 1991 than they did in 1990. Poland may register positive growth in 1991 and beyond, mostly as a result of far-reaching reforms, but also because of significant debt relief. In the other Eastern European economies, however, market-oriented reforms are less entrenched, and GDP will probably continue to decline in 1991. Brazil's stabilization and structural reform policies, introduced in 1990, are expected to arrest the economy's further slide. The remaining developing countries are in aggregate expected to grow at much the same pace as in the recent past (Table 3.4).

Several countries embarked on major reform programs in 1989 and 1990, especially in Latin America and Sub-Saharan Africa, and these are likely to begin bearing fruit in 1991. These reform programs have attracted additional funding from official sources. Net long-term lending to Latin America from official and private sources climbed from \$0.6 billion in 1989 to \$7.9 billion in 1990. In addition, debt and debt service reduction operations induced a notable increase in foreign direct investment, which is expected to raise efficiency and contribute to higher growth. For Sub-Saharan Africa, the Special Program of Assistance (SPA) has been successful in mobilizing additional external resources in support of adjusting

**Table 3.2 Growth and inflation in the G-7 countries, 1989-92**  
(annual percentage change)

Indicator	1989	1990	1991	1992
<i>Real growth in GNP</i>				
Germany	3.8	4.5	2.8	3.4
Japan	4.7	5.6	3.7	3.9
United States	2.5	1.0	0.0	2.3
G-7 total	3.3	2.6	1.4	2.8
<i>GNP deflators</i>				
Germany	2.6	3.5	4.2	3.1
Japan	1.9	1.9	2.3	1.6
United States	4.1	4.1	4.8	3.1
G-7 total	3.8	3.7	4.0	2.9

Source: World Bank data.

**Table 3.3 Key indicators of recent economic performance in developing countries, 1987–90***(average annual percentage change, except where otherwise stated)*

<i>Indicator and economies</i>	1987	1988	1989	1990
<i>Output</i>				
Real GDP	3.8	4.3	2.9	2.3 <sup>a</sup>
Sub-Saharan Africa	0.2	2.9	2.9	1.5
East Asia	8.9	9.7	5.5	6.7
South Asia	4.3	8.2	4.5	4.2
Europe, Middle East, and North Africa	1.2	2.1	1.5	-0.8 <sup>a</sup>
Latin America <sup>b</sup>	3.1	0.5	1.3	-0.7
Real GDP per capita	1.7	2.2	0.8	0.3
<i>Monetary and fiscal</i>				
Broad money <sup>c</sup>	16.4	17.3	15.0	13.0
Inflation <sup>d</sup>	7.6	8.7	8.7	10.0
Fiscal balance <sup>e</sup>	-5.2	-4.6	-4.5	-3.5
<i>Trade</i>				
Export volume	9.2	9.9	6.2	6.7
Oil exporters	-0.3	11.1	10.7	9.2
Others	10.0	9.8	5.8	6.1
Import volume	5.1	9.4	9.6	5.9
Terms of trade	2.4	-0.4	1.9	-0.2
Oil exporters	21.1	-23.3	18.3	25.0
Others	0.6	1.6	1.0	-1.3
<i>Financial (billions of U.S. dollars)</i>				
Aggregate net resource flows (long-term)	46.1	60.9	63.3	71.0
Official development finance	32.2	36.3	36.6	46.9
Aggregate net transfer	-16.8	-9.5	-1.0	9.3

a. Estimate excludes Iran and Iraq.

b. Includes the Caribbean.

c. Median estimates.

d. Median estimates of the consumer price index.

e. Median estimates as a percentage of GDP.

Source: World Bank data and IMF (1990).

countries. The region now receives about 30 percent of all net flows of official development assistance. Such support is expected to contribute to some recovery in output in the short term, but not enough to reverse the continued decline in per capita incomes. Growth is projected to be about 2.3 percent in 1991, almost a full percentage point less than the population growth rate for the region.

Although Asia will remain the fastest growing developing region, the outlook for 1991 and 1992 is more sober than in recent years. China is an exception. After two relatively slow years, growth is expected to accelerate under the benign influence of a gradual reform program. But the rest of East Asia is likely to feel the effects of trade barriers and slow growth in their principal export markets. For these countries, the strong growth performance of 1986–90 is unlikely to be repeated. South Asia is expected to maintain much the same momentum as in 1989–90, although there is a significant downside risk caused

by political turmoil and uncertainties about the pace of reform.

### Main contingencies for the 1990s

Global economic prospects over the next few years look difficult. The pressure points will be the extent, depth, and duration of the U.S. recession; the ability of Eastern Europe to maintain the momentum of its reforms; and the stability of the international financial system. For developing countries, the short-term outlook indicates steady growth in Asia, some recovery in North and Sub-Saharan Africa, and improved prospects in Latin America. In many of these countries, particularly those in Latin America and Sub-Saharan Africa, a key question is the ability of governments to implement structural reforms even as the global economy enters a turbulent phase.

In the longer term, more fundamental forces are likely to reassert themselves in defining global eco-

conomic prospects. Some of these were discussed in a historical context in Chapters 1 and 2—international trade, finance, investment, and technological change. In this section, we examine what is likely to influence their evolution and what that may mean for developing countries. The focus is on trade and finance, issues of central interest to developing countries. But some attention is also given to the future direction of world energy markets because, as recent events have shown, instability in energy markets imposes large adjustment costs on economies and has repercussions on world economic stability.

#### *The prospects for world trade*

The long-term growth prospects of both industrial and developing countries will depend heavily on developments in the world trading environment. The final outcome of the Uruguay Round of multilateral trade negotiations—the most complex and far-reaching attempt ever made to liberalize trade—remains uncertain. Progress has been made in some areas, but issues central to the success of the round remain unresolved. The most important of these concern agriculture, services, textiles and clothing, trade-related intellectual property rights, trade-related investment measures, the functioning of the GATT system, and safeguards.

The outcome of the Uruguay Round is critical to the future of the multilateral trading system and the welfare of the world community. A successful conclusion will mean a substantial reduction in the use of nontariff barriers to trade, in both industrial and developing countries. As noted in Chapter 1, nontariff barriers affected 16 percent of imports of industrial countries in 1986 and 28 percent of imports of developing countries in 1987.

Removing these barriers to trade will have a significant impact on growth, employment, and welfare. For example, studies show that the textiles and clothing sector in OECD countries is one of the most highly protected.<sup>2</sup> In 1985, OECD imports of textiles and clothing were approximately \$29.5 billion, most of it from developing countries. According to one simulation study, removing tariffs and nontariff barriers could increase developing country exports to the main OECD markets by 82 percent for textiles and 93 percent for clothing. Similarly, the UN Conference on Trade and Development (UNCTAD) estimates that complete trade liberalization could boost developing country exports of clothing by 135 percent and textiles by 78 percent. Another simulation study concludes that if OECD countries reduced agricultural protection by 50 percent, agricultural export revenues of developing countries could rise between 2 percent and 40 percent (Figure 3.3; Valdés and Zeitz 1980, as cited in Laird and Yeats, 1990).

Recent studies also suggest that nontariff barriers in industrial countries have slowed resolution of the debt crisis. For example, more than 40 percent of the exports (by value) of the highly indebted countries confront nontariff barriers in industrial country markets. These barriers constrain export opportunities and the capacity of heavily indebted countries to service their external debt. Simulations show that trade liberalization in the United States, the EC, and Japan would increase the present value of export earnings of heavily indebted countries by an amount equivalent to half of their debt, significantly improving the creditworthiness of these countries (Laird and Yeats 1987).

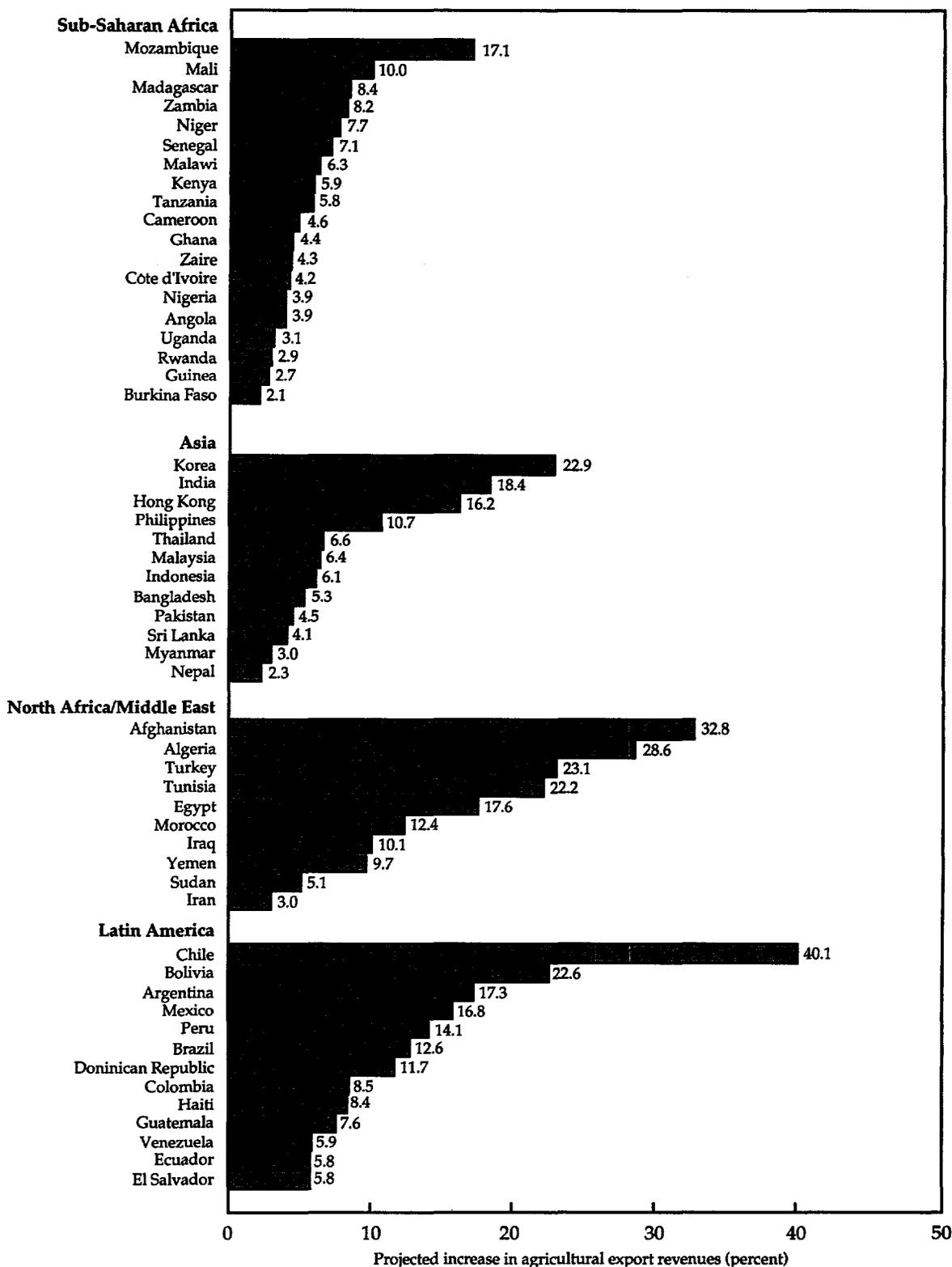
Furthermore, empirical estimates indicate that the static gains from trade liberalization vary from less than 1 percent to as high as 6 percent of GDP. When

**Table 3.4 Growth in developing countries, 1989–92**  
(average annual percentage change)

Region	GDP				GDP per capita			
	1989	1990	1991	1992	1989	1990	1991	1992
All developing countries	2.9	2.3	3.1	4.3	0.8	0.3	1.1	2.3
Sub-Saharan Africa	2.9	1.5	2.3	3.0	-0.3	-1.7	-0.9	-0.1
East Asia	5.5	6.7	5.7	6.2	3.6	5.0	4.2	4.7
South Asia	4.5	4.2	4.0	4.5	2.2	2.0	1.8	2.4
Europe, Middle East, and North Africa	1.5	-0.8	1.6	3.5	0.0	-2.6	-0.2	1.6
Latin America	1.3	-0.7	1.1	2.8	-0.7	-2.6	-0.8	0.9

Note: Estimates and projections for 1990–92 exclude Iran and Iraq.  
Source: World Bank data.

**Figure 3.3 Potential increases in agricultural exports of selected developing countries from reducing trade barriers in OECD countries**



Source: Laird and Yeats (1990).

**Table 3.5 Long-term real interest rates in selected industrial countries, for selected years, 1890–1989**  
(percent)

Country	1890–99	1900–13	1955–59	1960–73	1974–79	1980–84	1985–89
France	3.6 <sup>a</sup>	2.0 <sup>a</sup>	0.3	1.4	-0.9	3.1	5.1
Germany, Fed. Rep.	—	—	3.9	2.7	2.8	4.8	4.0
Italy	—	—	4.0	1.5	-3.7	1.9	3.6
Japan	—	—	—	0.5	-0.2	5.7	3.9
United Kingdom	2.6 <sup>b</sup>	2.0 <sup>b</sup>	1.3	2.5	-2.1	2.7	4.1
United States	4.5 <sup>c</sup>	1.7 <sup>c</sup>	0.8	1.5	0.3	5.4	5.4

Note: Long-term real interest rates are calculated by dividing long-term government bond yields by the GDP deflator.

a. Government stock.

b. Consols.

c. New England municipal bonds.

Source: World Bank data.

the dynamic effects are also considered, these gains tend to be even larger. These dynamic effects could include economies of scale, higher investment and saving, improvements in innovation and technical change, and increased speed in dissemination of technical and economic information. As technological improvements in telecommunications, computerization, and transport systems spread, the economic advantages derived from trade will tend to increase. And this process, in turn, will increase the efficiency gains and per capita incomes of developing countries.

### *The cost of international finance*

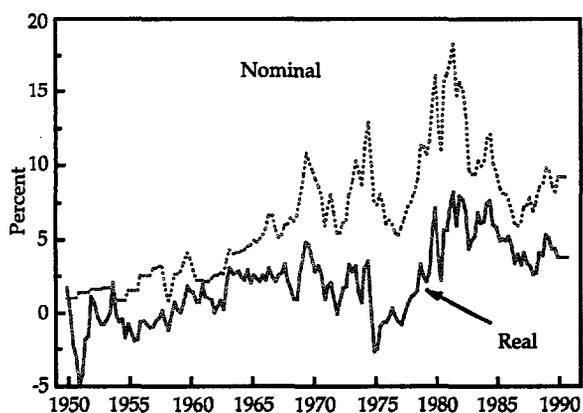
If high real interest rates persist through the 1990s, they would make more difficult a return to steady and rapid growth in developing countries. In the two decades before World War I, real interest rates were seldom higher than 3 percent. In the prosperous 1950s and 1960s, real long-term rates stood at some 1 to 1.5 percent and short-term rates were even lower. But since the mid-1970s, real interest rates have hovered between 4 and 5 percent, and they appear set to remain at these levels or to climb even higher during the next decade (Table 3.5 and Figure 3.4).

But do real interest rates matter for growth? Recent research using data for the period 1970–90 suggests that they do for developing countries but almost certainly do not for industrial countries (Shafik and Jalali 1990). In the case of developing countries, the reasons are not hard to find. Several developing countries borrowed heavily at variable rates during the 1970s and early 1980s (Figure 3.5). Higher real interest rates increase external debt service payments and lower the amount of foreign exchange available for imports of capital goods, thereby depressing levels of investment and growth. Every one percentage point increase in real LIBOR raises the interest payments of developing countries by an amount equal to about 10 percent of their total current account deficit. And if that increase in real LIBOR were sustained over ten years, the average growth rate of developing countries could be reduced by about 0.2 percentage point a year (see Box 4.3 in Chapter 4).

The relationship between real interest rates and growth in industrial countries is more complex. High real interest rates may reflect buoyant investment demand spurred by expectations of high rates of profit and opportunities for growth. In the 1980s, for

*Real interest rates have shown  
an upward trend since 1950*

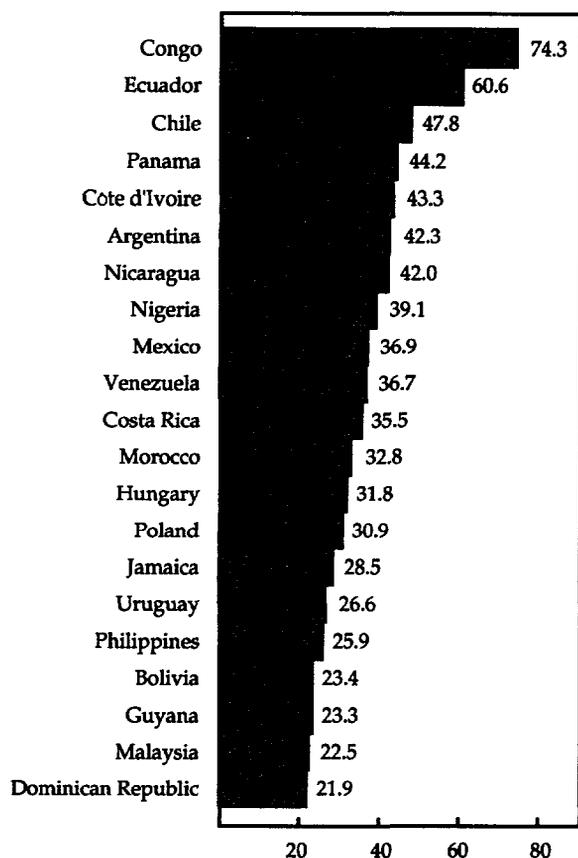
**Figure 3.4 Real and nominal LIBOR, 1950–90**



Source: World Bank data.

Many developing countries contracted large debts at variable interest rates in the early 1980s

**Figure 3.5 Variable rate debt as a share of GDP for selected countries, 1988**



Source: World Bank data.

instance, high real interest rates did not prevent selected episodes of rapid growth. It is true that these episodes coincided with some special event—recovery from recession, major tax cuts, booming stock markets. But more generally, there is little evidence to suggest that high real interest rates have adversely affected growth in industrial countries.

High real interest rates during the 1980s can be better explained by investment demand rising faster than the (ex ante) supply of savings (see Box 3.1). The strength of stock markets in the OECD countries through most of the 1980s provides compelling supportive evidence (Figure 3.6). Had high interest rates been caused primarily by a fall in savings, equity prices would have been expected to decline. And this may explain why high real interest rates and rela-

tively rapid growth have been able to coexist in recent years.

Corroborative evidence suggests that the productivity of capital did indeed rise in industrial countries. The rate of return in the business sector in the late 1980s was well above the depressed levels of the early part of the decade, and even above the levels in the 1970s (Table 3.6).

#### *New and continuing claims on world resources*

There is a significant probability that real interest rates will remain relatively high in the 1990s because of several new or continuing claims on the world's resources that will maintain upward pressure on interest rates. Among these are the costs of German unification, the continuing claims of the U.S. budget deficit, the need to strengthen the capital base of U.S. and Japanese banks, the social and physical infrastructure needs of Eastern Europe, the post-war reconstruction of Kuwait and Iraq, and the creation of a single internal market in Europe by 1992. Only the first three of these are examined below to provide a brief glimpse of the issues involved.

*The union of the two Germanys* will have both short- and medium-term consequences for interest rates. Estimates show that per capita incomes in the German Democratic Republic were between 35 percent and 40 percent of those in the Federal Republic of Germany.<sup>3</sup> To raise per capita incomes and productivity in eastern Germany to the levels that prevail in western Germany will require large investments in physical equipment, infrastructure, training, and social services. In the interim, transfers of current resources will also be required to pay for unemployment support, pensions, and basic services provided by regional and local governments.

The eventual implications of these developments for the budget remain uncertain. The general government deficit in the Federal Republic of Germany is estimated at 2.1 percent of GNP in 1990 (compared to a small surplus in 1989)<sup>4</sup> and is expected to be 4.2 percent of GNP for unified Germany in 1991 (IMF, 1991). These financing needs will need to be met by mobilizing resources from domestic and international financial markets.

More important, the sudden jump in German investment will raise world demand for capital resources relative to global saving and will manifest itself in Germany as a declining current account balance and upward pressure on interest rates. Some of this pressure on interest rates will inevitably spill over into other industrial countries as capital flows into Germany in response to the higher rates, with

### Box 3.1 Trends in savings rates of industrial countries

The upward pressure on real interest rates can be explained in part by a slow recovery of savings rates in industrial countries. Both governments and the private sector seem to have been responsible. Governments, in particular, moved from near-balance in the 1960s to significant overall deficits in the early 1980s. But such deficits declined during the 1980s: the U.S. federal deficit fell from its 1982–83 peak of 5 percent of GNP to about 3 percent by 1989–90 and, more important, the general government deficit of the OECD area as a whole fell from more than 4 percent to barely 1 percent over the same period.

Private saving as a ratio to GDP has now returned to the low level of the 1960s. Demographic and social factors may be responsible. The population of the OECD is increasingly elderly, while that of the developing world is increasingly young. Both groups tend to be small savers. Another reason may have been decelerating inflation. The high inflation of the 1970s forced households to save and restore the real value of many of their imperfectly indexed assets. Financial deregulation may also have reduced private savings rates in some areas by increasing the array of borrowing possibilities for previously rationed households and businesses.

Some factors could make for stability or even higher savings rates in the future. For example, the fall in

personal saving associated with large increases in asset values are unlikely to be repeated and may even be reversed. In addition, continuing high real interest rates and growth rates are likely to stimulate savings. But the inexorable shift of demographic forces could affect savings in a contrary direction. Recent research indicates that a one percentage point increase in the dependency ratio<sup>a</sup> is estimated to increase consumption by 0.16 percent in the short run and 1.4 percent in the long run. The overall dependency ratio is expected to rise significantly in Japan and Germany during the 1990s, remain stationary in the United Kingdom and France, and decline in the United States and Canada. On balance, this would probably result in lower private savings rates, with a shift in the distribution of private savings from Japan and Germany to the United States and Canada.

As far as public savings are concerned, however, the medium term suggests little change or perhaps a small decline. Public savings in Germany are expected to decline and remain low well into the latter half of the 1990s. Japan's public savings are also expected to slide as the government boosts domestic public spending, and a rapidly aging labor force absorbs increasing amounts of public current expenditures for education, medical services, and government pensions. The outlook for the U.S. budget is especially uncertain.

a. The dependency ratio is defined as the number of nonworking dependents for every member of the working labor force.

important consequences for the financing costs of developing countries.

The U.S. budget is likely to be a key factor influencing trends in international interest rates through its effect on global savings. Successful reduction of the U.S. budget deficit is thus of some concern to developing countries. The recent budget agreement in the United States provides for a \$482 billion reduction in budget deficits over five years. If the budget deficit estimates of January 1991 are used as the baseline, implementation of the cuts would reduce the deficit from 3 percent of GNP in 1990 to 1.4 percent by 1995.<sup>5</sup> If the costs of deposit insurance are included, the total deficit is officially projected to fall from 4.1 percent of GNP in 1990 to 0.8 percent in 1995.

These deficit projections are subject to considerable uncertainty, however, even if the budget agreement is carried out to the letter. For one thing, the expenses of the Gulf war are not included in calculations of the deficit.<sup>6</sup> But even more important is the possibility of large government outlays to support the Federal Deposit Insurance Corporation in the

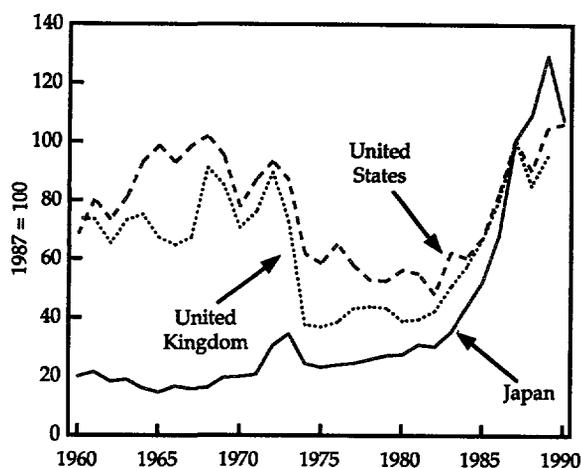
event of widespread bank failures. A significant recession could raise the cost of deposit insurance considerably, and projections of total government borrowing of \$400 billion in such circumstances would not be unreasonable. And a one percentage point lower annual growth in the U.S. economy could add \$250 billion, or almost 33 percent, to the cumulative deficit by 1995.

Problems in the financial systems of the United States—and Japan—have potentially significant consequences as well. Signs of weakness in the U.S. banking system have been evident for some time. The main private borrowing sectors in the U.S. economy—households and corporate nonfinancial businesses—borrowed heavily during the 1980s in relation to their income, making them vulnerable to a slowdown in the economy. The ratio of credit market debt to the value added of the nonfinancial business sector soared after 1981, reaching a new peak in 1989 (Figure 3.7). Moreover, banks increasingly replaced their shrinking corporate lending business with highly leveraged transactions. Many banks

Industrial country share prices rose sharply after 1980

**Figure 3.6 Industrial share price index in Japan, the United Kingdom, and the United States, 1960–90**

(in constant prices)



Source: World Bank data.

were involved with leveraged buyouts (LBOs) at several levels—as senior lenders, mezzanine lenders, and equity participants through LBO equity funds. As a consequence, banks are less well protected against loan nonpayments if their clients become bankrupt.

U.S. households similarly increased their leverage during the 1980s. The ratio of net credit market debt of households to personal income reached a historic peak in 1988, though it declined marginally in 1989. Two components of credit to households increased in relative importance—mortgages and credit card debt. In the 1980s, the ratio of mortgage debt to personal income rose far above its historic trend; the decline in real estate values in the United States,

especially in the northeast, is already posing problems for banks. Similarly, the credit card component of consumer lending has always been particularly risky, as the rising trend of personal bankruptcies attests.

With its two main client sectors leveraged at relatively high levels, U.S. banks became vulnerable to a rapid slowdown of the U.S. economy. While some banks are already in difficulty, most will be able to meet the capital requirements laid down by the Bank for International Settlements. In the near future, much will depend on how well banks protect themselves against the possibility of widespread default. Net charge-off rates of U.S. commercial banks have increased gradually in the last few years, but will need to rise further to reflect the deteriorating situation.<sup>7</sup>

The financial situation of some Japanese banks deteriorated in 1990, but the causes were altogether different from those affecting U.S. banks. Financial markets in Japan entered an uncertain phase with the decline of the Nikkei index by over 46 percent in the first three quarters of 1990. Unlike U.S. banks, Japanese banks hold substantial shares of corporate stock (they own more than 40 percent of all Japanese corporate stocks) and can count 45 percent of the unrealized capital gains toward their capital base. Estimates suggest that for Japan's city banks, the market value of capital in 1989 exceeded the book value by a factor of six (Kane, Unal, and Demirguc-Kunt 1991). The decline in Japanese stock prices altered this picture and seriously eroded the capital base of banks. During the first quarter of 1990, while the Nikkei 225 index declined by roughly 25 percent, the market capitalization of individual city banks declined by as much as 33 percent (Kane, Unal, and Demirguc-Kunt 1991).

To enable banks to partly restore their capital, Japanese financial authorities relaxed restrictions on the issuance of subordinated debt. Japanese banks,

**Table 3.6 Rate of return on nonresidential capital stock in major industrial economies, 1975–90**

(profit income as a percentage of capital stock)

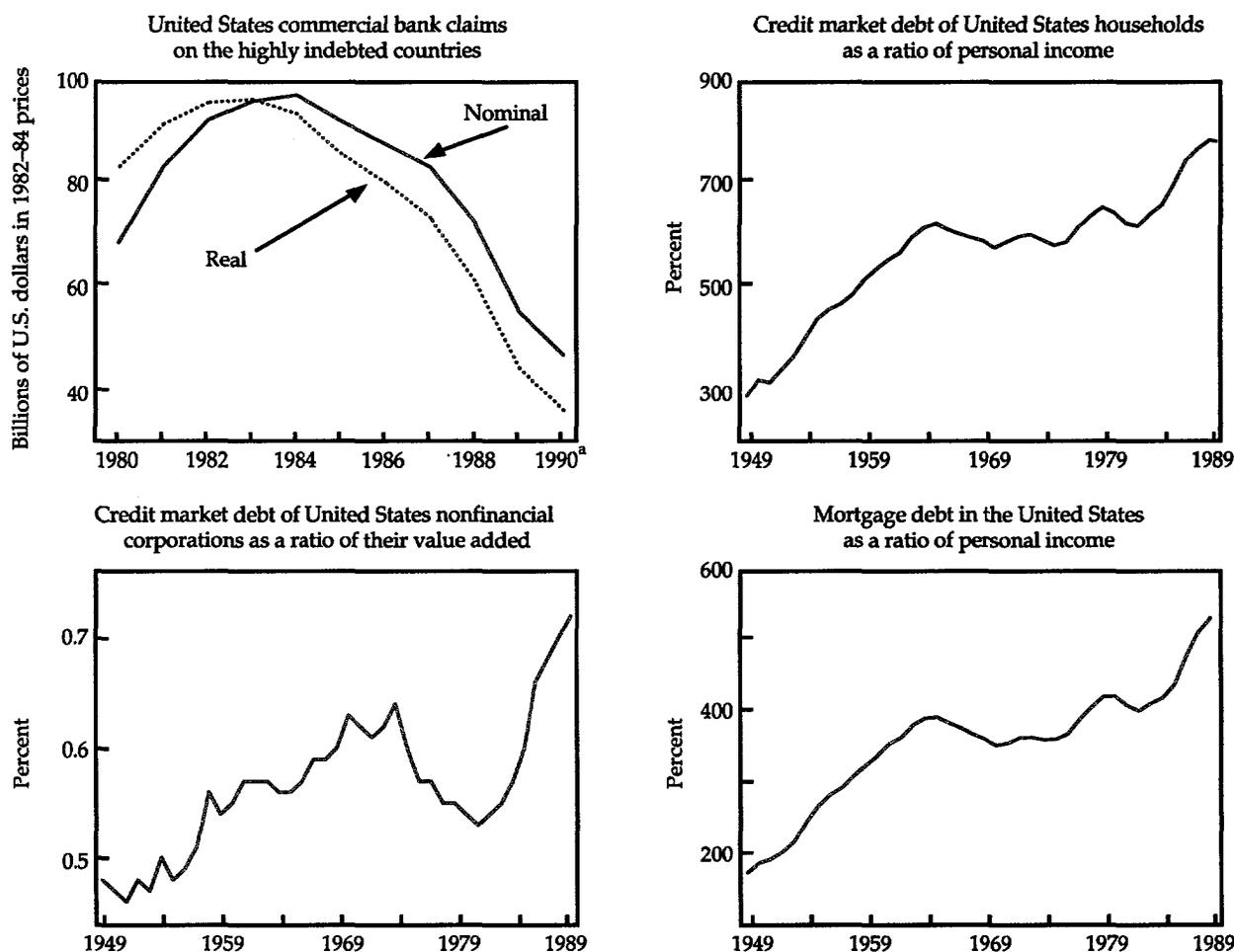
Economy or group of economies	1975–79	1980–87	1987	1988	1989	1990
United States	17.0	16.8	18.7	19.3	20.0	19.8
Japan	14.9	14.5	15.0	15.2	15.2	14.9
Germany, Fed. Rep.	13.8	13.5	14.6	15.2	15.6	15.8
G-7	14.8	14.7	16.0	16.5	16.8	16.7

Note: The measure of return to capital is taken as the difference between value added at factor cost and compensation of employees (the gross operating surplus of enterprises). The capital stock is adjusted for inflation and covers only assets included in nonresidential gross fixed capital formation and hence excludes dwellings, inventories, monetary working capital, land, and natural resources.

Source: OECD (1990).

While U.S. banks were reducing their risk exposure abroad, they were increasing their exposure at home

Figure 3.7 International and domestic debt exposure of U.S. commercial banks, 1980–90 and 1949–89



a. Data are as of the third quarter of 1990.  
Source: Prywes (1990).

which reportedly lost more than \$200 billion from their aggregate capital, started to issue subordinated debt on a large scale and reduced their investments in the United States by selling U.S. securities. If interest rates continue to rise in Japan and fall in the United States, this trend could accelerate.

The financial problems of the U.S. and Japanese banking systems appear to be receding, but the risks of further deterioration remain. Banking systems in the United Kingdom, Canada, and Australia are facing similar problems. Much will depend on the extent and duration of the slowdown in the U.S. economy and expectations of growth in Japan as reflected in stock prices. In turn, an unraveling in the financial system could deepen the U.S. recession and slow the Japanese economy.

In the meantime, both U.S. and Japanese banks are cutting back their lending and applying stricter standards for borrowers. This will mean smaller levels of lending even to creditworthy developing country borrowers. In addition, as U.S. and Japanese banks endeavor to restore their capital positions to meet the deadlines set by the Basel accord, the incremental demand for capital will apply upward pressure to interest rates. It will also indirectly affect developing countries, because slower domestic credit expansion in industrial countries will inhibit investment and affect longer-term growth prospects. A return to the growth rates of the mid-1980s in the United States and Japan will probably be postponed until the health of their banking systems is restored and domestic credit expansion can return to its earlier levels.

*The availability of external capital to developing countries*

In addition to uncertainties about the international trading environment and the cost of external finance, developing countries have to confront uncertainty about the availability of external finance. The inability of a sizable group of developing countries to service the debts acquired immediately after the 1979 oil shock meant that commercial flows to developing countries virtually dried up in the 1980s. In 1981, the heyday of petrodollar recycling, net flows to developing countries from private creditors and commercial banks totalled \$53 billion.<sup>8</sup> By 1989, net flows had dwindled to \$4 billion, and most of that was for collateralizing guarantees and debt buybacks and consequently was not available for purchasing imports (Figure 3.8). Arrears accumulated from next to nothing in 1981 to \$79 billion by 1989.

Funds from official sources were equally scarce. Flows of bilateral official development assistance stagnated at around 0.3 percent of developing coun-

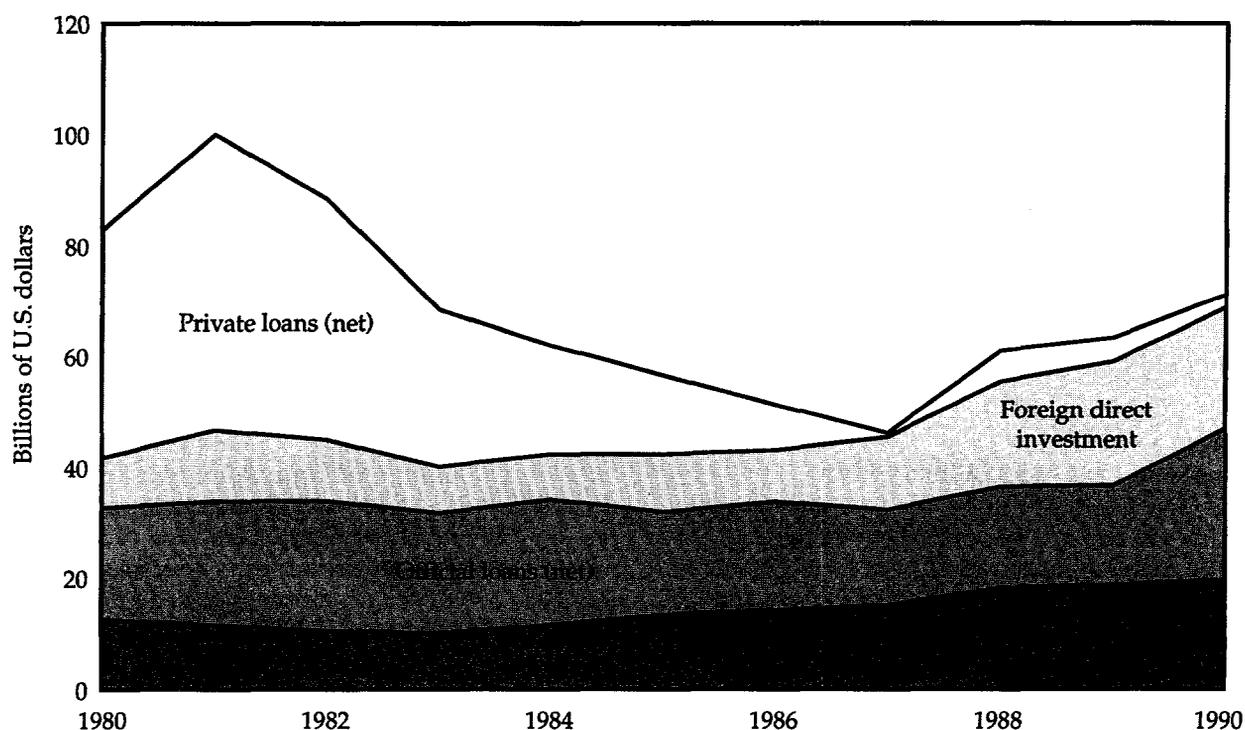
try GDP. Net flows declined by half during the period, although net flows from multilateral sources rose from \$7.8 billion in 1980 to almost \$12 billion in 1989.

The sharp decline in new money to developing countries during the 1980s meant that net resource transfers to developing countries, after deducting for interest on existing debt, shifted from a positive \$46 billion in 1981 to a negative \$17 billion in 1988.<sup>9</sup> This downward trend was arrested in 1989, although net transfers were still slightly negative. In 1990, aggregate net resource transfers are projected to turn positive once again and reach \$8.8 billion, largely as a result of substantial increases in bilateral and multilateral lending.

The availability of external finance for developing countries in the medium term will remain difficult. Net flows are projected to increase at 8.9 percent a year on average in 1990–95, which is slightly slower than the projected growth rate of export earnings in developing countries (Table 3.7). But because of the larger debt stock of developing countries, relatively high real interest rates, and rising remittances from

*Aggregate net resource flows began to increase after 1987*

**Figure 3.8** Aggregate net long-term resource flows to developing countries, 1980–90



Source: World Bank data.

**Table 3.7 Projected net flows of long-term external finance to developing countries, 1989–95**  
(billions of U.S. dollars)

Type of flow	1989	1990	Average level, 1991–95	Average annual growth, 1990–95
Official	34	49	60	5.3
Grants	18	20	25	5.6
Loans	16	29	35	5.0
Multilateral	12	17	21	7.4
Bilateral	6	10	12	5.7
IMF	-2	2	2	—
Private	32	28	45	14.2
Grants	4	4	5	7.6
Loans	4	2	10	42.0
Foreign direct investment	24	22	30	10.3
Total	66	77	105	8.9

Source: Fernandez-Arias (1990).

profits on the growing stock of direct foreign investment, aggregate net transfers would be only slightly positive by 1995.

A conservative estimate of some \$117 billion in aggregate net flows for 1995 would support a current account deficit in developing countries of about \$70 billion, or 1.6 percent of GNP. The implications are significant. Such low levels of external financial flows immediately place a constraint on the level of investment in developing countries and highlight the importance of policies to encourage domestic savings and attract flight capital. Less investment will mean slower growth. It will also mean a slower pace of technical progress, as lower levels of external financing will inevitably depress imports of capital goods.

Aggregate net flows in the 1990s could revert to their composition during the 1960s—with official flows and foreign direct investment assuming greater importance and private lending remaining limited. Both bilateral and multilateral lending in the first half of the decade are expected to grow ahead of the GNP of industrial countries. Bilateral lending would rise with Japan's increased role, and multilateral lending is likely to grow because of increases in disbursements from the World Bank, the impact of the newly created European Bank for Reconstruction and Development, and the capital increases of the Asian Development Bank and Inter-American Development Bank.<sup>10</sup> However, much of this lending will be predicated on continued efforts by develop-

ing countries to pursue policies that promote macroeconomic stability, increase creditworthiness, and support rapid and sustainable growth. In some cases, it will also depend on successful negotiations with commercial banks to reduce debt.

Private financial flows to developing countries are more difficult to project. Nevertheless, two important factors suggest that they are likely to remain modest in the 1990s. First, international banks and capital markets are unlikely to consider most developing countries creditworthy, unless there is compelling evidence—over a fairly long period—of a strong external payments situation and stable economic policies. The continuing problem of interest arrears has made commercial banks extremely reluctant to extend new money to developing countries, especially for general purpose financing. Countries in South and East Asia already enjoy access to external commercial finance, but tougher criteria will apply even to those countries in the future. A few countries in Latin America—notably Chile, Mexico, and Venezuela—may improve their access to international financial markets if they maintain macroeconomic stability and the pace of current reforms. For the heavily indebted countries, the key evidence of a restoration of creditworthiness will be a return to par of the price of their debt on secondary markets.

The second factor likely to limit private flows to developing countries is the recent erosion in the capital base of Japanese and U.S. commercial banks, which will slow bank lending in the short term. But even when their capital base is restored, the banks will probably give preference to their domestic borrowers over their developing country clients.

Projections of financial flows show steady growth in direct foreign investment in developing countries through the 1990s. But this forecast is especially uncertain because much depends on policies in developing countries. East Asia—and as reforms take root, Eastern Europe—could be the important destinations of foreign investment capital. Developing countries are expected to increase their use of new financial instruments to attract investors. For example, in highly indebted Eastern Europe, debt-equity swaps could prove a useful instrument for attracting foreign investors. In other developing countries, debt conversions could be used to improve the environment (debt-for-nature swaps) or to support health programs (debt-for-health swaps). And the growing availability of portfolio investment opportunities could also generate interest among large savers in industrial countries.

For several developing countries, creditworthiness could be restored more quickly if their heavy

burden of debt and debt service were reduced. Considerable progress has already been made in dealing with the debt crisis—the reduction of commercial debt and debt service, the easing of terms of the Paris Club reschedulings, and the continuation of other programs of debt relief. But the debt crisis is far from over. Arrears have continued to accumulate, and heavily indebted countries are constrained in implementing structural reforms by the scarcity of incremental external finance.

Whether the world economic community succeeds in reducing the debt burden of heavily indebted countries will affect the prospects for developing countries in the next decade. There is much that could be done. Forgiveness of debt to severely indebted low-income countries by official creditors totalled \$6 billion in 1988–90, equivalent to 11.6 percent of total bilateral debt to these countries at the end of 1990.<sup>11</sup> Official bilateral creditors may wish to expand that coverage and deepen the concessionality of other debt relief measures. In all cases, such measures ought to be implemented only after it is clear that a country is prepared to take the necessary steps to restore macroeconomic stability, increase the efficiency of resource use, and promote equitable growth.

For severely indebted middle-income countries, official involvement will continue to be necessary to extend commercial debt and debt service reduction to countries with strong adjustment programs. Seven of these middle-income countries—Bolivia, Egypt, Honduras, Morocco, Nicaragua, Poland, and Senegal—owed more than half of their debt to official creditors at the end of 1989. There is a case, therefore, for extending debt relief to such countries, provided they are prepared to undertake the structural reforms necessary to restore creditworthiness.

Despite its importance, debt reduction on its own is not enough to sustain creditworthiness. Once creditworthiness is regained through a combination of debt relief and structural reforms, it can be sustained through increased opportunities for trade, investment, and technology acquisition. Thus, debt relief measures need to be accompanied by policies in industrial countries that will increase market access for developing countries.

### Oil prices

International oil prices have been volatile since August 1990, when the crisis in the Middle East erupted. Market expectations about prices were particularly uncertain in the short term. Since the resolution of the crisis, however, expectations have reverted to their

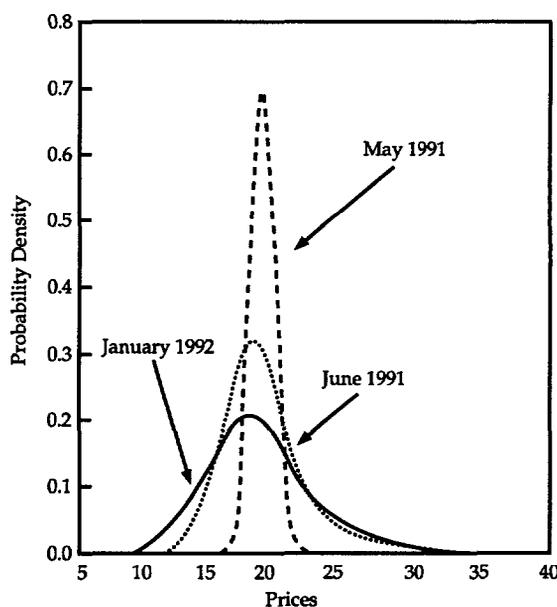
traditional form, with uncertainty increasing as the time horizon extends further into the future. The market expects the future spot price to be \$20.00 a barrel in March 1991, and in July 1991 and \$19.40 in January 1992 (Figure 3.9). The probability density function of oil prices at different dates in the future can be calculated using market prices of options on oil futures (Figure 3.9).<sup>12</sup>

Market expectations show considerable uncertainty about the future course of oil prices. For 1991 and 1992, prices are forecast to lie in the range of \$15 to \$25 a barrel, with a 70 percent subjective probability (Figure 3.10). The range of possible prices depends on expected growth in OECD countries, the speed with which Kuwait and Iraq resume production, and the cohesion of OPEC. Current supply and demand conditions suggest that prices are likely to tend toward the lower end of the range.

The latest forecasts for the year 2000, from a wide variety of agencies, range from below \$10 a barrel to more than \$40 a barrel (in constant 1989 dollars). The range is so wide because of a large dispersion in forecasts of demand and supply and different estimates of price elasticities. Uncertainties about proven and potential reserves in the USSR, develop-

*Oil prices are expected to decline and become more volatile in the coming year*

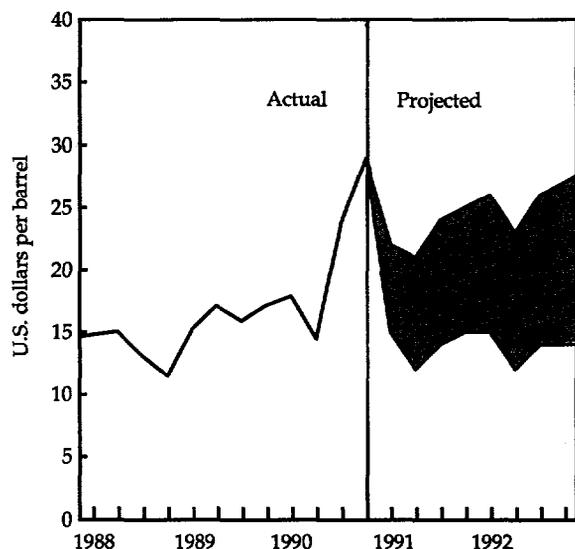
**Figure 3.9 Probability density of future oil prices**



Note: Based on oil futures as of March 1, 1991.  
Source: World Bank data.

*Oil price uncertainty is expected to increase in the future*

**Figure 3.10** Projected range of oil prices with a 70 percent probability, 1991–92



Source: World Bank data.

ing countries, and even the United States compound the difficulties in forecasting long-term oil prices.

But there is considerable agreement on one probable development. With increasing world demand for oil, and flat (or declining) supplies from non-OPEC sources, the world will become increasingly dependent on OPEC for its oil. And within OPEC, a few countries—Saudi Arabia, Iran, the United Arab Emirates, Iraq, and Kuwait—will achieve dominance. Increased concentration of oil supplies in a few countries will likely make the oil market more vulnerable to supply disruptions. The present crisis in the Middle East is a clear reminder of that vulnerability.

### Conclusion

The 1990s started poorly, and the longer-term outlook is clouded by a variety of contingencies affecting the climate for international trade and finance. The impact of external circumstances on developing countries will depend crucially on how individual countries manage these contingencies. Policies in in-

dustrial countries will need to be sensitive to the concerns of developing countries and make it easier for them to restore momentum to the growth process. This would be especially important for low-income countries that have relatively few strategic options open to them for sustained development.

### Notes

1. Technically, an economy is considered to be in recession when it experiences two consecutive quarters of negative GNP growth.

2. For example, see Organisation for Economic Cooperation and Development (1985, Econometric Annex to Chapter 6).

3. Comparisons of incomes between the two countries are particularly difficult since the GDR has had no free markets for foreign exchange and no goods arbitrage. Interpretation of the two statistics is complicated further by the differences in the quality of goods and services in the two countries.

4. Includes central, state, and municipal government, German Unity Fund, Treuhand, ERP-Fund, but excludes social security fund, Bundespost, and Bundesbahn. These exclusions are important. For example, the telecommunications arm of the Bundespost will be borrowing DM 10 billion a year from all sources for the next seven years to help fund a DM 200 billion investment program.

5. U.S. Congress, Congressional Budget Office, 1991.

6. The cost of the Gulf war to the United States was eventually lower than expected. Earlier estimates ranged between US\$28 billion and US\$48 billion.

7. The net charge-off rate is a measure of the decline in the market value of a bank's assets.

8. The term "net flow" is defined as disbursements net of (actual) principal repayments on long-term lending.

9. The term "net transfer" is defined as disbursements less (actual) principal repayments on long-term lending and (actual) interest payments on long-term debt.

10. The World Bank's net flows to developing countries in 1995 are expected to be substantially higher than in 1989 but only modestly so when compared to 1990. This is because disbursements in 1990 were unusually high as a result of the Brady Initiative.

11. Based on a projection of debt outstanding and disbursed from bilateral sources. The data source was World Bank (1990).

12. Implied volatilities were calculated by minimizing the mean squared sum of errors between the theoretical Black option value for all outstanding puts and calls (for all strike prices and maturities) at a particular date and the observed market prices with respect to the volatility used in the theoretical option price formula.

# 4

## *The developing countries and the outlook for the global economy: Alternative scenarios*

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Will the tendency toward global interdependence, propelled by microeconomic linkages and international markets, be reinforced or frustrated by geopolitical developments in the 1990s? Expectations about this range widely. At one extreme is the fear of a collapse of the old order into a chaos of regional trade blocs, trade wars, and autarky. At the other is the hope for a new era of cooperation among the major powers under a revitalized United Nations. The field of choice is wide. Governments may seek safety in an elusive independence. Or they may acquiesce in a more productive interdependence. The latter course is not a passive one; it entails active change in economic policies and institutions.

The pace of economic progress in industrial and developing countries will depend to a large extent on the path chosen. Starting with this idea of a wide distribution of possible outcomes, this chapter sketches a representative range of scenarios for the global economy that portrays the economic stakes for the world in general, but particularly for developing countries.

### **Four global scenarios: An overview**

Economic forecasters often take for granted both the relevance and the permanence of the institutional framework for economic progress. Political alignments, scope for cooperation and leadership, national economic systems, rules underpinning international trade and finance, and even peace are all part of the "woodwork" in a typical macroeconomic forecast. Yet, a casual reading of current events suggests that this institutional framework is undergoing rapid change. Acknowledgment of this shifting framework must be central to any realistic assessment of the range of plausible outcomes for economic development in the 1990s.

It is this concept that motivates the scenarios presented in this chapter. For want of a better term, we refer to it here as the "management dimension."

Locations along this dimension represent different levels of effectiveness of international economic management and of the institutional framework that braces the world economy. These affect economic growth by influencing the quality of economic decisionmaking in the global economy as a whole. In addition, they relate closely to the level of uncertainty that pervades economic decisionmaking in a rapidly changing world.

Development scenarios for the 1990s can be arranged along this management dimension, from a low-case scenario of highly detrimental uncertainty to a high-case scenario of robust confidence in the quality of economic management. The middle ground is occupied by two scenarios: a baseline that incorporates expectations that intended policy changes will be implemented, and a downside scenario that is more cautious but far from extreme. The subjective probabilities attached to these scenarios are not uniform; rather, they are approximated by a probability distribution in which the two extreme cases each represent 15 percent of the probability, the baseline 40 percent, and the downside 30 percent.

Table 4.1 colors this sketch with some qualitative details of the structural characteristics of each of the four scenarios. Four major areas of economic management—finance, trade, energy, and macroeconomic policy—each representing a cluster of related policies and issues, cover the principal areas of uncertainty identified in earlier chapters. Each column highlights relationships between these clusters in a way that makes each scenario internally coherent. Each scenario tells a story, starting with an initial trigger or unexpected change and then leading to consequences and policy reactions. But since the triggers themselves cannot be predicted, an element of luck determines to some extent the scenario that eventually unfolds.

A notion of how the low-case scenario could unfold, beginning with an unexpected development in the financial sector, is developed in Box 4.1. The

**Table 4.1 Characteristics of four scenarios of global economic conditions for the 1990s**

Clusters of characteristics	Low case	Downside	Baseline	High case
	(15 percent)	(30 percent)	(40 percent)	(15 percent)
Finance	Serious financial crisis in the United States and Japan with "contagion" effects worldwide and long-term ramifications (Box 4.1); widespread defaults by highly indebted developing countries; very little net inflow of capital to developing countries; very high real interest rates reflecting extreme uncertainties.	Continued financial stress in the United States and Japan, with unchanged policies; many bank failures; lack of further progress of Brady Plan; high real interest rates continue mainly because of the perception of serious risks by markets and a growing shortage of global savings relative to investment needs; little growth of foreign direct investment worldwide.	Gradual reduction in financial stress in the United States and Japan as reforms are introduced to revitalize investment and banking institutions; Brady Plan makes progress as remaining major debtor countries are included; real interest rates fall somewhat despite high demand for capital in Europe and Japan, and productivity improves gradually; foreign direct investment flows grow more rapidly but some developing regions are bypassed.	Global financial reforms make the system much more robust; financial integration continues unabated while systemic risks are reduced through regulatory changes; real interest rates decline to pre-1980s levels as risk premia are reduced and as a lengthening of time horizons creates ample savings; a new, more comprehensive debt initiative combined with a sharp increase in foreign direct investment brings about a significant rise in net resource flows to developing countries.
Trade	Trade "war" among major trading blocs (Europe, North America, and East Asia); GATT framework collapses as high barriers bring a much-reduced growth in the volume of world trade.	Failure of GATT trade negotiations leads to increased protectionism worldwide; growth of world trade slows relative to that of the late 1980s, particularly inter-bloc trade. Now new free-trade initiatives.	GATT negotiations achieve modest success; tariffs and nontariff barriers are lowered; both inter and intrabloc trade grow relatively rapidly, reflecting fundamental trends; but agricultural trade remains protected. New free-trade initiatives lack force and are symbolic only.	GATT negotiations succeed in bringing about a new and more liberal trading system covering goods, services, and agricultural commodities; regional trade arrangements reinforce the global trade-creating forces under a new world trade organization.
Energy	Big swings in oil prices around a high level, because of continued political and social instability in the Middle East, while the region becomes a more predominant supplier of oil. Relative decline in the monopoly power of conservative forces in OPEC.	Persistence of high oil prices in the early 1990s because of political uncertainty in the Middle East, but relatively flat and stable path (compared with low case).	Oil prices rapidly return to prewar levels and then rise at a steady pace reflecting market fundamentals; moderate fuel conservation measures gradually exert downward pressure on international oil prices.	New political arrangements in the Middle East combined with cooperation between producers and consumers and bold new environmental initiatives lead to persistently lower international oil prices.
Policy	The G-3 countries fail to agree on macroeconomic policy goals; the policy dialogue established in the 1980s collapses; extreme uncertainty about global inflation and exchange rates among G-3; large number of developing countries fail to implement extended reforms; only a small fraction of developing countries continue with intended policies.	The G-3 countries cooperate only to avert crisis but fail to stabilize excessive volatility in financial prices; U.S. fiscal deficit becomes major source of uncertainty; payments imbalances within the OECD persist or reemerge; OECD remains a net capital importer; many developing countries attempt to stabilize macroeconomic conditions and introduce reforms but the pace of progress is slow, with many setbacks.	Improved cooperation among the G-3 countries; gradual but steady decline of balance of payments imbalances and less volatility in financial prices; low G-3 inflation remains an anchor; improved exchange rate stability; most developing countries manage to implement intended policies, particularly countries that experienced little or no growth in the 1980s.	Policy coordination among the G-3 countries on fundamental monetary reform leads to far less volatility in financial prices, especially exchange rates and interest rates; pace of supply-side reforms in both industrial and developing countries accelerates; most developing countries implement intended policies or initiate new programs for development.

Note: The percentage in parentheses associated with each scenario refers to the subjective probability of occurrence.

#### Box 4.1 How a low-case scenario might unfold

Unpredictable events could strongly influence what actually happens during the forecast period. For example, a low-case scenario for the world economy could be triggered by a sudden sharp decline in the Japanese real estate market. The capital base of Japanese banks has already been eroded significantly with the decline in stock prices. A decline in real estate values could further erode that base, weaken loan quality (real estate is often the collateral behind bank loans), and increase the need for capital.

As a result, the following scenario could unfold:

- To raise resources to rebuild capital, banks cut back their lending to the troubled real estate sector and perhaps even sell real estate they hold as collateral against troubled loans. Real estate prices fall even lower, further weakening capital ratios.
- Japanese authorities stabilize the markets by easing monetary policies (through loans to troubled banks) and by discouraging foreign lending.
- Reducing foreign lending includes sales of dollar-denominated financial assets. The U.S. dollar suffers, prompting higher interest rates, which reduces the credit available to high-risk sectors in the United States—real estate, highly leveraged transactions, some consumers. Higher interest rates and lower lending slow consumption and investment, reducing domestic demand in the United States.
- Reduced U.S. demand affects European and Japanese exports, prompting bankruptcies and further weakening the financial sector.
- Reduced growth in industrial countries leads to increased unemployment. Governments respond to increased demands for protection against foreign competition.
- Lower growth and increased protection in industrial countries, together with higher interest rates, slow growth in developing countries and trigger defaults by severely indebted countries.

scenarios are used as didactic devices, to explore the range of possible outcomes. The possibilities are, of course, countless. The actual outcome could very well be a combination of components across the different scenarios and, indeed, is likely to include features not even contemplated here.

A set of oil price scenarios were constructed consistent with the four scenarios (Figure 4.1). Other global economic and financial indicators are summarized in Table 4.2.

An important feature of Table 4.1 is the inclusion of policy reforms in developing countries as a variable that changes in each scenario. The underlying view is that successful *internal* management in developing countries is probably not independent of successful *global* outcomes. While this is not always the case, there are sound arguments in its favor. A global economy that remains strong for a prolonged period rewards good economic management and helps build internal consensus for reform. And strengthened incentive structures require efficient and energetic international markets. This is consistent with the evidence that, in the short run, adverse external shocks provoke constructive policy responses in developing countries. Overoptimistic Bank forecasts in the past—even for low-case scenarios—may well have derived in part from the neglect of this synergy of performance across countries. For similar reasons, scenarios developed outside the Bank have also tended to understate the growth consequences for

developing countries of different states of the world economy.

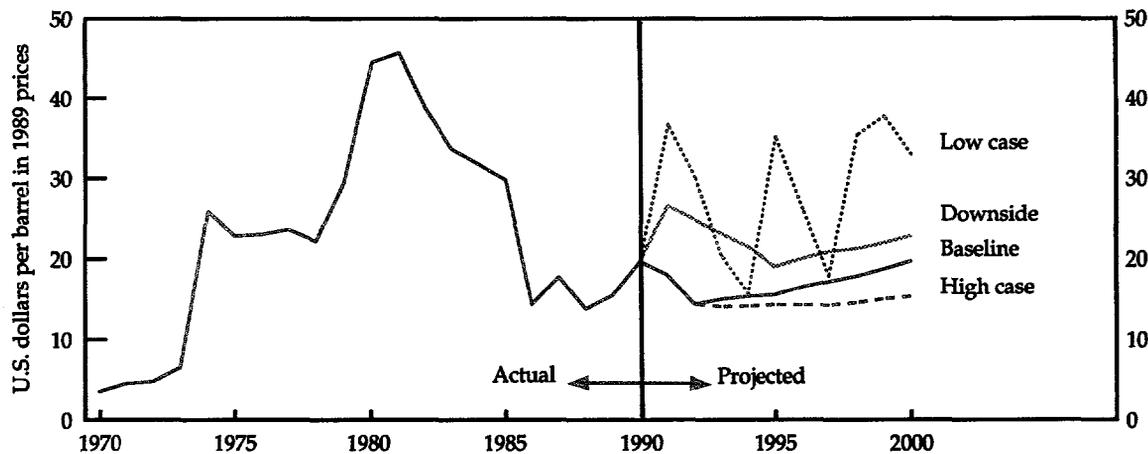
#### The external circumstances for development in the 1990s

The baseline scenario foresees oil prices dropping to prewar levels by 1992 and then growing at 3 percent a year. Real interest rates average 3.7 percent during the 1990s for the G-5; the U.S. rate is closer to 3.4 percent, while European rates are somewhat higher in the first half of the decade because of Germany's extraordinary financing requirements. World trade is expected to be relatively unaffected by current difficulties in the Uruguay Round. A healthy growth rate of 5.8 percent for the decade reflects a continuation of the strong forces of global economic integration.

The forecast indicates some weakness in the U.S. economy through 1993 due to low investment and public expenditure. During the second half of the 1990s, however, the U.S. economy rebounds to a GNP growth rate of 2.9 percent, resulting in an average growth rate for the decade of 2.5 percent. Inflation is held to an average rate of 3.9 percent a year. The effective exchange rate for the dollar remains essentially unchanged during the decade: a depreciation in 1991 is followed by appreciation during 1992–93.

Japan averages 3.7 percent annual GDP growth throughout the 1990s. Savings could edge down-

Figure 4.1 Oil prices, 1970–89 and the 1990s



Source: World Bank data.

ward as a share of GDP, exerting an upward pressure on interest rates. Partly as a result, investment is likely to be lower than in the 1980s both at home and abroad. The current account surplus is on a downward trend. Growth is likely to be driven more by domestic demand than in previous decades, partly because external markets do not grow rapidly (the United States) or become increasingly difficult to penetrate as a result of increased nontariff barriers (Europe). Exports to East Asia are an exception and are likely to grow quickly as interdependence in the region accelerates. Part of the impetus for increased domestic demand may come from a boost in govern-

ment spending on infrastructure and housing. And part of it may come as a result of a gradual increase in the dependency ratio—the number of nonworking dependents for every member of the working labor force.

Europe is projected to perform better than in the 1980s, with an average growth rate of 3 percent. The stimulus from Germany's unification is felt throughout most of the decade. In addition, efficiency gains from the creation of a single European market continue to emerge well into the next century. Further movement toward economic and monetary union reinforces prospects for stable economic relations

Table 4.2 Selected global indicators, 1980–89 and the 1990s

(average annual percentage change, except LIBOR)

Indicator	1980–89	Low case	Downside	Baseline	High case	Expected mean <sup>a</sup>
G-5 GNP	3.0	1.2	2.2	2.9	4.0	2.6
G-5 labor productivity <sup>b</sup>	1.7	0.4	1.4	1.8	2.8	1.6
World trade	4.1	2.7	4.5	5.8	7.6	5.4
Nominal LIBOR <sup>c</sup>	10.1	13.3	9.5	7.5	6.0	8.7
Real LIBOR <sup>c</sup>	5.5	7.9	5.1	3.7	2.1	4.5
G-5 MUV index <sup>d</sup>	3.1	6.8	5.1	3.9	3.2	4.6
G-5 GNP deflator <sup>e</sup>	4.1	5.0	4.3	3.6	3.8	4.1

a. Assuming subjective probabilities of 15 percent for the low and high cases, 30 percent for the downside scenario, and 40 percent for the baseline scenario.

b. Output per worker.

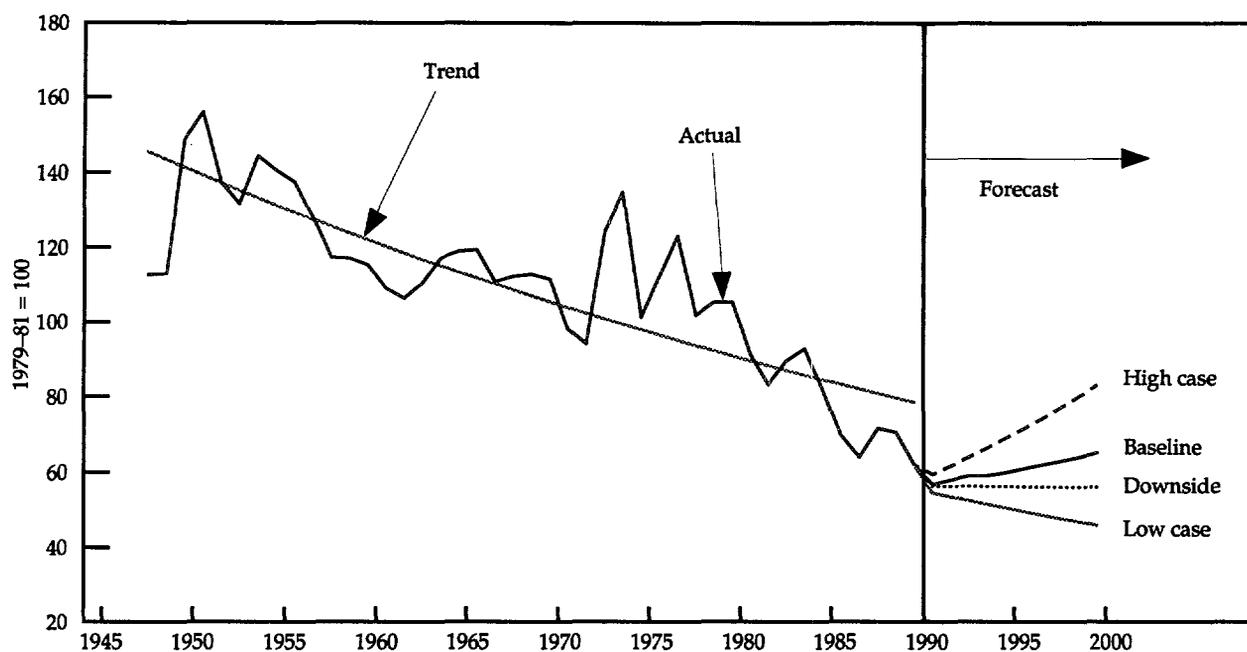
c. Six-month rates, per year, G-5 average using SDR weights.

d. Unit value index of manufactures exports, in U.S. dollars.

e. In local currency units.

Source: World Bank data.

Figure 4.2 Non-oil commodity prices relative to unit value of manufactures exports, 1948–2000



Source: World Bank data.

and raises confidence among investors. Finally, Western Europe gains from Eastern Europe's efforts at economic reform through increased trade.

Most nonfuel commodity prices recover to their recent levels in real terms. This implies a modest recovery from the current trough, particularly for beverage prices. Nevertheless, the nonfuel commodity price index remains below the long-term trend line (as shown in Figure 4.2) at the end of the century. It is highly unlikely that the actual trajectory of commodity prices over the next decade will be smooth; rather, prices are likely to rise and fall in response to periods of recession and rapid growth in economic activity. Raw materials prices are particularly susceptible to such economic fluctuations.

These global indicators vary across the four scenarios presented in Table 4.1, creating alternative sets of external circumstances for development in the 1990s. In the low case, volatile oil prices, high real interest rates, and a deteriorating international trading environment have harsh consequences for the G-5 economies. The current slowdown is prolonged for another two years and is followed by another slump in 1998. Sandwiched between these is a period of sluggish growth, so that by the year 2000 the GNP of the G-5 is 15 percent lower than in the baseline.

The high case, on the other hand, is a return-to-the-sixties scenario. Stable oil prices, low real interest rates, and a liberal and buoyant world trading environment support a G-5 GNP growth averaging about 4 percent a year. In the downside scenario, which falls between the low-case and the baseline scenarios, growth averages 2.2 percent a year, or about 0.7 percentage point below the baseline. The sensitivity of commodity prices across these scenarios is illustrated in Figure 4.2. (Readers interested in a more detailed account of these alternative scenarios will find it in the annex at the end of this chapter.)

The implicit supply-side dynamics embedded in the four scenarios are discussed in Box 4.2. The set of policies included in each scenario is expected to affect not only the level of investment and employment, but also the efficiency of capital and labor. The baseline, for example, includes an outlook for total factor productivity growth that is close to the average of actual performance since 1960. In the high case, reduced uncertainty, combined with fundamental policy and structural reforms, raises the share of private investment and increases overall economic efficiency. New investment in plant and equipment and increased public investment in education and training permit economywide diffusion of techno-

### Box 4.2 Arithmetic of long-term growth, simply stated

The long-term or equilibrium growth path of an economy may be expressed as the sum of two trends: the rate of growth of the labor supply and the growth of labor productivity.

In a simple growth-accounting framework, the growth of labor productivity may be expressed as the sum of technological progress (usually referred to as total factor productivity growth) and the factor substitution effect, which is defined as the rate of growth of the capital-labor ratio times the share of profits in national income. Long-term growth of output is directly influenced by new investments in machinery and equipment, which raise the capital-labor ratio, and by disembodied technological progress, which leads to a higher level of output for a given level of the capital-labor ratio.

Box table 4.2 shows rough estimates of such growth components for the industrial countries for three periods since 1960 and suggests how these components might evolve in each of the scenarios developed in the text.

The growth accounting framework used here is simple. The real world is more complicated. If new technologies are embodied in new machines, speeding up the rate of investment will have a positive effect on the level of output over and above the effect from increasing the capital-labor ratio alone (the factor substitution effect). By raising the marginal product of capital, technological progress stimulates additional investment until the marginal product of capital is reduced again to the real rate of interest.

The result is that output rises by more than the increase in factor productivity resulting from technological progress. Furthermore, additional growth dividends are possible if investment in human capital (training, new knowledge, better management) results in larger growth of total factor productivity. Two-way interactions between investment (particularly in people) and technological progress tend to widen the difference between the low- and high-case scenarios for growth.

**Box table 4.2 Possible sources of growth trends in industrial countries, 1960–2000**  
(average annual percentage change)

Source of growth	"Golden Age," 1960–73	"Inflation and slump," 1973–79	"Consolidation," 1979–88	Scenarios for the 1990s			
				Low case	Downside	Baseline	High case
Output growth <sup>a</sup>	5.2	2.9	2.7	1.2	2.2	2.9	4.0
Labor input growth <sup>b</sup>	1.1	1.4	1.0	0.8	0.8	0.8	0.8
Labor productivity growth	4.1	1.5	1.7	0.4	1.4	2.1	3.2
Total factor productivity growth	2.8	0.6	0.8	0.2	0.6	1.2	2.0
Factor substitution <sup>c</sup>	1.3	0.9	1.0	0.2	0.8	0.9	1.2

a. For illustrative purposes, the output growth rates for the scenarios in this table are set equal to the G-5 GNP growth rates shown in Table 4.2. The components shown for the scenarios ("sources of growth") are intended to represent equilibrium paths consistent with a Cobb-Douglas production function.

b. Growth in employment corrected for changes in working time. These two components change in offsetting ways across the scenarios. Working time (hours per week) is assumed to remain unchanged in the low-case scenario but continues its long-term downward trend in the other scenarios. The rate of decline in hours worked increases with the rise in real wages, as productivity growth increases.

c. Growth in the capital-labor ratio times the share of profits in national income.

Source: World Bank data; Englander et al.

logical progress. At the other extreme, the low case envisages a financial crisis, autarkic trade policies, and volatile oil prices—all of which would tend to increase risk and uncertainty, reduce incentives to improve efficiency, lower investment in long-term research and development, and obstruct established channels for the international transmission of new technologies.

### Implications for developing countries

The rest of this chapter explores the implications of the international environment, as laid out in the four scenarios, for developing countries in the next de-

cade. This section examines four aspects of developing country performance—growth, trade, current payments, and external finance. The final section looks at prospects for different developing regions and analytical groups of countries, touching on some national policy issues. The analysis highlights the importance of a strong, open, multilateral trading system for accelerating growth in the developing world and helping many developing regions return to creditworthiness. It also emphasizes the need for developing countries to adopt policies that increase their international competitiveness, strengthen their external payments position, and attract the levels of foreign direct investment and commercial finance

**Table 4.3 Summary results for developing countries, 1980–89 and the 1990s**  
(average annual percentage change)

Indicator	1980–89	Low case	Downside	Baseline	High case	Expected mean <sup>a</sup>
GDP	3.7	2.9	4.1	4.9	6.5	4.6
GDP per capita	1.6	1.1	2.2	2.9	4.6	2.7
Exports	6.6	2.4	4.7	6.1	8.3	5.5
Imports	2.3	1.8	4.3	5.9	8.2	5.2

a. Assuming subjective probabilities of 15 percent for the low and high cases, 30 percent for the downside scenario, and 40 percent for the baseline scenario.

Source: World Bank data.

considered so crucial for future growth. Finally, it points to the role that further debt relief measures can play in promoting faster and sustainable growth in severely indebted developing countries.

#### Growth

The four global scenarios demarcate a wide range of outcomes for growth (Table 4.3). The average level of real income per capita for developing countries by the year 2000 is about 40 percent higher in the high case than in the low case. The ratio of exports and imports to GDP is also higher, indicating greater integration of developing countries into the world economy. And the growth rate of exports from developing countries outstrips the growth of aggregate GNP in industrial countries, reflecting increased penetration of industrial country markets. Similar tendencies are visible in the baseline and the downside scenarios, but they are weaker than in the high

case. In the low case, developing countries are much less integrated with the rest of the world, and growth of their exports and imports falls below that of output. This pattern of outcomes for growth underscores the central tenet of this report: for growth to accelerate in the next decade, both national and international policies need to encourage integration in the world economy.

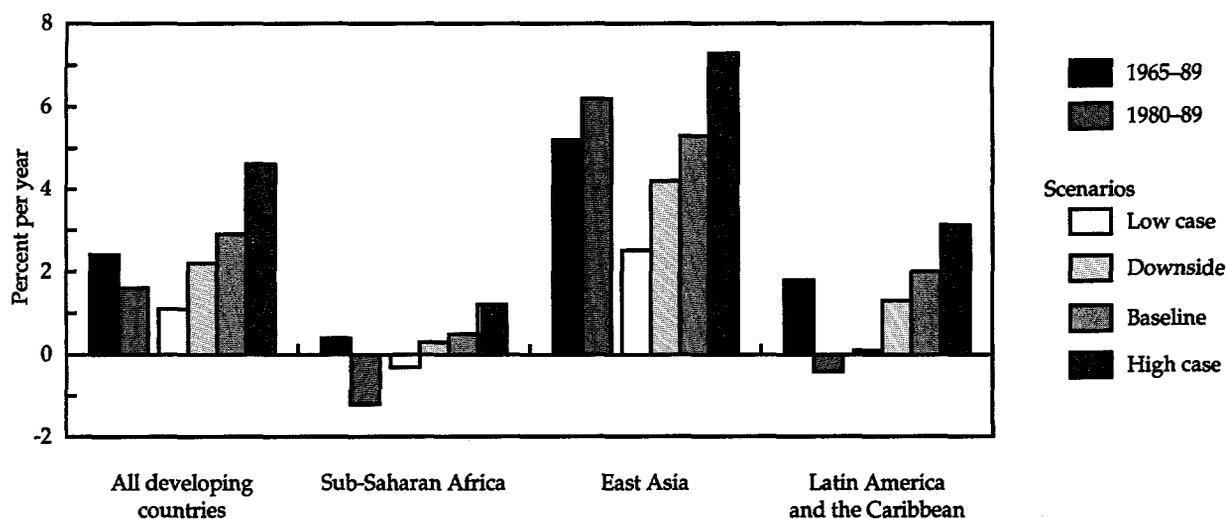
Even with greater integration of the world economy, however, the chances are remote that the growth rates of incomes across developing regions will converge over the next decade. The growth of GDP in Sub-Saharan Africa and Latin America is expected to continue to lag behind the mean for all developing countries, while growth in the Europe, Middle East, and North Africa region will drop further behind than it has since the mid-1960s (Table 4.4). The disparities are even more striking when expressed as per capita growth (Figure 4.3). Sub-Saharan Africa in the high case grows more slowly

**Table 4.4 Growth in developing countries, by region and analytical group, 1965–89 and the 1990s**  
(average annual percentage change)

Region or group	1965–89	1980–89	Scenarios for the 1990s			
			Low	Downside	Baseline	High
All developing countries	4.7	3.7	2.9	4.1	4.9	6.5
<i>Geographic regions</i>						
Sub-Saharan Africa	3.2	2.0	2.8	3.5	3.6	4.4
East Asia	7.2	7.9	3.9	5.6	6.7	8.8
South Asia	4.2	5.4	3.3	4.2	4.7	6.5
Europe, Middle East, and North Africa	4.2	2.5	2.5	3.2	3.6	4.7
Latin America	4.3	1.7	1.9	3.1	3.8	5.3
<i>Analytical groups</i>						
IDA-only adjusting Africa	2.3	2.5	3.2	4.0	4.5	5.6
Severely indebted middle-income countries	4.4	1.9	1.9	3.1	3.8	5.4
Exporters of fuels	3.2	1.8	3.5	4.5	4.1	3.5

Source: World Bank data.

Figure 4.3 Growth of real GDP per capita in developing countries, 1965–89 and the 1990s



Source: World Bank data.

than East Asia in the low case, while growth in Latin America in the high case falls well below that of East Asia in the downside case.

Since growth rates across developing regions are unlikely to converge, progress in the battle against poverty is expected to be modest, and the risks of adding to the number of absolute poor are high. The baseline scenario for the global economy discussed in the *World Development Report 1990* implied that 825 million people would be living in poverty by the year 2000, down from 1.1 billion in 1985.<sup>1</sup> The baseline in this book carries similar implications. Under the high-case scenario, the number of poor would decline significantly in all developing regions except Sub-Saharan Africa. In the downside scenario, the number of poor in developing countries by the year 2000 increases slightly compared with the baseline. And under the low-case scenario, the number of poor could rise significantly above the baseline level. In all the scenarios, the proportion of the population living in poverty in developing countries is expected to decline unambiguously. The only exception is Sub-Saharan Africa, where the number of poor people as a share of the population could rise marginally in the low case.

The logic of the growth forecasts may be conveyed in rough, summary fashion by reference to the “multipliers” in Box 4.3. Of the difference in the growth rate of developing countries in the 1990s between the

high and low cases, about one-half can be associated with the external demand and terms of trade factors, about 30 percent with the cost of finance, and perhaps as much as 20 percent with portfolio investment and foreign direct investment linked to enhanced productivity and export supply.

The strength of these linkages varies for different developing regions (as shown in Box 4.3)—and even more for individual countries. Since these linkages refer to conditions (“shocks”) sustained over ten years, many structural characteristics of economies come into play. For example, Sub-Saharan Africa would benefit relatively little from higher growth in industrial countries: the income elasticities of demand for its exports are low, and it lacks a diversified industrial base. Its ability to respond to increased external demand is also limited since much of its export capacity, most notably in mining, was allowed to deteriorate during the 1980s. East Asia presents a contrasting picture. A diversified and competitive industrial sector and significant levels of capital goods exports make the region’s economic performance particularly sensitive to growth rates in industrial countries.

#### Trade

For output growth in developing countries to accelerate in the 1990s, imports would need to grow even

### Box 4.3 Measuring the growth impact of changes in external circumstances

Measuring the impact of changes in the external environment on the economic performance of developing countries is far from a precise science. Keeping this in mind, we report here the results of several simulations on the sensitivity of growth rates in developing countries to different sets of external circumstances.

In Box table 4.3, the incremental changes in the rate of growth of GDP of developing countries are based on ten-year averages. Note that the difference between annual growth rates during the 1990s in the high and low cases is 3.6 percentage points for developing countries as a group (Table 4.4) and 2.8 percentage points for industrial countries (Table 4.2). Applying the multiplier of almost 0.7 yields 1.8 percentage points, a rough approximation of the contribution of the exter-

nal demand factor to the difference of 3.6 percentage points.

This growth factor in industrial countries should be interpreted as including terms of trade effects on developing countries. The difference in global real interest rates between the high and low cases of about 580 basis points (Table 4.2), combined with the multiplier of -0.2, would account for another 1.1 percentage points of the difference in growth. That leaves about 0.7 percentage points for the trade-and-finance factor to explain (see the third column of the multiplier table). This factor can be viewed as a supply-side component that combines the effects of private capital inflows and an induced shift in the path of supply, particularly of developing country exports.

**Box table 4.3 Estimated impact of changes in the external environment on GDP growth of developing countries**

(percentage point deviation per year)

Region	Increment in GDP growth if		
	OECD growth increases 1 percentage point	Real LIBOR increases 100 basis points	Trade and private finance increases <sup>a</sup>
All developing countries	0.7	-0.2	1.3
Sub-Saharan Africa	0.5	-0.2	0.8
East Asia	1.0	-0.2	1.5
South Asia	0.7	-0.0	1.4
Europe, Middle East, and North Africa	0.8	-0.1	1.1
Latin America	0.5	-0.4	1.1

*Note:* Data do not incorporate feedback to industrial countries or any indirect effects through linkages among the developing countries. Policy responses of the developing countries to the given external changes are limited to management of the external finance constraint.

a. The level of foreign direct investment in developing countries is double that of the baseline (an average of about \$27 billion a year more than in the baseline), and a combination of favorable trade-related supply effects and a more liberal trading system adds two percentage points to the rate of growth of exports of developing countries.

*Source:* World Bank data.

more rapidly (Table 4.5 and Figure 4.4). This is so for three reasons. First, faster output growth requires higher levels of investment, and investment tends to be relatively import-intensive. Second, developing countries, especially severely indebted middle-income countries, will need to recover from the import compression of the debt-crisis years. And third, improving the quality and competitiveness of exports requires new technology embodied in imported equipment and services. As one would expect, the gap between import growth and GDP growth increases as one moves from the low case to the high case (Figure 4.5).

Higher import growth, however, will not be possible unless developing countries improve their export performance, increase their penetration of industrial country markets, and expand their trade with other developing countries. Achieving this will

require not only continued attention to improved trade policies and structural reforms in developing countries, but also a supportive multilateral trading system governed by rules respected by both industrial and developing countries. If the Uruguay Round succeeds in introducing such a system, the rewards for liberal trade policies would be greater and would encourage many developing countries to implement their reform programs more aggressively.

As external circumstances improve, the export sector in developing countries is transformed from a neutral force (in the low case) to an increasingly potent growth leader (Table 4.6). The increased penetration of industrial country markets that this entails reflects three key aspects of the scenarios: the conditions of international trade policy (Table 4.1), higher productivity growth in developing countries,

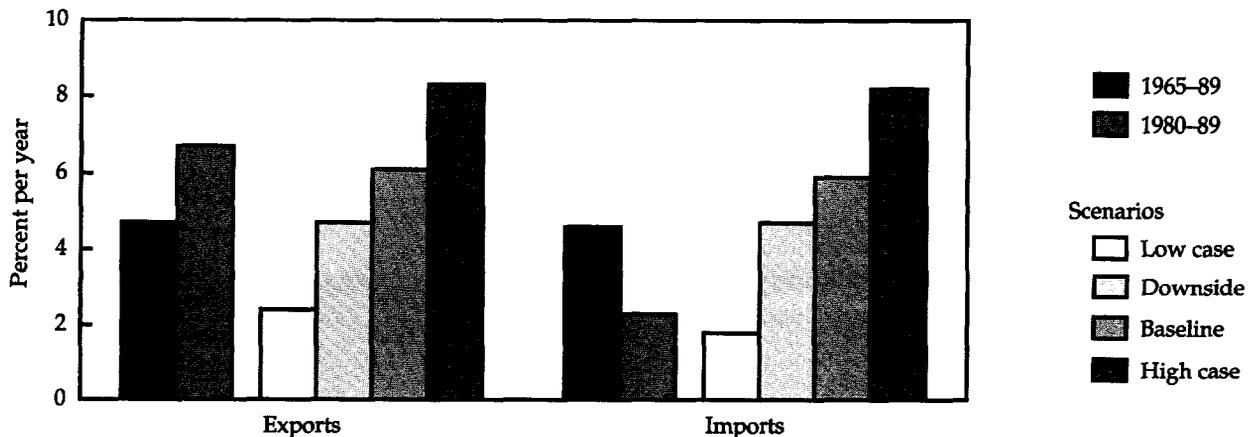
**Table 4.5 Growth of trade in developing countries, by region and analytical group, 1980–89 and the 1990s**  
(average annual percentage change)

Region or group	Export volume growth					Import volume growth				
	1980–89	Scenarios for the 1990s				1980–89	Scenarios for the 1990s			
		Low	Downside	Baseline	High		Low	Downside	Baseline	High
All developing countries	6.6	2.4	4.7	6.1	8.3	2.3	1.8	4.3	5.9	8.2
<i>Geographic regions</i>										
Sub-Saharan Africa	1.6	1.3	2.3	3.0	4.1	-4.5	1.8	2.4	3.2	4.7
East Asia	10.7	3.3	6.1	7.7	10.1	4.4	2.5	5.5	7.1	9.5
South Asia	6.5	2.6	5.0	6.6	9.0	8.0	0.0	2.8	4.4	7.0
Europe, Middle East, and North Africa	5.5	1.3	3.4	4.8	7.0	1.2	1.6	3.5	4.9	6.8
Latin America	4.2	2.1	3.8	5.0	6.9	-1.6	1.0	3.8	5.6	8.4
<i>Analytical groups</i>										
IDA-only adjusting Africa Severely indebted	1.7	3.3	4.2	4.8	5.7	0.0	0.2	2.8	4.1	6.3
middle-income countries	4.3	2.0	3.9	5.1	7.1	-1.0	1.4	4.1	5.8	8.6
Exporters of fuels	1.5	0.6	1.9	2.7	4.0	-9.2	5.5	2.7	2.3	0.9
<i>Memorandum item</i>										
Elasticity <sup>a</sup>	2.1	1.7	2.0	2.1	2.1	0.6	0.6	1.1	1.2	1.3

a. Elasticity refers to the *export elasticity* (growth of a developing region's exports divided by growth of GNP in OECD) under the columns for export volume growth, and *import elasticity* (growth of a developing region's imports divided by the growth of its own GDP) under the columns for import volume growth.

Source: World Bank data.

Figure 4.4 Growth of trade under the four scenarios



Source: World Bank data.

and a stronger export orientation, made possible by greater use of foreign direct investment and other private capital inflows (see below).

Differences in trade performance among analytical groups of countries are large (Table 4.5). As one reads across the scenarios, import growth falls and export growth rises modestly for fuel exporters. Low-income countries in Sub-Saharan Africa (excluding Nigeria) that are implementing adjustment programs do better on the export side, in all scenarios, than the rest of Sub-Saharan Africa, and their import growth also varies much more across scenarios. This difference reflects both the fact that they are "adjusting" and the fact that they benefit from nearly all the conditions of the higher cases. The sensitivity of import growth to the external environment is most dramatic for the severely indebted middle-income countries; and this sensitivity on the import side translates into a high sensitivity of their export growth as well.

Movements in a region's terms of trade reflect trends in world prices and the commodity structure of trade, and they affect real incomes as well as the balance of payments (Table 4.7). For exporters of fuels and exporters of nonfuel primary commodities, outcomes for the terms of trade closely resemble trends in the real price of fuel and nonfuel primary commodities, respectively. So policies to hedge terms of trade risk remain important (see Chapter 2). The terms of trade of exporters of manufactures, in contrast, remain essentially unchanged during the 1990s in all four scenarios. For this group, the product

composition of exports is nearly the same as that of imports—a natural hedge against terms of trade risk.

It seems an interesting coincidence of price trends and trade structure—at least for these scenarios—that developing countries both in the aggregate and by geographic region face low terms of trade risk. Latin America, however, is at risk in the low case because of its large nonfuel primary exports (including demand-sensitive metals and minerals). Sub-Saharan Africa is not, but only because the regional aggregate includes large exporters of fuel; nonfuel primary producers, however, could face large declines in their terms of trade in the low case.

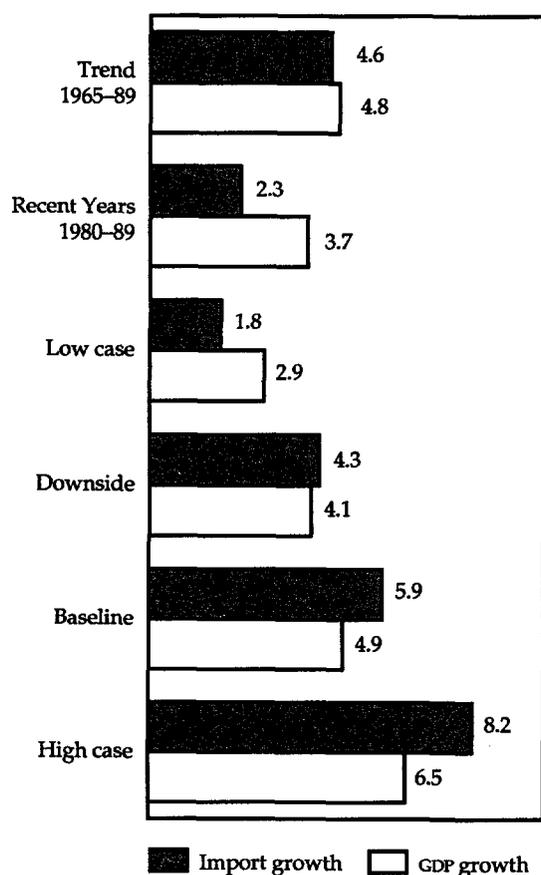
#### Current payments

Although in all scenarios the volume of exports from developing countries is expected to grow slightly faster than the volume of imports, the deficit on goods, services, and private transfers is expected to rise when expressed in current U.S. dollars (Table 4.8). This results from inflation (the deficit in constant 1987 prices is expected to decline, except in the high case) and from the fact that the aggregate current account deficit of developing countries is already large.

Two conclusions follow. First, the deficit on the trade account (goods and nonfactor services) rises as trade grows more rapidly, which means greater resource transfers to developing countries as one moves from the slow growth of trade in the low case to faster growth of trade in the high case. If sustained

The gap between growth of imports and GDP widens when moving from the low case to the high

**Figure 4.5 Growth of imports and GDP for developing countries, 1965–89 and the 1990s (percent per year)**



Source: World Bank data.

over the decade, these increased resource transfers can be expected to contribute to a decline in the absolute numbers of poor in developing countries. Second, the higher deficit on the trade account in the high case than in the low case translates into a higher deficit on goods, services, and private transfers as well, even though lower interest rates serve to dampen this effect (Table 4.9).

#### External finance

Higher deficits on goods, services, and private transfers are possible only with higher levels of external finance. This is especially the case if developing countries bolster their external reserve position, as they would be expected to do in response to increasing uncertainty. A significant proportion of these net flows will continue to come from official development assistance. But the equally significant remainder will need to come from private sources—commercial borrowing and foreign direct investment—and from exceptional financing in the form of various debt relief measures.

Commercial bank lending for general purpose financing is unlikely to be a significant source of external finance for developing countries in the 1990s, except for countries, mostly in East Asia, that have remained creditworthy throughout the 1980s. Foreign direct investment, however, is expected to play an influential role in the future prospects for developing countries—but not merely as a potential source of external finance. It is also an important channel for accelerating the transfer of new technology, increasing the competitiveness of developing country products in world markets, and strengthening the export-orientation of production structures. To attract higher levels of foreign investment, however, developing countries need to restore their creditworthiness and ensure stable macroeconomic

**Table 4.6 Growth of trade in relation to GDP in developing countries, 1980–89 and the 1990s (average annual percentage change)**

Indicator	1980–89	Scenarios for the 1990s			
		Low	Downside	Baseline	High
<i>Developing countries' export volume growth</i>					
Less OECD GDP growth	3.5	1.2	2.5	3.2	4.3
Less own GDP growth	2.9	-0.5	0.6	1.2	1.8
<i>Developing countries' import volume growth</i>					
Less OECD GDP growth	-0.8	0.6	2.1	3.0	4.2
Less own GDP growth	-1.4	-1.1	0.2	1.0	1.7

Source: World Bank data.

**Table 4.7 Trends in terms of trade, by region and analytical group, in developing countries in the 1990s**  
(average annual percentage change)

<i>Region or group</i>	<i>Low</i>	<i>Downside</i>	<i>Baseline</i>	<i>High</i>
All developing countries	-0.2	0.0	0.0	0.0
<i>Geographic regions</i>				
Sub-Saharan Africa	0.4	0.1	0.1	0.4
East Asia	-0.3	0.0	0.1	0.0
South Asia	-0.5	0.0	0.1	-0.1
Europe, Middle East, and North Africa	0.6	0.2	0.1	-0.4
Latin America	-1.0	-0.4	-0.2	0.2
<i>Analytical groups</i>				
Exporters of fuels	4.5	0.7	-0.7	-3.5
Exporters of manufactures	0.1	0.1	0.1	-0.2
Exporters of nonfuel primaries	-3.9	-1.0	-0.1	2.1
IDA-only adjusting Africa	-3.0	-0.6	0.3	2.4
<i>Memorandum items</i>				
Real fuel prices <sup>a</sup>	4.5	0.9	-0.6	-3.7
Real nonfuel prices <sup>a</sup>	-3.8	-0.7	0.5	3.4

Note: See Appendix A for definition of analytical groups and the countries they comprise.

a. The fuel or nonfuel commodity price index, in current U.S. dollars, deflated by the unit value index of manufactures exports (in U.S. dollars) of G-5 countries.

Source: World Bank data.

**Table 4.8 Deficit on goods, services, and private transfers in developing countries, by region and analytical group, 1980-89 and the 1990s**  
(annual average, in billions of current U.S. dollars)

<i>Region or group</i>	<i>1980-89</i>	<i>Scenarios for the 1990s</i>			
		<i>Low</i>	<i>Downside</i>	<i>Baseline</i>	<i>High</i>
All developing countries	58	55	69	78	105
<i>Geographic regions</i>					
Sub-Saharan Africa	10	19	19	19	21
East Asia	7	-3	0	2	9
South Asia	8	8	8	8	10
Europe, Middle East, and North Africa	14	5	9	12	18
Latin America	18	26	33	37	47
<i>Analytical groups</i>					
IDA-only adjusting Africa	4	8	8	8	8
Severely indebted middle- income countries	23	34	42	45	61
Exporters of fuels	1	2	3	4	4
<i>Memorandum item</i>					
Deficit for all developing countries in 1987 dollars	59	34	46	56	73

Source: World Bank data.

policies, a viable external payments position, relatively outward-looking trade and exchange policies, and supporting infrastructure. The East Asian example demonstrates how such policies can have a salutary effect on the level of foreign direct investment and the subsequent spread of new techniques to the rest of the economy.

The level of debt relief could also have an important bearing on prospects for developing countries in the next decade, especially for severely indebted low- and middle-income countries that implement strong adjustment programs. Debt relief measures would ease the foreign exchange cash flow position of many of these countries, permitting them to increase their imports in support of productive investments. Even more important, such measures would speed the return to creditworthiness and allow these countries to reap the benefits of participating in global financial markets.

Debt relief without increased access to export markets would be self-defeating, however. Creditworthiness, once acquired, would need to be sustained through increased opportunities to trade, invest, and acquire and absorb new technologies. Otherwise, it could just as easily be lost, leading to yet another round of debt relief measures and a costly delay in the struggle for development and the fight against poverty.

The external finance requirement of developing countries in the 1990s (including normal additions to reserves) rises sharply in nominal terms across the scenarios. But, as noted earlier, its rise in constant dollars is modest; for instance, in the baseline, it is only slightly above the average for the past twenty years (Table 4.9). The components of external finance that are expected to increase across the scenarios are net foreign direct investment and "other" finance, which includes borrowing from commercial sources and exceptional financing (Figure 4.6).

Looking at finance requirements by region shows a clear connection between the rise in overall finance available across scenarios and the extent to which private finance is expected to respond to the external circumstances underlying the scenarios. Latin America and East Asia are likely to be capable of attracting significant amounts of foreign direct investment and commercial finance. By contrast, virtually all the incremental finance for Sub-Saharan Africa is expected to come from official development assistance, for which the global supply is likely to be fairly rigid. Thus the composition of Africa's finance reinforces the composition of its production, exports, and debt in limiting growth opportunities in the medium term.

Despite the higher levels of finance required, the debt service ratio for developing countries in the

**Table 4.9 Trends in selected balance of payments and external debt indicators of developing countries, 1970-89 and the 1990s**  
(annual average)

Indicator	1970-89	Scenarios for the 1990s			
		Low	Downside	Baseline	High
<i>Levels (billions of current U.S. dollars)</i>					
Deficit on goods, services, and private transfers	43.0	55.0	69.0	78.0	105.0
plus					
Addition to reserves <sup>a</sup>	5.0	29.0	33.0	31.0	42.0
equals					
Financing requirement	48.0	84.0	102.0	109.0	147.0
Financing requirement in constant 1987 U.S. dollars <sup>b</sup>	64.0	51.0	66.0	77.0	102.0
<i>Ratios (percent)</i>					
Resource balance to GDP <sup>c</sup>	-1.4	0.2	-0.3	-0.7	-1.1
Interest payments to GDP	-2.2	-2.1	-1.9	-1.7	-1.8
Other current flows, net to GDP	0.9	0.6	0.6	0.6	0.7
Current account to GDP	-2.7	-1.3	-1.6	-1.8	-2.2
Total debt service to exports	22.8	19.3	16.9	16.1	15.0
Private debt to total debt	60.0	41.0	45.0	46.0	50.0

a. For all scenarios, this is assumed to approximate three and a half months of imports, in dollar value at current prices and exchange rates.

b. The deflator is the import price deflator for the aggregate of developing countries.

c. The resource balance is the balance of payments on goods and nonfactor services. (A negative number indicates a deficit.)

Source: World Bank data.

1990s will be well below its values in the 1980s, even in the low case (Table 4.9). The lower ratio reflects both the actions (already taken and expected) to end the debt crisis as well as the widespread unwillingness to renew lending from commercial sources. Lower sovereign lending is reflected in the low ratios of private debt to total debt in all scenarios—although this ratio increases across scenarios as other forms of private finance increase.

**From global analysis to national policy**

Given all the risks and uncertainties, what is the most likely outcome for development in individual countries and regions through the 1990s? In this last section, we attempt to answer this question by looking

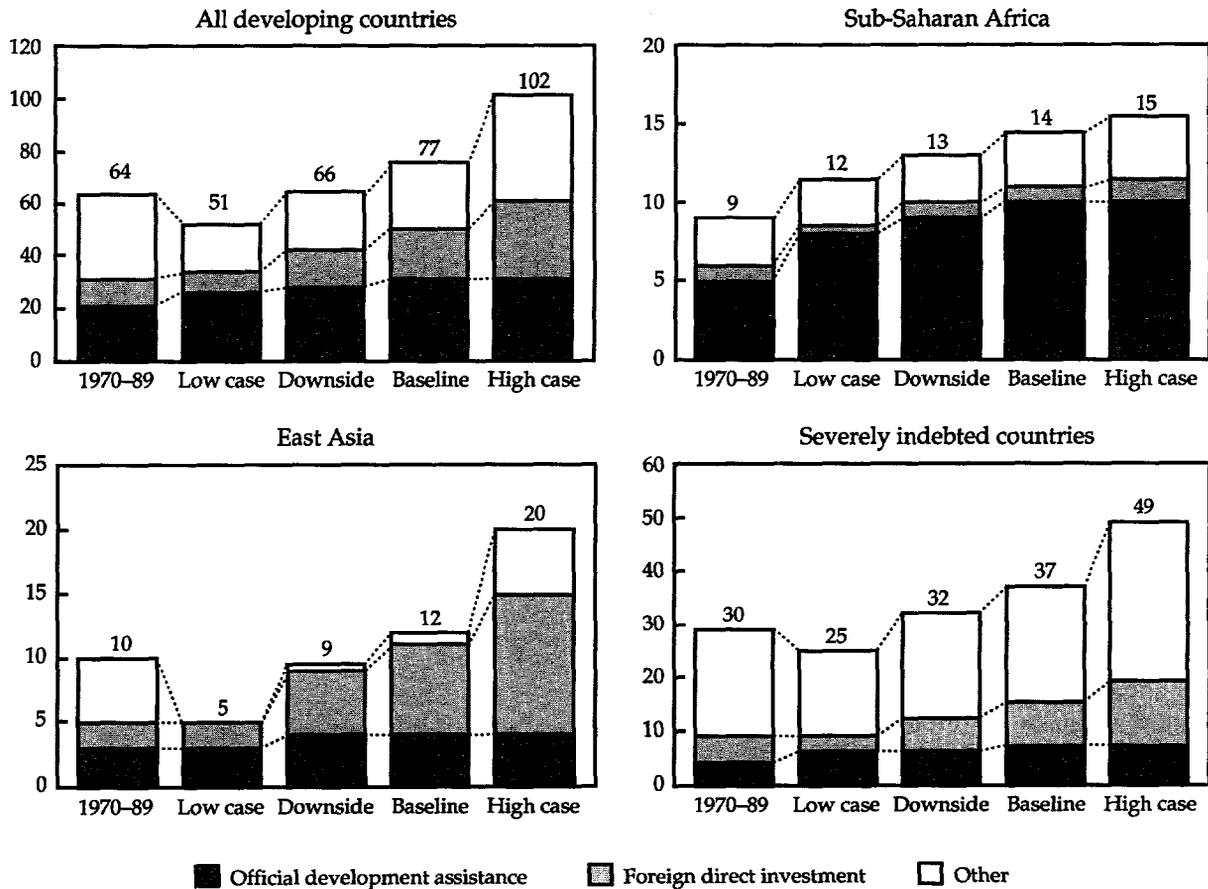
selectively at different developing regions and analytical groups of countries.

From the standpoint of an individual developing country now facing hardship, the challenge and the opportunity for national leadership will be to adjust the national economic structure toward paradigms that work, as illustrated by experience in countries that are developing well. This book does not pursue such policy implications; they are explored at length in the *World Development Report 1991: The Challenge of Development*. But it does recognize the importance of domestic policies in shaping development prospects for the next decade.

Countries that raised their domestic savings in the 1970s and 1980s and that consistently tried to integrate their economies with the rest of the world

*Foreign direct investment and private financing will be crucial in the coming decade*

**Figure 4.6 Financing requirement for developing countries, by source, 1970–89 and the 1990s**  
(billions of constant 1987 U.S. dollars)



Source: World Bank data.

successfully steered through the turbulence of the past decade and are well positioned to face the 1990s. East Asian countries, including Indonesia, Korea, Malaysia, and Thailand, are striking examples, but by no means the only ones. In Africa, Botswana, Ghana, and Mauritius have shown how prudent macroeconomic management, liberalized trade and exchange rate policies, and accompanying sectoral policies can lay the foundations for sustained growth and development despite a grim international environment. In Latin America, the performance of Chile and, more recently, Mexico points to similar conclusions. A growing number of economies in the developing world are embarking on wide-ranging structural reforms with the objective of raising the level and efficiency of investment, increasing the level of domestic saving, and improving the rationality of its allocation. The baseline scenario assumes, indeed, that these efforts will continue and spread.

For the oil exporters—including Angola, Congo, and Nigeria in Sub-Saharan Africa; Algeria in the Maghreb; and Venezuela in Latin America—the price of oil will obviously exert considerable sway over their prospects in the 1990s.<sup>2</sup>

In general, one would expect growth rates for oil exporters to decline as one moves from the low case to the high case since the scenarios were constructed so that the low case is beneficial to oil exporters (even though oil prices are volatile), whereas the high case incorporates low oil prices. But this is not the case for the group as a whole, because most developing country oil exporters are also highly indebted and hold large portfolios of variable-rate debt. Some also export significant quantities of nonfuel primary products. Thus, the effect of high real rates of interest and lower growth of industrial countries in the low case tends to balance the effect of an increase in the average oil price, with the result that the average growth rate of the group in the low case is close to that in the base case.

Nigeria and Venezuela—two oil-exporting countries—demonstrate the complexity of the interrelationship between debt, oil prices, and domestic policies. Nigeria's growth rate in the high case can be expected to decline because of lower oil prices. But to the extent that Nigeria receives Toronto terms on its outstanding bilateral nonconcessional debt over the next few years and gains access to new commercial sources of finance, the growth effect of lower oil prices could be lessened.<sup>3</sup> In the low case, on the other hand, the volatility of oil prices will strain macroeconomic management in Nigeria despite their high average level. Under those circumstances, there is also the danger that Nigeria could find little

sympathy from the London and Paris Clubs, while also experiencing difficulty translating high (but volatile) oil prices into increased investment and growth.

As for Venezuela, the economy faces significant downside risks if key reforms introduced by the government are not implemented. The government may find it difficult to continue its reform program if oil prices decline significantly, as envisaged in the high case. Higher oil prices in the low-case scenario, on the other hand, could generate additional foreign exchange earnings: a \$1 a barrel increase in the price of oil adds \$600 million to Venezuela's oil exports, or roughly 5 percent of its total export earnings. Nevertheless, Venezuela's growth rate in the low case is lower than in the downside case because the higher average oil price is accompanied by increased interest payments on its variable-rate long-term debt and slower growth in nonoil export earnings.<sup>4</sup>

Severely indebted middle-income countries as a group can be expected to grow more slowly during the next decade than all developing countries in aggregate. This group includes, among others, Argentina, Côte d'Ivoire, Hungary, Mexico, the Philippines, and Poland. Countries undergoing structural reforms face brighter prospects than those that are not. For example, Poland's government has committed itself to fundamental reforms and has been supported by the international community through substantial debt relief. Thus, although Poland's growth rate is likely to be slow in the early years of the decade, it is expected to accelerate thereafter. Similarly, Mexico is expected to perform better than in the past decade because of its more liberal policies, closer trading ties to the rest of North America, and more prudent management of external debt.

The case of Côte d'Ivoire shows how delays in adjustment could adversely affect a country's prospects for the next decade. The economy faces fundamental structural and macroeconomic imbalances and has been accumulating arrears on commercial bank debt since May 1987. The outlook for the 1990s as a whole looks bleak unless the government can manage a real depreciation of about 30–40 percent. Until it happens, however, Côte d'Ivoire's economy will continue to be gripped by crisis, no matter which scenario eventually unfolds for the world economy. If a real depreciation does occur in the early part of this decade, as is assumed here, Côte d'Ivoire's prospects will be sensitive to international commodity prices, particularly for coffee and cocoa, which are responsive to OECD growth. And Côte d'Ivoire possesses the infrastructure to make a quick recovery in international markets. Thus, its growth rate in the high case is 1.5 percentage points higher than in the

base case, the largest differential among the Sub-Saharan African countries.

In Sub-Saharan Africa, the twenty-one low-income countries undergoing adjustment and supported by the Special Program of Assistance for Africa (SPA) are expected to grow relatively fast in the 1990s and to show significant improvement in performance over the 1980s.<sup>5</sup> Improved trade and exchange rate policies that restructure incentives in favor of tradables and an appreciable reduction in direct state participation in production and marketing activities are expected to foster efficient private sector-led development. For many of these countries to recover from the declines in per capita incomes they experienced in the 1970s and early 1980s, however, growth rates of 4–5 percent would need to be sustained for several years. Such sustained growth could be achieved if these countries maintain steady progress in implementing structural reforms, if their terms of trade do not deteriorate significantly, and if gross disbursements of official development assistance increase by about 4 percent a year in real terms. Much also depends on the supply response induced by these conditions. So far, supply has responded hesitantly because of inadequate infrastructure and little confidence in the permanence of the reforms. But with the passage of time, both these constraints should ease, permitting higher levels of private savings and investment.

In the high case, the SPA group is expected to grow at a rate that is 1.1 percentage points above the growth rate in the baseline case. The additional thrust comes primarily from higher commodity prices, but this effect will be tempered by lower preferential margins to African, Caribbean, and Pacific (ACP) countries when exporting to EC markets after a successful Uruguay Round. The higher growth of industrial countries envisaged in the high case does not result in a proportional increase in export volumes for the SPA countries because of continued inelasticities of supply in Africa. Moreover, the improved economic situation of industrial economies in the baseline case will not necessarily lead to a proportional increase in aid, partly because of aid fatigue and partly because of limited absorptive capacity of the SPA countries. Other limits to the rate of growth in the SPA countries can also be expected in the high case. The environmental fragility of many of these countries places limits on the level of growth that can be sustained over the decade, even though most of these economies are well endowed with abundant natural and mineral resources. Responsible resource management policies are a feature of most of the programs being implemented in these

countries and are already dampening production growth in some of them.<sup>6</sup>

In the low case, growth is affected more in the adjusting SPA group of countries than in Sub-Saharan Africa overall (a 1.2 percentage point decline in growth relative to the baseline, compared with a 0.8 percentage point drop for Sub-Saharan Africa as a whole). Lower commodity prices (affecting exports) and higher oil prices (affecting imports) would reduce the availability of foreign exchange for imports of capital and intermediate goods. Lower levels of concessional assistance would exacerbate the situation, reducing growth to the point that per capita incomes stay flat. Nevertheless, this outcome in the low case would still be better (because policies are better) than the decline in real per capita incomes experienced in the 1980s.

The nonadjusting low-income countries in Sub-Saharan Africa, however, face a difficult decade. Other than Lesotho, which has adopted sound economic policies and whose economy is closely tied to that of South Africa, these economies can expect significant deterioration in coming years unless current trends improve sharply. It is in these countries—Ethiopia, Liberia, Somalia, Sudan, and Zaire—that the interactions among population, poverty, and the environment will be displayed at their worst. Here again, the alternative scenarios for the international environment have little relevance in assessing the prospects for these countries. They have become estranged from the world economy, and their isolation is expected to grow in the coming decade unless their domestic political and economic policy situations turn around significantly and international efforts to support growth in these economies are renewed.

In sharp contrast are the prospects for the economies of Asia. East Asia is well positioned to remain the fastest growing developing region in the 1990s. Indonesia, Korea, Malaysia, and Thailand, because of their heavy reliance on exports of manufactures, are sensitive to growth in industrial countries: a one percentage point increase in industrial country growth is estimated to engender more than a one percentage point increase in growth in East Asia. Japan's economic performance is particularly important because of close trade and financial links and the network of Japanese foreign direct investment in the region. A successful conclusion to the Uruguay Round is also of immense importance to the prospects of these countries: East Asia's growth rate under the high case is a full 2.1 percentage points above the base case.

In all scenarios, the average real resource balance on the external account is expected to turn positive,

suggesting strong export-led growth.<sup>7</sup> Nevertheless, some constraints to growth are evident and are likely to become more serious in the future. First, Korea, Malaysia, and Thailand, which are fast closing the technological gap with industrial economies, will find further narrowing of the gap increasingly difficult. And second, with rapid labor productivity growth, the advantage of relatively low labor costs is diminishing quickly. Indonesia, however, is in the unusual position of being an exporter of both oil and manufactures. It is thus especially well positioned to maintain a relatively high rate of growth in all scenarios in the low case because of high oil prices, and in the high case because of increased demand for manufactures and nonfuel primary commodities.

For China, how the world economy evolves is somewhat less important than it is for the rest of East Asia. Here, the tension between forces pushing for increased government control and those favoring a shift toward market forces is likely to increase as growth accelerates in the next few years. Under the high case, rapidly growing foreign markets could encourage a more market-oriented approach in China, leading to rapid growth (2.5 percentage points above baseline). On the other hand, were the low-case scenario to unfold, growth could be 2.7 percentage points below that of the baseline. Another East Asian economy that does not fit the pattern is the Philippines, where the challenge of the 1990s is to improve trade policies and raise levels of investment and domestic savings. Access to external commercial capital will continue to be a problem, except in the high case. Nevertheless, the Philippines can be expected to grow faster under all the scenarios compared with its dismal performance during the 1980s, when it was a principal casualty of the debt crisis.

For South Asia, the 1990s pose higher risks than previous decades. In India, choices made this year are likely to influence the outcome for the rest of the decade. Large fiscal and external imbalances have eroded India's creditworthiness and reduced its access to commercial financing. Furthermore, structural reforms and improved macroeconomic policy are more difficult under the current political situation. Thus, India's growth in the 1990s is likely to be slower than in the 1980s under every scenario except the high case. Under the low case, India could be an important loser: not only would it need to pay higher real interest rates on its sizable commercial debt, but it would fall outside the ambit of any large regional trading arrangements that might arise should the Uruguay Round break down completely.

Bangladesh and Sri Lanka face a similar outlook, with uncertain political developments at home and

difficult circumstances on the external front, particularly with respect to aid and export markets. For these countries, maintaining their reform programs, even under the baseline case, would pose a significant challenge. Finally, Pakistan is not expected to do as well in the 1990s as it did in the 1980s, except under the high case. Lower growth is of some concern, given a high population growth rate estimated at 3.1 percent a year. High tariff barriers insulate it from the discipline of international trade, and the public sector is involved in several sectors in the economy. In Pakistan's favor, however, is a reasonably sound debt position and a potential for rapid growth if the government implements structural reforms.

## Conclusion

The baseline scenario incorporates external circumstances for development that are expected to be moderately better than in the 1980s. Developing countries in aggregate could expect their growth to average 3 percent per capita over the next decade. But to achieve this outcome would require improved domestic policies, a favorable international trading environment, and further debt relief measures supporting adjustment in severely indebted low- and middle-income countries. Alternative scenarios of external conditions demarcate a wide range of outcomes for average growth per capita in developing countries, from less than 1.0 percent a year to 4.5 percent. The weighted mean of all the scenarios is 2.7 percent a year, an improvement over the 1.9 percent average of the 1980s. The prospects for individual developing regions vary widely. The baseline scenario suggests that regional disparities are likely to be perpetuated during the 1990s. And since convergence in growth rates across regions is expected to be limited, progress in reducing the numbers of the absolute poor is apt to be modest.

## Annex: Details of the alternative scenarios

### *The low case*

The low-case scenario assumes average real interest rates of about 8 percent for the decade (Annex Figure A). Oil prices are highly volatile, ranging from \$20 to \$55 a barrel. Volatile oil prices, uncertainty generated by the financial crisis, and a trade war combine to damage business confidence, and investment falls more than it would have because of higher interest rates alone. The investment-GNP ratio falls rapidly from 22 percent in 1990 to 17 percent by the year 2000. Rising government deficits force cuts in public ex-

penditures during the second half of the 1990s, so that domestic demand contracts further. Unemployment in the G-5 countries increases steadily to 24 million workers by the end of the decade. The disinflationary effects of excess capacity in the economy weigh against the inflationary consequences of higher oil prices. But low labor productivity, growing by only 0.4 percent a year, pushes inflation 1.5 percent higher than in the baseline.

Effects on the G-5 economies are harsh. They experience two recessions during the 1990s. The initial slump in 1991 is prolonged by a couple of years, and another recession occurs by 1998. Between these two recessions, growth remains sluggish in the G-5 countries and leads to an overall GNP growth rate of 1.2 percent a year for the decade. By the year 2000, the GNP of the G-5 economies is 15 percent below that in the baseline. World trade, which suffers from the expansion of trade barriers and the slowdown in growth, is projected to grow at only 2.7 percent on average. Japan is especially hard hit by the trade war and by very high real interest rates. But continued international specialization prevents the trade volume from actually falling, as it did in the 1930s. The dollar depreciates during the second half of the decade as a result of large current account deficits.

A decade of high uncertainty, high real interest rates, and low economic growth in the low case would have a devastating impact on commodity prices in real terms, especially raw materials, which are particularly sensitive to changes in demand. The depressing effect on nominal commodity prices of lower industrial demand would outweigh any cost-push effects on these prices (say, from the oil market or from low productivity growth in both industrial countries and developing countries). While foodstuffs are much less income-elastic than raw materials, especially in industrial countries, poor economic growth in developing countries (the main area of growth in demand for grains) would certainly hurt food prices (see Chapter 2). Lower food prices would provide some offsetting benefits for grain-importing developing countries suffering from high interest rates, high oil prices, and reduced trade opportunities that characterize the low case.

#### *Downside*

The downside scenario assumes that oil prices are less volatile than in the low case but still higher than in the baseline. Productivity is set to grow at 1.4 percent annually. Real interest rates are increased to

about 5 percent on average for the decade. Uncertainty has a moderate direct effect on investment and U.S. consumer confidence.

For the decade, GNP growth in the G-5 economies averages 2.2 percent, down from 2.9 percent in the baseline, while growth in world trade falls more, to an average of 5.0 percent. Oil prices increase by 1.4 percent a year above the baseline and, together with the lower productivity, pushes inflation to 4.3 percent. The effective exchange rate of the dollar depreciates, and growth in the index of the unit value of manufactures exports exceeds that in the baseline by 1.2 percent, countering the terms of trade loss resulting from higher oil prices. The investment-GNP ratio is two percentage points lower than in the baseline by the year 2000. Unemployment in the G-5 countries rises to more than 17 million workers in the first half of the decade, but stays at about 15 million during the second half.

The slow growth of OECD countries in the downside scenario would likely lead to a prolonged weakness in nonfuel commodity prices in real terms during the 1990s. The decline in commodity prices would be led by raw material prices because of the slack pace in industrial activity. Foodstuff prices would be much less adversely affected. Prices for beverages, the export commodities on which so many of the small, low-income developing countries depend, should increase in real terms even in the downside scenario. Their demand is highly income-inelastic, and the production cycle is likely to be the main factor driving these prices over the decade (barring natural disasters). The expected slowdown in the growth of beverage production should cause beverage prices to move up from their presently very low levels.

#### *The high case*

In the high case, real interest rates are lowered to about 2 percent on average. Oil prices are unchanged in real terms relative to the index of the unit value of manufactures exports throughout the decade. Productivity grows at 2.8 percent. Increased confidence and reduced uncertainty have a positive direct effect on investment.

This is a return-to-the-sixties scenario. The G-5 countries enjoy healthy GNP growth of 4.0 percent on average for the 1990s. World trade grows at 7.6 percent, and nominal LIBOR averages 6 percent. Low oil prices keep inflation in check through the decade at 3.8 percent. But during the second half of the 1990s,

inflation in the G-5 countries picks up and approaches 6 percent in the last two years of the decade, when full capacity is reached.

The investment-GNP ratio advances steadily in the high case, closing at 28 percent by the year 2000. The United States experiences no significant savings shortage because of a substantial reduction in the budget deficit and higher private savings. Excess savings in Japan finance investments in Europe. Unemployment in the G-5 countries falls to 8 million workers by the year 2000.

The high-case scenario would lead to a sharp increase in commodity prices relative to the baseline, which would mean an unwinding of the real price decline seen since 1981. Low real interest rates, high investment rates, high growth rates of industrial production, and strong growth in incomes in both industrial and developing countries would tend to push up nonfuel commodity prices in real terms. The corresponding nominal increase would be less striking, since cost inflation in manufacturing would be lower in this case (reflecting better productivity growth). The most affected markets would again be raw materials, particularly metals and minerals, as there would be a substantial boom in investment activity. With per capita incomes increasing strongly in the developing countries, demand for foodstuffs—especially grains, vegetable oils, sugar, and meats—would grow rapidly. Latin America and Africa would witness a strong surge in food demand, recovering the losses experienced in the 1980s.

## Notes

1. The poverty line assumed was an annual income of \$370 in 1985 U.S. dollars at purchasing power parity (PPP). See World Bank (1990b, Tables 2.1 and 9.2, pp. 29 and 139).

2. Oil exporters are defined as those economies where oil exports account for more than 50 percent of total exports (see Appendix table A).

3. Bilateral nonconcessional debt in 1989 stood at about \$12 billion, about twice the outstanding debt owed to commercial banks.

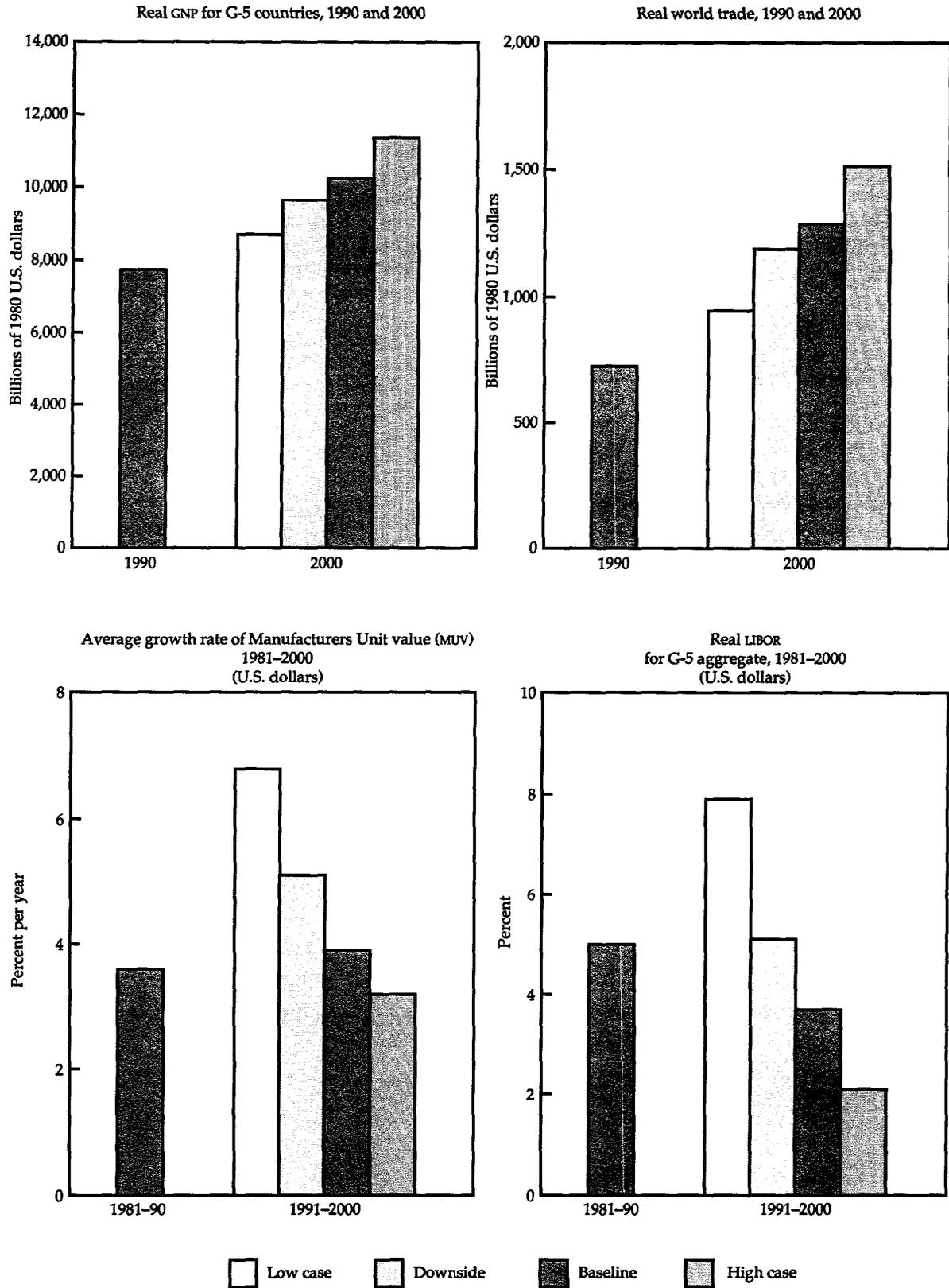
4. Venezuela is a severely indebted country, holding \$26.6 billion of variable rate long-term debt at the end of 1989 out of a total stock of outstanding debt of \$33 billion.

5. The Special Program of Assistance for Africa, now in its second phase, is a World Bank-coordinated program involving several bilateral and multilateral aid sources in providing additional concessional assistance to low-income Sub-Saharan economies (with debt service ratios above 30 percent), that are implementing structural adjustment programs. These countries include Benin, Burundi, Central African Republic, Chad, Ghana, Guinea, Guinea Bissau, Kenya, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, São Tomé and Príncipe, Senegal, Tanzania, The Gambia, Togo, Uganda, and Zambia.

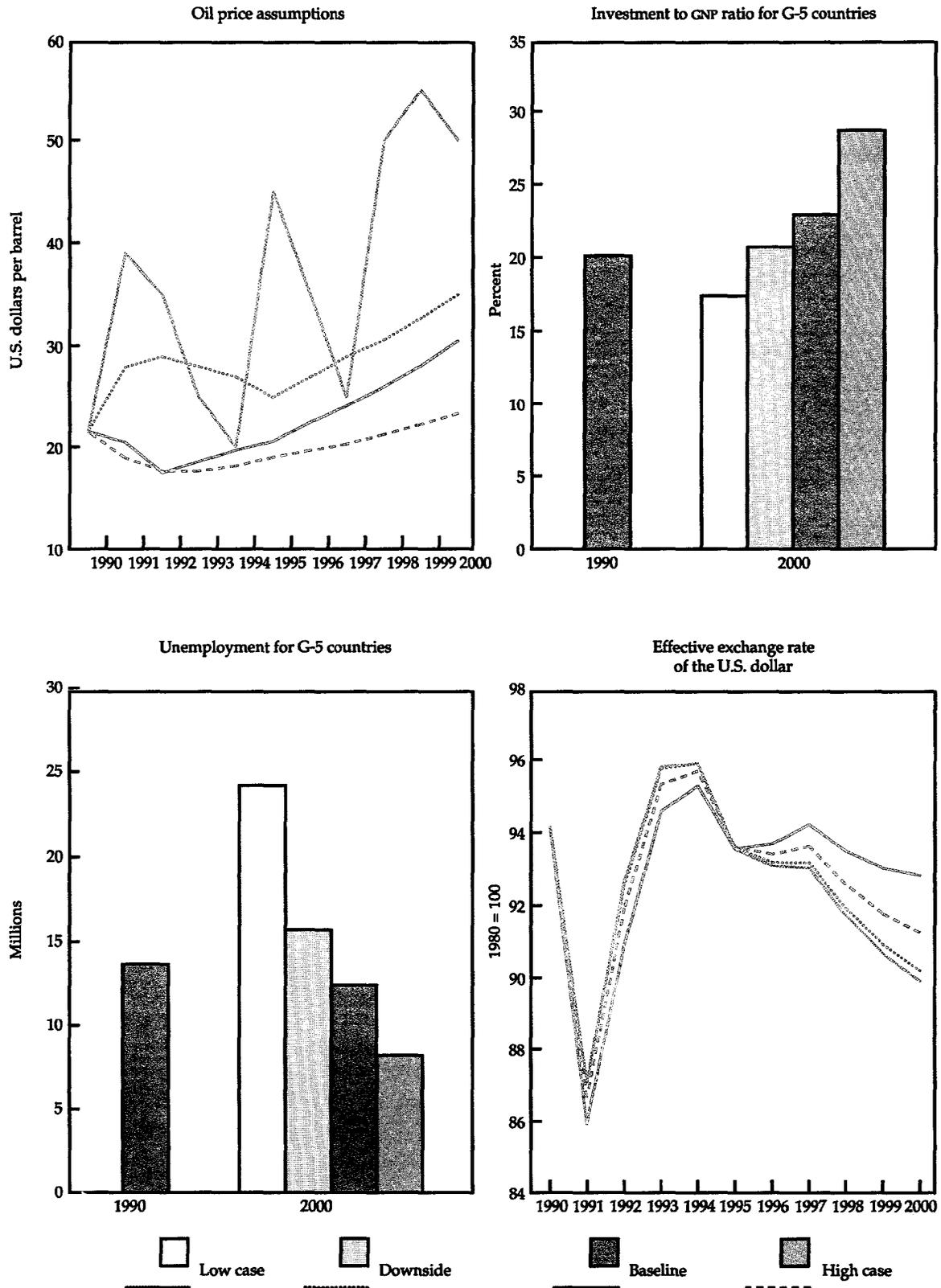
6. For example, Ghana's recent introduction of forest management policies designed to limit forest output to a maximum sustainable yield has slowed the rapid growth of timber exports considerably.

7. The real resource balance is defined as exports of goods and nonfactor services less imports of goods and nonfactor services in current U.S. dollars, deflated by the region's export and import prices of goods and nonfactor services.

**Annex Figure A. World economic indicators of importance to developing countries**



Annex Figure A. (continued)



Source: World Bank data.



## Appendix A: Notes on classification of economies

This study classifies economies according to income level, region, and analytical category (see Appendix tables A1 and A2). This appendix explains the methodology underlying this classification system.<sup>1</sup>

Economies are classified according to whether they are high, middle, or low income. "Income" refers to 1989 GNP per capita and is calculated according to the *World Bank Atlas* method (World Bank, 1990c, p. 26). The income groups used in this study are defined as follows:

- **high-income economies** are those with GNP per capita of \$6,000 or more in 1989
- **middle-income economies** are those with GNP per capita within the range \$581 to \$5,999 in 1989
- **low-income economies** are those with GNP per capita of \$580 or less in 1989.

The term "developing countries" refers to all low- and middle-income economies; it is not intended to imply that all economies in the group are experiencing similar development or that other economies have reached a preferred or final stage of development. The term "industrial countries" refers to all high-income OECD economies.

Economies are also classified according to their geographic location. The term "developing regions" used in this study refers to low- and middle-income economies in the following five geographic regions:

- **Sub-Saharan Africa** comprises all economies south of the Sahara
- **East Asia** comprises all the low- and middle-income economies of East and South East Asia and the Pacific, east of, and including, China and Thailand
- **South Asia** comprises Bangladesh, Bhutan, India, Myanmar, Nepal, Pakistan, and Sri Lanka
- **Europe, Middle East, and North Africa** comprises Bulgaria, Czechoslovakia, Greece, Hungary, Poland, Portugal, Romania, Turkey,

and Yugoslavia and all the economies of North Africa and the Middle East, and Afghanistan. For some analyses, the study refers to Eastern Europe, which comprises Bulgaria, Czechoslovakia, Hungary, Poland, Romania, and Yugoslavia

- **Latin America and the Caribbean** comprises all American and Caribbean economies south of the United States.

For analytical purposes, the study uses overlapping classifications based on different export and external debt indicators:

- **exporters of fuel, manufactures, or nonfuel primary commodities** are economies in which at least 50 percent of exports of goods and services falls within any one of these categories. If none of these export categories accounts for 50 percent of exports of goods and services, the economy is classified as a diversified exporter
- **severely indebted economies** are those in which three of the following four debt ratios are above critical levels as of the end of 1988: debt to GNP (50 percent), debt to exports of goods and services (275 percent), accrued debt service to exports (30 percent), and accrued interest on external debt to exports (20 percent)
- **moderately indebted economies** are those in which three of the following four debt ratios are within a certain range as of the end of 1988: debt to GNP (30–50 percent), debt to exports of goods and service (165–275 percent, accrued debt service to exports (18–30 percent), and accrued interest on external debt to exports (12–20 percent).

Because of limitations in data, Albania, Cuba, Democratic Republic of Korea, and the Soviet Union are not included in any regional or analytical group totals.

### Note

1. The classification system used in this study is identical to that used in the *World Development Report 1991* (New York: Oxford University Press, forthcoming).

**Appendix table A1 Classification of low-, middle-, and high-income economies**  
(by income groups and geographical regions)

Income group	Sub-group	Sub-Saharan Africa		Asia & Pacific		Europe, Middle East, and North Africa				Americas
		East & South	West	East & Pacific	South Asia	Eastern Europe	Rest of Europe	Middle East	North Africa	Latin America & Caribbean
Low-income	Large			China	India					
	Small	Burundi Ethiopia Kenya Lesotho Madagascar Malawi Rwanda Somalia Sudan Tanzania Uganda Zaire Zambia Comoros Mozambique	Benin Burkina Faso Central African Republic Gambia Ghana Liberia Mali Mauritania Niger Nigeria Sierra Leone Togo Chad Eq. Guinea Guinea Guinea Bissau São Tome & Principe	Kampuchea Indonesia Lao, PDR Solomon Islands Vietnam	Bangladesh Myanmar Nepal Pakistan Sri Lanka Bhutan Maldives			Afghanistan		Guyana Haiti
Middle-income	Lower	Angola Botswana Djibouti Mauritius Namibia Swaziland Zimbabwe	Cameroon Cape Verde Congo Côte d'Ivoire Senegal	Fiji Kiribati Korea, DR <sup>a</sup> Malaysia Mongolia Papua New Guinea Philippines Thailand  Tonga Vanuatu Western Samoa		Albania <sup>a</sup> Poland Bulgaria	Turkey	Jordan Lebanon Syria Yemen	Algeria Egypt Morocco Tunisia	Argentina Belize Bolivia Chile Colombia Costa Rica Cuba <sup>a</sup> Dominica Dominican Republic Ecuador El Salvador Grenada Guatemala Honduras Jamaica Mexico Nicaragua Panama Paraguay Peru St. Lucia St. Vincent & Grenadines
	Upper	Seychelles South Africa Reunion	Gabon	Korea Macao New Caledonia Pacific Islands, Trust Territory		Czechoslovakia Hungary Romania USSR <sup>a</sup> Yugoslavia	Gibraltar Greece Malta Portugal	Iran Iraq Oman	Libya	Antigua & Barbuda Brazil French Guyana Martinique St. Kitts & Nevis Suriname Trinidad & Tobago Uruguay Venezuela
Low & Middle No. of countries 136		25	23	21	8	8	5	8	5	33
High-income	OECD Countries			Australia Japan New Zealand			Austria Belgium Denmark Finland France Germany Iceland Ireland Italy Luxembourg Netherlands Norway Spain Sweden Switzerland United Kingdom			Canada United States
	Non-OECD Countries	Mayotte		American Samoa Brunel French Polynesia Hong Kong Singapore Guam OAR <sup>b</sup>			Andora Channel Islands Faeroe Islands Greenland Isle of Man Cyprus	Bahrain Israel Kuwait Qatar Saudi Arabia United Arab Emirates		Aruba Bahamas Barbados Bermuda Guadeloupe Netherlands Antilles Puerto Rico Virgin Islands, U.S.

- a. Not included in regional measures due to data limitations.  
b. Other Asian economies—Taiwan, China.

Appendix table A2 Classification of economies by analytical groups

Group	Low- and middle-income								High-income non-OECD	High-income OECD
	Major indebted economies				Below average indebtedness or not included in World Debt Tables	High-income non-OECD	High-income OECD			
	Low-income		Middle-income							
	Severely indebted	Moderately indebted	Severely indebted	Moderately indebted						
Exporters of manufactures			Hungary Poland		China Korea	Bulgaria Czechoslovakia Korea, DR <sup>a</sup> Lebanon Macao New Caledonia Romania South Africa	Hong Kong French Polynesia Israel Singapore OAB <sup>b</sup>	Canada Finland Germany Ireland Italy Japan Sweden Switzerland		
Exporters of nonfuel primary products	Burundi Equatorial Guinea Ghana Guinea Guinea-Bissau Guyana Liberia Madagascar Malawi Mauritania Myanmar Niger São Tomé & Príncipe Somalia Tanzania Togo Zaire Zambia	Ethiopia Uganda	Argentina Chile Côte d'Ivoire Honduras Nicaragua Peru	Paraguay Zimbabwe	Papua New Guinea Rwanda	Albania <sup>a</sup> American Samoa Bhutan Chad Cuba <sup>a</sup> Dominica French Guyana Mongolia Namibia Reunion Solomon Islands St. Vincent Suriname Swaziland Vietnam	Faeroe Islands Greenland Guadeloupe Guam	Iceland New Zealand		
Exporters of fuels (mainly oil)	Nigeria		Congo Venezuela	Algeria	Trinidad & Tobago	Angola Gibraltar Iran Iraq Libya Oman USSR <sup>a</sup>	Bahrain Brunei Qatar Saudi Arabia United Arab Emirates			
Exporters of services	Comoros Mozambique		Egypt	Cape Verde Jamaica Dominican Republic Yemen	Burkina Faso Greece Jordan Lesotho Malta Nepal Panama Seychelles	Antigua & Barbuda Djibouti Grenada Kampuchea Kiribati Maldives Martinique St. Kitts & Nevis St. Lucia Tonga Vanuatu Western Samoa	Aruba Bahamas Barbados Bermuda Cyprus Netherlands Antilles	United Kingdom		
Diversified exporters <sup>b</sup>	Benin Kenya Mali Sierra Leone Sudan	Bangladesh Central African Republic Gambia, The Indonesia Pakistan Sri Lanka	Bolivia Brazil Costa Rica Ecuador Mexico Morocco Philippines Senegal Uruguay	Cameroon Colombia Gabon Guatemala Syria Turkey Yugoslavia	Botswana El Salvador Fiji Haiti India Malaysia Mauritius Portugal Thailand Tunisia	Afghanistan Belize Lao, PDR	Kuwait	Australia Austria Belgium Denmark France Luxembourg Netherlands Norway Spain United States		
No. of countries 178	26	8	20	14	23	45	21	21		

Note: Economies not classified by exports: Andorra, Channel Islands, Isle of Man, Pacific Islands, Trust Territory, Puerto Rico, Virgin Islands, and United States.

- Not included in regional measures because of data limitations.
- Economies in which no single export category accounts for more than 50 percent of total exports.
- Other Asian economies—Taiwan, China.

## Appendix B: Measuring population-weighted world income



Growth rates of world or regional income (or output) need to be interpreted with caution. This appendix explains why.

In seeking a summary measure of economic performance, it is often desirable to measure the change in income of "typical individuals." This is not what conventional aggregation procedures achieve.<sup>1</sup> To better measure changes in income of the typical individual, it is more appropriate to use *population-weighted* income growth, on a total and per capita basis.

Per capita income growth of the world (or of a region) is calculated as the difference between growth of world (or regional) income and the growth of world (or regional) population. The former is an aggregate weighted by income, while the latter is an aggregate weighted by population. In other words, in measuring world income, the rule for aggregation is that "one dollar gets one vote," while in measuring world population, the rule is that "one person gets one vote." Of course, these "voting" systems would be equivalent if the distributions of income and population were identical: that is, if the distribution of per capita income were uniform. But this is far from true. Difficulties in interpreting the figures for aggregate per capita income growth can occur whenever *differences* in these two distributions are correlated with *differences* in growth rates of either income or population (or both).

An example best illustrates the problem. Imagine a two-region world composed of "North" and "South." The North has 75 percent of the income but only 25 percent of the population. The North's population growth is zero, while the South's is 2 percent per annum. To make the arithmetic simple, assume further that during a given period of time the growth of *per capita* income in each region is exactly zero (which implies that income in the North remains unchanged, while that in the South grows at 2 percent per annum). Since incomes per capita are stationary everywhere, world per capita income is presumably constant, too. But is it? World income is

growing at the rate of 0.5 percent ( $0.75 \times 0 + 0.25 \times 2$ ), while world population is growing at 1.5 percent ( $0.25 \times 0 + 0.75 \times 2$ ). The difference, which approximates to the world income per capita growth rate, is -1.0 percent ( $0.5 - 1.5$ ). Yet, this statistic is not consistent with the regional income per capita growth rates, which were assumed to be all zero.

For any aggregation, the difference between growth of income-weighted income and growth of population-weighted income depends on whether countries with relatively high levels of per capita income experience relatively slow *growth* of income. If so, the growth of aggregate population-weighted income will be higher than growth of aggregate income-weighted income. In other words, when total incomes of countries with high per capita incomes are falling relative to total incomes of countries with low per capita incomes, population-weighted income of the aggregate will rise faster than income-weighted income of the aggregate.<sup>2</sup>

The following tables present results for growth of GDP and GDP per capita, using population weights for aggregation from the national level to the level of the world, and all developing countries. For comparison, the standard aggregates using GDP weights are also shown, to gauge the magnitudes of difference injected by variations in per capita incomes across nations into the measurement of international per capita growth rates.

Appendix table B1 summarizes trends from 1965 to 1989 in terms of three periods: 1965-73, 1973-80, and 1980-89. As in the "North-South" example given above, the conventional measure of growth in real GDP per capita is less than the growth of population-weighted GDP per capita by an average of about 1 percent per annum over the 1965-89 period as a whole. Moreover, this difference rises steadily from period to period, reaching a gap of 1.5 percent per annum in the 1980s.

Appendix table B2 shows the same set of measurements for the developing countries. For them, popu-

lation-weighted real GDP per capita grew about 3 percent per annum during the 1980s, better than during 1973–80 and virtually as high as during 1965–73. By contrast, GDP-weighted GDP per capita of developing countries slowed in the 1980s to a growth rate of 1.6 percent, from 2.5 in 1973–80 and 3.9 in 1965–73. These differences result largely from differences in growth of China and India from the average for all developing countries.

### Conclusion

Data (or projections) for growth of per capita income, derived in the standard way, can easily be misinterpreted as indicative of how per capita incomes are growing on average over a given population. The two concepts are different and need to be kept distinct, especially since they have behaved quite differently historically, both for the developing countries and for the world as a whole. While trends in GDP-weighted GDP per capita support the notion that the 1980s was to some extent a “lost decade” for developing countries as a group, population-weighted GDP per capita in developing countries appears to have increased about as fast during the 1980s as during the years leading up to the first oil crisis. If economic performance is to be assessed according to the change in income of the “typical individual,” the 1980s would score higher than the 1970s. An assess-

**Appendix table B1 Growth of world GDP per capita, 1965–89**  
(percent per year)

	1965–73	1973–80	1980–89
<i>Population-weighted</i>			
Real GDP <sup>a</sup>	5.4	4.3	4.7
Population	2.2	1.8	1.8
Real GDP per capita	3.1	2.5	2.8
<i>GDP-weighted</i>			
Real GDP <sup>b</sup>	5.0	3.3	3.1
Real GDP per capita	2.7	1.5	1.3

a. Computed from sums of data for national GDP at market prices in constant U.S. dollars, after rescaling such that the level of each series in the base year is national population in that year.

b. Computed exactly like line 1, except without the rescaling described in Note a.

Source: World Bank data.

**Appendix table B2 Growth of developing countries' GDP per capita, 1965–89**  
(percent per year)

	1965–73	1973–80	1980–89
<i>Population-weighted</i>			
Real GDP <sup>a</sup>	5.6	4.6	5.1
Population	2.5	2.1	2.1
Real GDP per capita	3.0	2.4	2.9
<i>GDP-weighted</i>			
Real GDP <sup>b</sup>	6.5	4.7	3.7
Real GDP per capita	3.9	2.5	1.6

Note: For footnotes, see Appendix table B1.

Source: World Bank data.

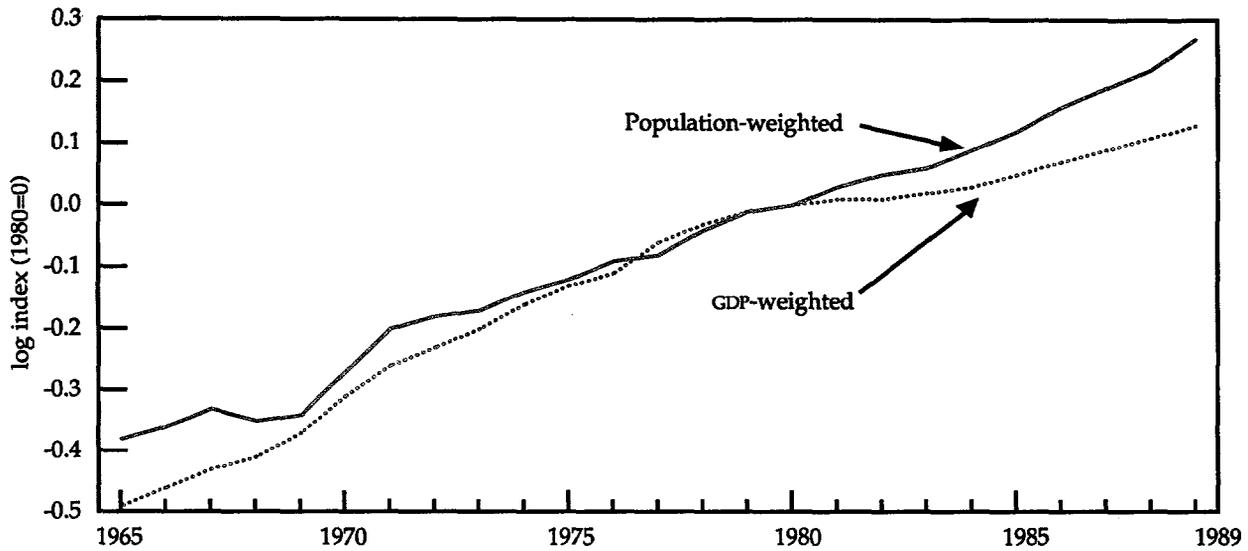
ment of the progress of global development therefore needs to include population-weighted income in its list of performance indicators.

### Notes

1. Imagine that two individuals, A and B, make up an economy, and A's income in the base year is ten times that of B. In the next year, A's income falls by 1 percent, and B's rises by 10 percent. The economy's per capita income does not change, since A's loss is equal to B's gain. But the average of the growth rates of each person's income in the economy is  $(10-1)/2$ , or 4.5 percent.

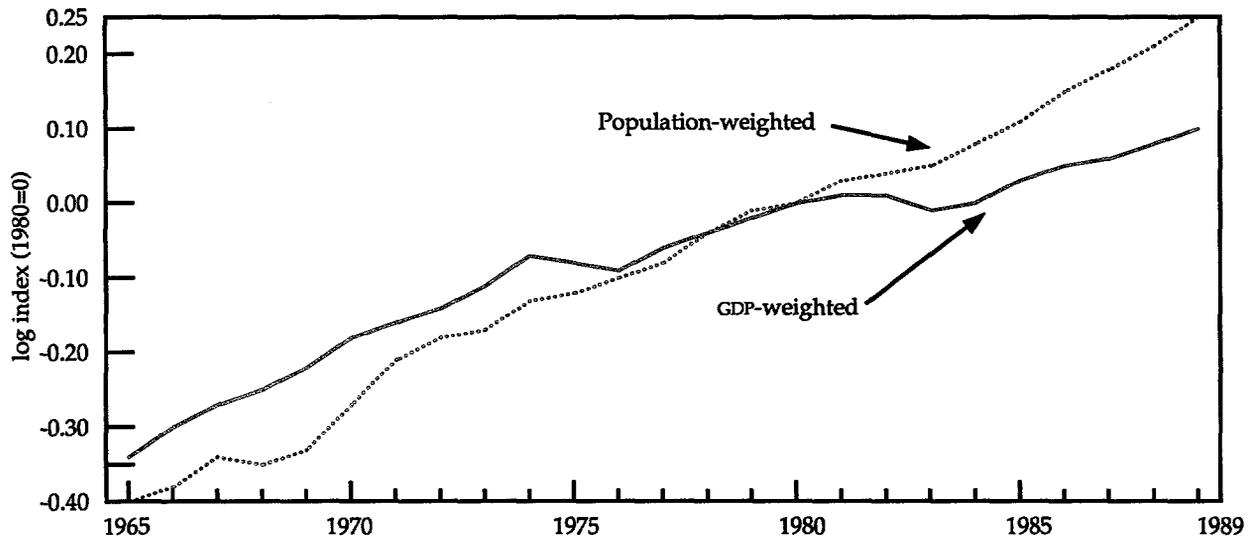
2. The case for weighting income by population does not stop at national or other geopolitical boundaries. Since income inequalities may be just as important within some countries as among them, estimating the average growth of a national economy requires observations on income from samples stratified by income class and denoted by the number of people supported by each income series. Unfortunately, such data have not yet been compiled widely and systematically enough to permit much generalization, although some additional research is feasible. In any event, weighting *national* income by population is feasible and should add to our understanding of global growth performance, even if the national components cannot be compiled on the same basis.

Appendix figure B1 Population-weighted and GDP-weighted per capita growth: Developing countries



Source: World Bank data.

Appendix figure B2 Population-weighted and GDP-weighted per capita growth: The world



Source: World Bank data.



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*Global Economic Prospects and the Developing Countries* is the first study in an annual series issued by the World Bank on the long-term prospects for the world economy. The study emphasizes the economic linkages between industrial and developing countries, focusing this year on linkages through trade in primary commodities.

In an extensive historical analysis, the study shows how growing interdependence in the world economy has favored economic growth over the past four decades. International trade has grown faster than production, foreign investment has accelerated, new technologies have revolutionized telecommunications and altered long-standing patterns of productivity and employment, and international financial markets have expanded in scale and diversity of instruments. But international economic relations have grown increasingly strained because of tensions in the areas of international trade and finance. While the developing world has been reducing barriers to trade in recent years, unilateral actions to curb imports have proliferated in industrial countries. And the debt crisis and its aftermath have cut off many developing countries from international financial markets and significantly reduced their access to flows of external capital.

The study finds that the potential for global economic growth in the 1990s is encouraging despite tensions in the international trading system, stress in the financial markets of Japan and the United States, and a deepening recession in industrial countries. But the realization of this potential will depend critically on a successful outcome to the Uruguay Round, a return to solid growth with price stability in the industrial economies, and the reinforcement of trade and foreign investment policies in developing countries that integrate them more closely with the rest of the world economy.

The study examines a "baseline" forecast for the global economy in the 1990s and explores in detail its ramifications for developing countries. Alternative global scenarios are analyzed for their growth and policy implications, particularly as viewed from the perspective of developing countries. These scenarios depict a wide range of possible outcomes that highlight the uncertainty of the baseline forecast. But the analysis of international linkages identifies the key parameters within which different groups of developing countries will need to examine their policy options in the next decade.