

World Development Report, 1980

10880

Part I Adjustment and growth in the 1980s

Part II Poverty and human development

Annex World Development Indicators



**World
Development
Report
1980**

**The World Bank
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Foreword

This third *World Development Report* is published at a time of difficulty and uncertainty for the world economy—particularly for the developing countries. They must adjust to external payments imbalances, higher energy prices and slower growth in world trade. That adjustment will slow their growth for at least the next few years. There is much that they themselves can do to ease the slowdown and to speed the expected subsequent recovery. But the burden of adjustment must be shared: the industrialized and centrally planned countries and the principal oil exporters also have a major role to play.

The first part of this *Report* is primarily about the economic policy choices facing both developing and richer countries and about the implications of these choices for growth. The outlook for growth that it discusses is a cause for deep concern—particularly for low-income countries and, among them, for the countries of Sub-Saharan Africa. More generosity and initiative in the provision of concessional aid by richer countries is urgently needed.

It is vital, moreover, that successful adjustment should not unduly sacrifice either the current living standards of the poor or the measures needed now to reduce poverty in the future. Growth is vital for poverty reduction, but it is not enough. The second part of the *Report* reviews other ways to

reduce poverty, focusing on human development, an important complement to the approaches to poverty alleviation emphasized in the two previous *World Development Reports*.

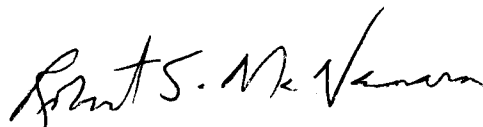
Human development—education and training, better health and nutrition, and fertility reduction—is shown to be important not only in alleviating poverty directly, but also in increasing the incomes of the poor, and GNP growth as well. The vital message is that some steps we all have long known to be morally right—primary education, for example—make good economic sense as well.

The laudable objectives of human development, though, are far from easy to achieve. Nor are they without cost. The *Report* draws on years of World Bank experience—in the analysis of projects, sectors and national economies, and in research—to examine the causes and effects of progress in human development and what it takes to implement successful programs in this area.

While there is now increasing recognition that growth does not obviate the need for human development and other steps to reduce poverty, it must be stressed that

the converse is true as well—direct steps to reduce poverty do not obviate the need for growth. This *Report* emphasizes that the direct attack on poverty, if it is ultimately to be successful, must be combined with measures to ensure that the economies of the developing countries continue to expand. The active support of the richer nations is required to assist this process through the provision of capital and technical knowledge and through the opening of their markets to developing-country exports. There is a real risk that the domestic economic problems of these richer countries will cause them to give inadequate attention to the immense problems of the developing world, and to the hardships that narrow or short-sighted policies—in energy, trade and financial assistance—can inflict.

This *Report* reflects the work of many of my colleagues in the World Bank. The judgments expressed do not necessarily reflect the views of our Board of Directors or the governments they represent. As in previous years, the *Report* includes the World Development Indicators, which provides tables of social and economic data for more than 100 countries.



Robert S. McNamara

This report was prepared by a team led by Paul Isenman and comprising Nicholas Hope, Timothy King, Peter Knight, Akbar Noman, Rupert Pennant-Rea and Adrian Wood. The Economic Analysis and Projections Department prepared the data and projections used in Chapter 2 and in the World Development Indicators. The authors would like to acknowledge the substantial help received from many contributors, reviewers and support staff. The work was carried out under the general direction of Bevan Waide and Hollis Chenery.

Contents

1	Introduction	1
Part I Adjustment and growth in the 1980s		3
2	The outlook for developing countries	3
	Adjustment and recovery	3
	Factors affecting growth	6
	Regional growth in the 1980s	11
3	International problems and policies	14
	Energy	14
	Trade	18
	Capital flows	25
Part II Poverty and human development		32
4	Poverty, growth and human development	33
	Dimensions of poverty	33
	Three decades of poverty reduction	35
	Poverty and growth	35
	Sources of growth	36
	Raising the incomes of the poor	40
5	Human development issues and policies	46
	Education	46
	Health	53
	Nutrition	59
	Fertility	64
	The seamless web	68
6	Implementing human development programs: some practical lessons	71
	Political support	71
	Easing the financial constraint	72
	Developing administrative strengths	75
	Ensuring that services are used	78
	International assistance	80
	The importance of persistence	81
7	Priorities and progress in regional perspective	83
	Issues for planners	83
	Sub-Saharan Africa	85
	South Asia	88
	Middle-income regions	90
	Lessons for planning	94
8	Summary and conclusions	95
	Statistical appendix to Part I	99
	Bibliographical note	102
	Annex World Development Indicators	105

Text tables

2.1	Summary of prospects for growth	6
2.2	Growth of exports and imports, 1970–90	7
2.3	Percentage shares in world exports of goods and nonfactor services	7
2.4	Net imports of oil by oil-importing developing countries, 1975–90	8
2.5	Developing countries' savings and investment rates, 1980–90	9
2.6	Current account deficits of oil-importing developing countries, 1970–90	10
2.7	Debt-service ratios of developing countries, 1977–90	10
2.8	Growth of GNP per person by region, 1960–90	11
2.9	Developing countries' GNP per person, 1980–2000	13
3.1	Shares of net world trade in commercial energy, 1977–90	16
3.2	World merchandise trade, by country group, 1970 and 1977	21
3.3	Product composition of developing countries' merchandise exports to industrialized countries and other developing countries, 1977	24
3.4	Commercial bank claims on developing countries, 1976–79	27
3.5	Average spreads over LIBOR for external borrowing, 1974–79	27
3.6	Aid flows to developing countries and multilateral institutions, 1975–90	29
3.7	Distribution of DAC donors' bilateral official development assistance, 1970–78	30
4.1	Agricultural population in relation to crop area	39
4.2	Irrigation and income, selected projects	43
4.3	Dependency ratios, by income group	43
5.1	Public expenditures on elementary and higher education per student, 1976	46
5.2	Primary school enrollment, by income group	47
5.3	Farmer education and farmer productivity	48
5.4	Rates of return to education	49
5.5	Public education spending per household, by income group	50
5.6	Differences in life expectancy within countries	55
6.1	Taxes as a percentage of GNP	73
7.1	Sub-Saharan Africa: GNP per person	85

Statistical appendix tables

SA.1	Growth of population, GNP and GNP per person, 1960–90	99
SA.2	Commercial primary energy production and consumption, by country group, 1977–90	99
SA.3	Composition of world commercial primary energy supply, 1970–2020	99
SA.4	Growth of merchandise exports, by product category and country group, 1960–77 and 1977–90	100
SA.5	Direction of merchandise trade, 1970 and 1977	100
SA.6	Capital flows and debt of the developing countries: oil importers and oil exporters, 1975–90	101
SA.7	Capital flows and debt of the oil-importing developing countries: low-income and middle-income, 1975–90	101

Figures

2.1	Growth of GNP per person: industrialized and oil-importing developing countries, 1965–80	5
2.2	Developing countries' growth of GNP per person, 1970–90	6
2.3	Energy production and consumption growth, by country group, 1980–90	8
2.4	Developing countries' savings and investment rates, 1960, 1980 and 1990	8
2.5	Net flows of medium- and long-term capital to developing countries, 1980 and 1990	9
3.1	Petroleum prices, annual averages, 1972–80	14
3.2	Actual and projected shares in world primary energy supply, 1970–2020	16
3.3	Growth of developing countries' merchandise exports, 1963–73 and 1973–77	19
3.4	Growth of developing countries' merchandise exports, by destination, 1973–77	24
3.5	Developing countries' use of borrowed funds, 1970–90	25
3.6	International bond issues, 1972–79	28
4.1	Three decades against poverty	34
4.2	National income and national poverty	36
4.3	Population distribution by age, 1980	40

4.4	Income of poorest groups	40
5.1	Enrollment ratios, by region, 1960–75	47
5.2	Death by age groups, developing and industrialized countries, 1980	54
5.3	Trends in birth and death rates, 1775–2050	64
5.4	Income and fertility, 1978	66
5.5	Influences on fertility	66
5.6	Policy and poverty	69
6.1	Literacy rates, selected developing countries, 1950 and 1970	81
7.1	GNP per person, 1960, 1970 and 1980	85
7.2	Literacy, by region, 1945–75	85
7.3	Life expectancy, 1960 and 1978	85
7.4	Sub-Saharan Africa: life expectancy in relation to income per person, 1978	87
7.5	South Asia: life expectancy in relation to income per person, 1978	89
7.6	Middle East and North Africa: life expectancy in relation to income per person, 1978	92
7.7	Latin America and the Caribbean: life expectancy in relation to income per person, 1978	92
7.8	East Asia and Pacific: life expectancy in relation to income per person, 1978	93
Boxes		
	GNP and trade prices	4
	Taxes and energy	15
	Fuel from food	17
	Stabilizing export earnings	20
	Multilateral trade negotiations: the Tokyo round	21
	Migration and money	22
	Food, farming and foreign exchange	23
	Military spending	29
	Human resources and growth: macroeconomic evidence	38
	Small is productive	42
	A strategy that backfired	44
	Schooling, screening and productivity	49
	The benefits of women's education	50
	Unemployment among the educated	51
	Big is not necessarily bad	52
	Oral rehydration	56
	Lessons of experience	58
	Food and the poor	61
	Alternative population projections	65
	Contraceptive technology	69
	How much would it cost?	72
	China's barefoot doctors	74
	Self-help in Sri Lanka	75
	Rural poverty unperceived	77
	Private costs of using public services	79
	The banjars of Bali	80
	Tradeoffs in Sri Lanka	90
	Sex, length of life and development	91

Definitions

Country groups in the analytical framework of this *Report* are as follows:

- *Developing countries* are divided, on the basis of 1978 gross national product (GNP) per person, into: *low-income countries*, with a GNP per person of US\$360 and below; and *middle-income countries*, with a GNP per person above US\$360. The countries in each group are shown in the tables of the World Development Indicators beginning on page 105.

- *Oil-exporting developing countries* comprise Algeria, Angola, Bahrain, Bolivia, Brunei, Congo, Ecuador, Egypt, Gabon, Indonesia, Malaysia, Mexico, Nigeria, Oman, Syria, Trinidad and Tobago, Tunisia, Venezuela and Zaire.

- *Capital-surplus oil exporters* comprise Iran, Iraq, Kuwait, Libya, Qatar, Saudi Arabia and United Arab Emirates.

- *Oil-importing developing countries* comprise developing countries not classified as oil-exporting developing countries or capital-surplus oil exporters.

- *Industrialized countries* are the

members of the Organisation for Economic Cooperation and Development, apart from Greece, Portugal, Spain and Turkey, which are included among the middle-income developing countries.

- *Centrally planned economies* comprise Albania, Bulgaria, China, Cuba, Czechoslovakia, the German Democratic Republic, Hungary, the Democratic Republic of Korea, Mongolia, Poland, Romania and the USSR.

Organisation for Economic Cooperation and Development (OECD) members are Australia, Austria, Belgium, Canada, Denmark, Finland, France, the Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

The OECD Development Assistance Committee (DAC) comprises Australia, Austria, Belgium, Canada, Denmark, Finland, France, the Federal Republic of Germany, Italy, Japan, the Netherlands, New

Zealand, Norway, Sweden, Switzerland, the United Kingdom, the United States and the Commission of the European Community.

The Organization of Petroleum Exporting Countries (OPEC) comprises Algeria, Ecuador, Gabon, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates and Venezuela.

Economic and demographic terms are defined in the technical notes to the World Development Indicators on pages 158 through 165.

Billion is 1,000 million.

Tonnes are metric tons (1,000 kilograms).

Growth rates are in real terms unless otherwise stated.

Symbols used in the text tables are as follows:

... Not available.

(.) Less than half the unit shown.

n.a. Not applicable.

1 Introduction

Developing countries start the decade facing two major challenges. First, they must strive to continue their social and economic development in an international climate that looks less helpful than it did a decade—or even a year—ago. Second, they must tackle the plight of the 800 million people living in absolute poverty, who have benefited much too little from past progress. This *Report* examines some of the difficulties and prospects in both areas, looking as far ahead as 2000, but paying particular attention to the next 5 to 10 years.

One of its central themes is the importance of people in development. Adam Smith's observation that the prosperity of a nation is determined mainly "by the skill, dexterity, and judgment with which its labor is generally applied" has lost none of its truth. In the difficult economic conditions of the past six years, as in earlier years, most of the fastest-growing developing countries without oil have had well-educated populations. Better health and more education can also help the poorest people climb out of their poverty.

The economic outlook

As in the two previous *World Development Reports*, economic projections for the developing countries have been carried out, drawing on the World Bank's analysis of what determines country and regional growth. These projections are

intended to illustrate the likely outcome of different policies, rather than to provide precise forecasts. Two sets of projections are presented in Chapter 2, based on differing growth rates in the industrial world and policy responses in developing countries. This year the analysis has been extended to provide separate estimates for oil-importing and oil-exporting developing countries, as well as by region and income level.

The analysis indicates that world economic growth will be sluggish during the next few years, as oil-importing countries reduce their current account deficits and adapt to higher energy costs. But the policies adopted during the adjustment period will have some effect on growth then—and even more on the recovery expected after 1985.

International finance will play a crucial role in the 1980s: unless the developing (and other oil-importing) countries can fund their large projected balance-of-payments deficits, output and growth will be seriously affected. The domestic policies of developing countries will also be crucial: the more efficiently they use their imports, their investments, and their energy supplies, and the more they increase their saving and investment, the faster will be their growth. The fate of poor people in developing countries will likewise be decided largely by domestic opportunities and policies.

None of this, though, detracts

from the importance of the role of industrialized countries. Chapter 3 examines three of the economic links that bind the world together—trade, energy and capital flows—and analyzes the fundamental issues in these areas, issues that must be resolved chiefly by the industrialized countries. Because they take about 65 percent of developing country exports, their growth rates and trade policies largely determine how much the developing countries can export. Because they account for more than half of world energy consumption, it is their conservation (or lack of it) that has the biggest impact. And most of the foreign capital that the developing countries need must come through the industrial world's banks or directly from its aid programs.

The role of human development

The past three decades have seen some impressive changes in the lives of people in the developing world. Average incomes have doubled. Average life expectancy has increased from 42 to 54 years. The proportion of adults who are literate has risen from about 30 percent to more than 50 percent. There has been a significant closing of the gap between industrialized and developing countries in life expectancy, literacy and primary school enrollment.

But there is still a long way to go. More than three-quarters of a

billion people have barely enough income to keep themselves alive from week to week. In the low-income countries people on average live 24 years less than they do in the industrialized countries. Some 600 million adults in developing countries are illiterate; a third of the primary school-age children (and nearly half of the girls) are not going to school.

This state of affairs is the starting point for Part II of the *Report*. Chapter 4 provides an overview of the various ways of attacking absolute poverty. The sources of growth, and policies to accelerate it, are examined, as are a wide range of measures—employment creation, land reform, schooling and so on—to raise the incomes specifically of poorer groups.

The rest of the *Report*, beginning with Chapter 5, singles out for closer examination one particular approach to poverty—human development—which epitomizes the

familiar idea that poor people should be helped to help themselves. Better education, health and nutrition have long been considered important ends of development. They can also raise incomes and reduce fertility. Human development alone cannot overcome absolute poverty; but it is an essential complement to other steps to raise the productivity and incomes of the poor.

Chapter 5 provides a detailed look at education, health, nutrition and fertility. In each of these areas, it explains why the poor are deprived, and discusses the policies needed to overcome their deprivation. Special attention is given to the practical consensus that has recently emerged in several areas—including nutrition policy, primary health care and the role of family planning programs in reducing fertility. These different areas of human development influence each other; education is seen to

be of central importance.

Chapters 6 and 7 draw conclusions from experience with human development programs. Chapter 6 shows how common financial, administrative and political constraints have been eased, and considers the role of foreign assistance. It also looks at ways of overcoming the cultural and economic barriers that stop poor people and their children—especially their daughters—from using human development services.

Chapter 7 focuses on broader planning issues—including the tradeoffs between growth and poverty reduction, and the allocation of resources between human development and other activities. It examines these and more specific human development issues as they apply to the different regions of the developing world. Chapter 8 contains a summary of the main arguments and conclusions of Parts I and II.

Part I Adjustment and growth in the 1980s

2 The outlook for developing countries

World economic prospects have deteriorated since last year's *World Development Report* was published.

- The real price of oil is likely to be at least 80 percent higher in 1980 than in 1978. As a result, capital-surplus oil-exporting nations will run current account surpluses of around \$110 billion this year and oil-importing developing countries deficits of more than \$60 billion.¹ This prospect revives questions about the international financial system's ability to recycle enough funds—to industrialized and developing countries—to maintain import levels and economic growth rates. Furthermore, the real price of energy can be expected to rise during the 1980s.

- For reasons only partly connected with higher oil prices, the outlook for growth in the industrialized countries and in world trade has worsened. The widespread resurgence of inflation in 1979 and 1980 has prompted governments to take strong deflationary measures; the industrial economies are expected to show only sluggish growth in 1980 and 1981. This inevitably slows their demand for developing countries' exports. The 1980s are thus off to a slower start than anticipated a year ago.

Given these two developments, the world faces the need to adjust—to payments imbalances and expensive energy—on a scale com-

parable to 1974–75. But the adjustment must take place at a time when the outlook for capital flows—especially aid for the poorest nations—is worse than before. This adjustment will be spread over several years; while it lasts, the world economy and most developing countries are likely to grow more slowly than in the 1970s. Provided the adjustment is successful, a significant recovery should be possible from the mid-1980s onward.

Higher oil prices have clearly improved the prospects of those developing countries with oil to export, where a fifth of the developing world's population lives. Their GNP per person grew 2.8 percent a year in the 1960s, compared with 3.1 percent for the oil-importing developing countries; but in the 1970s the oil exporters accelerated to an annual 3.5 percent growth, while the oil importers slowed to 2.7 percent. (The disparity was even larger when GNP is adjusted for changes in the purchasing power of their exports—see box overleaf). With much increased oil revenues, at least for the first half of the 1980s, the oil exporters' growth will be constrained more by the productivity of domestic investment than by their ability to borrow abroad.

Adjustment for oil-importing countries

All oil importers, developing and industrialized alike, face a cen-

tral challenge over the next few years—to adjust to higher oil prices and sluggish world trade while minimizing their loss of growth. They are subject to a formidable constraint: their ability to import more has declined, both because imports (particularly of energy) are more expensive and because the export outlook has deteriorated. These countries went through a similar adjustment in 1974–78, and there is much that can be learned from this earlier experience.

The adjustment process has two stages. First, when there is a sudden increase in the cost of imports relative to export earnings, countries squeeze imports—and so growth slows sharply. Because too sharp a fall is disruptive, both economically and politically, countries accept large current account deficits and finance them from borrowing or aid. During the earlier adjustment period the current account deficit of oil-importing developing countries rose sharply—from 2.3 percent of their GNP in 1970 to 5.1 percent in 1975; from 1978 to 1980 it went from 2.3 percent to 3.9 percent. Growth is falling off in these countries in 1980, but less sharply than in 1975 (see Figure 2.1).

The second stage is to reduce these current account deficits to levels that can be financed over the medium term. At the same time output and trade must be restructured to meet the new circumstances. This structural change requires heavy investment. New

1. See page viii for definitions of country categories.

GNP and trade prices

When a country's terms of trade shift substantially, changes in national product in constant prices do not accurately reflect changes in its purchasing power. The volume of imports that can be bought with a given volume of exports will rise if the terms of trade improve, fall if they deteriorate. There is no generally accepted way of measuring these changes in purchasing power; but a rough measure is obtained if export earnings are expressed in terms of the imports that they will buy—and any gain or loss is added to GNP.

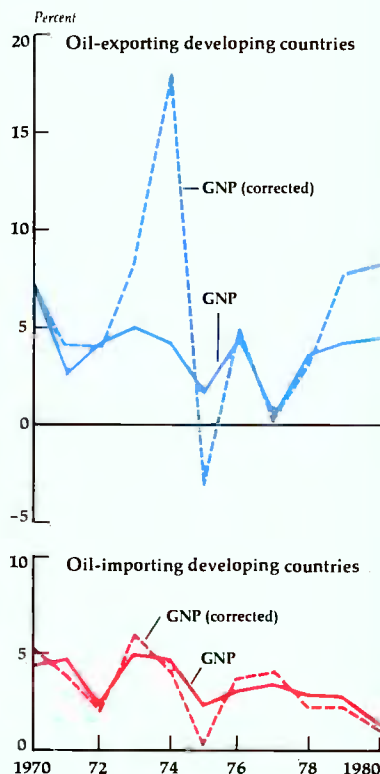
Among the developing countries, the oil exporters and oil importers provide a vivid example of the difference such an adjustment can make to the apparent benefits of GNP growth. In 1974, the year oil prices rose most sharply, the oil exporters' output (as measured by their GNP per person in constant prices) rose 4.4 percent; but their "corrected" GNP rose 18 percent (see figure). That was exceptional: gains and losses from terms-of-trade changes are typically much smaller. But for the 1970s, the adjusted annual average GNP growth of 11 major oil-exporting developing countries was 2.4 percentage points higher than for 25 major oil importers, compared with 0.2 percentage points if the adjustment is not made.

Terms-of-trade effects are caused by a variety of factors: with the correction, the GNP of oil importers grew significantly more slowly than without it—in 1971, for example, long before oil prices

rose. The reason was that commodity prices were depressed; two years later they were booming, and the correction augmented the growth rate.

Terms-of-trade effects on growth of GNP per person, 1970–80

(1977 prices)



energy sources must be developed and energy conserved, and in industrialized and developing countries declining or inefficient industries have to be replaced by competitive ones. So growth can pick up during the second stage, but it is still slowed by the continuing need for adjustment.

Slower growth compounds the political difficulties that can arise when governments pass on world price increases to consumers, particularly to politically powerful urban consumers, or cut back on public services. No less important, governments are concerned that rapid increases in the price of basic

imported goods can cause severe hardships for the poor. These constraints can prolong the adjustment period. And there is a need to strike a balance between investments with a short-term payoff and those, such as infrastructure or education, which are vital for longer-term growth.

Judged against initial pessimism about their ability to adjust, the developing countries generally confounded expectations in 1974–78. In 1974 and 1975 their growth rates fell less than those of industrialized countries (Figure 2.1), helping to moderate the slowdown in world trade growth. Their adjustment was helped by substantial increases

in official aid and other capital and by borrowing a significant part of the oil producers' recycled surpluses. Nonetheless, the result of these efforts was slower growth: in 1975–78, GNP per person in the oil-importing developing countries grew 2.3 percent a year—above the 0.8 percent in the 1975 trough, but still well below the 3.7 percent average for 1965–73. And some countries experienced serious fiscal and external debt problems. The poorest African countries were the biggest cause for concern; their GNP per person grew 1.6 percent a year in the 1960s, but only 0.2 percent in the 1970s. On average their people are as badly off at the end of the decade as they were at the beginning.

The oil-importing developing countries that coped best during the earlier adjustment period were:

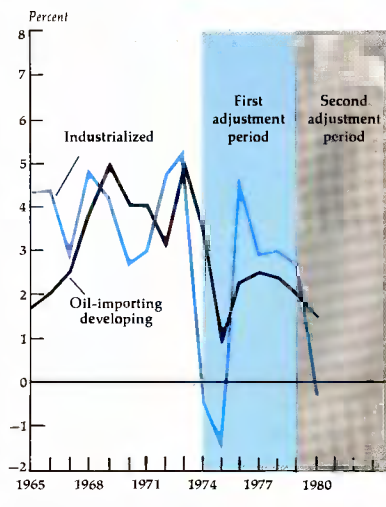
- Those that reacted to the decline in their import capacity by a temporary slowdown in growth accompanied by a drive to expand exports. Import capacity (and hence output growth) was restored quickly. Most of these countries had grown rapidly and diversified their exports during the previous decade; a good example is Singapore.

- Those that, while maintaining import growth by foreign borrowing, used the borrowed funds mainly to sustain high levels of productive investment—including Brazil and South Korea.

- Those that benefited from good harvests resulting from improved agricultural policies and favorable weather (such as India) or rising migrant remittances (such as the Yemen Arab Republic).

Several of the developing countries that improved their economic policies and did well during six difficult years had previous records of slow growth and poor economic management: for them, improved domestic efficiency went a long way toward offsetting the effects

Figure 2.1 Growth of GNP per person: industrialized and oil-importing developing countries, 1965–80
(1977 prices)



of a deterioration in the world economy. And they are now much better placed to weather the current slowdown and recover in the 1980s.

The 1970s have shown that success in adjustment should be measured not just by the volume of recycling, or the share going to developing countries, or the reduction of developing-country deficits to affordable levels. These are all important, but they must be viewed in the context of the growth that the developing countries achieve. A key factor in that growth is the performance of the industrialized countries; in the 1970s their erratic growth and incomplete adjustment had a depressing effect on the oil-importing developing countries (Figure 2.1).

Adjustment in the 1980s

As in the 1970s, the adjustment required can be seen from both global and domestic viewpoints. Globally, the oil importers' deficits are the counterpart of the surpluses of the capital-surplus oil exporters. Although each oil-importing coun-

try has powerful reasons for wanting to expand exports and restrain imports, they cannot all succeed simultaneously while the oil surpluses persist. The attempt to do so through uncoordinated domestic deflationary policies (especially if augmented by protectionism) will slow world economic growth even more. Because of their weight in the world economy, the industrialized countries in particular should maintain import growth—recognizing that this may involve large payments deficits.

On the domestic front, adjustment in the 1980s should benefit from the knowledge gained from experience. Moreover, it is now apparent that higher real energy prices are here to stay; so there is more incentive to take the difficult steps necessary to conserve energy and to develop domestic energy production. A number of countries that were large oil importers in 1973 are now projected to come close to self-sufficiency in the 1980s (for example, Pakistan and Colombia) or be major exporters (such as Mexico).

Unfortunately, however, there are several reasons why this adjustment may prove more difficult for many countries than the 1974–78 adjustment was.

- Some developing countries did not adapt effectively during the 1970s, and ended up with high debt-service obligations or slower growth (and in some cases both). In addition, many countries now have less room than before to squeeze either energy consumption or imports without reducing growth. In some countries (India and Tanzania, for example) shortages of fuel have already impeded the transport of food and other key commodities.

- Oil surpluses could stay at a high level for longer—both because more conservative development programs among the oil producers

may boost imports less rapidly than in the 1970s, and because the real price of oil is likely to rise, not fall as it did in 1974–78.

- The prospects for capital flows are less favorable. Official finance—including aid—which played an important role in 1974–75 is not yet responding to developing countries' needs; commercial borrowing is likely to cost more; and both borrowers and lenders are likely to be more cautious. In addition, more of what is borrowed will have to be used for repayments of principal and interest on old debt (see page 25).

- The industrialized economies face more serious difficulties than in the mid-1970s, when adjustment tended to be viewed as a phase from which they would quickly recover. But the growth of the 1960s and early 1970s has not been regained; and although their slowdown may not be as marked in 1980–81 as in 1974–75, no quick recovery can be expected.

The current economic malaise of the industrialized countries results from much more than higher energy prices. Inflation in some of them is running several percentage points above its peak in 1974; they have plainly decided that it must come down and stay down before rapid growth can be resumed, and that deflationary measures are the best way of achieving this. There are question marks, too, over their long-term growth potential. Productivity growth has slowed sharply: on average it increased 3.9 percent a year in 1963–73, but only 1.7 percent a year since 1973. This stems from a complex of factors—among them, incomplete adjustment to higher energy costs, sluggish investment and a mismatch of skills in the labor market—that cannot be rectified quickly or easily.

Overall, even with a well-directed policy response by all countries,

Table 2.1 Summary of prospects for growth*(average annual percentage growth, 1977 prices)*

Country group	Population 1980 (millions)	GNP per person, 1980 (1977 dollars)	Growth of GNP (High case)		Growth of GNP per person				
			1980-85	1985-90	Low case		High case		
					1970-80	1980-85	1985-90	1980-85	1985-90
Low-income oil importers	1,133	168	4.1	4.6	0.9	1.0	1.3	1.7	2.4
Sub-Saharan Africa	141	186	3.1	3.8	0.2	-0.3	0.1	0.1	1.1
Middle-income oil importers	701	1,275	4.9	5.7	3.1	2.0	2.4	2.6	3.5
Oil exporters	456	753	6.3	5.9	3.5	3.0	3.0	3.5	3.4
Industrialized countries	671	7,599	3.3	4.0	2.4	2.5	2.5	2.8	3.5

Note: For more detail, see Table 2.8 and Table SA.1 in the statistical appendix to Part I.

growth in the oil-importing developing countries is likely to be significantly slower in 1980-85 than in the 1970s—and still further below the average in the 1960s.

Key factors affecting growth: 1980-85 and 1985-90

To help analyze the outlook, two sets of illustrative projections have been prepared. Designated Low and High, they are based on alternative policy responses to current economic difficulties. Each scenario is internally consistent with respect to policies and outcomes. The Low case shows an unsuccessful adjustment in 1980-85; though payments imbalances are reduced, growth remains depressed, and inadequate foundations are laid for recovery

after 1985. The High case represents a much more successful adjustment, with growth slowing less in 1980-85 and accelerating more thereafter (see Figure 2.2).

Because of the differences in growth rates between oil-importing and oil-exporting developing countries, estimates for them are shown separately (see Table 2.1). The projections of this *Report* are not directly comparable to those of last year's, but they represent a substantial fall in growth expectations for the oil importers over the next five years.²

The oil exporters have buoyant prospects throughout the decade (see Table 2.1). But the oil importers will grow more slowly in 1980-85 than in the 1970s, even in the High case; with a successful adjustment and a strong revival in world trade after 1985, their growth should accelerate in 1985-90. By contrast, their recovery would be weak in the Low case. Sub-Saharan Africa has the most disturbing outlook. Even in the High case, its growth in 1985-90 would be a meager 1 percent per person—far below the average for the oil im-

porters; and in the Low case average incomes would actually be lower in 1990 than they were in 1980.

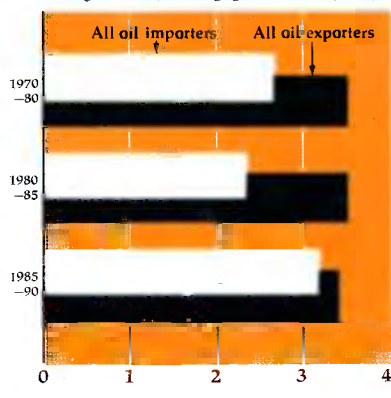
Whether the outcome will be closer to the High or the Low case will depend on the policies pursued by industrialized countries, the capital-surplus oil exporters and the developing countries themselves. At this early stage in the adjustment process, it is unclear how successful their policies will be in restoring growth, for the world as a whole or for developing countries. The estimates this year should therefore be treated with more than usual caution. But there are some disturbing signs that the seeds of the Low case are already being sown: on current prospects, aid for low-income countries is far from certain to meet the modest requirements of the High case, and some middle-income countries are experiencing both debt and political difficulties.

Thus, without a strong policy response during the adjustment period, the Low case is the likelier outcome. And a number of factors, including serious political instability, major problems in capital markets or a breakdown of world economic cooperation, could bring about a much worse outcome.

But the High case remains achievable—depending on policies in four key areas: the growth and structure of international trade; the changing pattern of energy

Figure 2.2 Developing countries' growth of GNP per person, 1970-90 (High case)

(average annual percentage growth, 1977 prices)



2. The projections of this *Report* differ from those of last year's for several reasons. For example, only two sets of projections have been prepared—a Low case, which is comparable to last year's Low case, and a High case, which is closer to last year's Base case than its High case. In addition, Iran and Iraq are now included among capital-surplus oil exporters; and improvements in data have led to revisions of some historical aggregates.

production and consumption; investment and productivity in the developing countries; and the inflow of capital. (A broader view of the determinants of economic growth—including the effects of human resources—is discussed in Chapter 4.) In each area, the emphasis is on what is required to increase growth; policy prescriptions are discussed in Chapter 3.

International trade

With slow growth expected in the industrialized countries in 1980–81 and with much larger current account deficits for all the oil-importing countries, world trade growth will slow from the 5.5 percent a year it averaged in the 1970s. But if, as the High case assumes, the industrialized economies are able to average GNP growth of 3.3 percent a year in 1980–85—see Table 2.1—and if further protectionism is avoided, world trade could rise by an average of 5.2 percent a year in 1980–85 (see Table 2.2). Thereafter, with the industrialized countries' GNP projected to grow 4.0 percent a year in 1985–90, it should accelerate. Exports of developing countries could expand at 6.4 percent a year in 1985–90, compared with 5.5 percent in 1980–85.

As with growth, the trade outlook differs sharply between oil exporters and oil importers—underlining the important effects of terms-of-trade changes. In the 1970s export volume for oil-exporting developing countries grew at about two-thirds the rate of that of the oil importers; but because the price of their exports rose so much faster, their import volume was able to grow twice as fast. For the capital-surplus oil exporters, the terms-of-trade benefits were even greater.

Although the terms of trade of the oil-importing developing countries are not projected to de-

Table 2.2 Growth of exports and imports, 1970–90 (High case)

(average annual percentage growth rates, 1977 prices)

Country group	Exports ^a			Imports ^a		
	1970–80	1980–85	1985–90	1970–80	1980–85	1985–90
Oil-importing						
developing countries	5.6	5.7	6.8	4.6	4.7	6.3
Low-income	2.6	0.9	3.7	0.1	2.1	2.8
Middle-income	5.9	6.1	7.0	5.2	4.9	6.5
Oil-exporting						
developing countries	3.5	4.6	4.5	8.6	7.6	6.3
All developing countries	5.1	5.5	6.4	5.4	5.4	6.3
Industrialized countries	6.0	5.4	5.8	4.8	4.3	5.3
Capital-surplus						
oil exporters	2.7	1.8	2.0	21.1	10.9	7.3
Centrally planned economies	6.6	5.1	5.2	8.1	5.8	5.2
World	5.6	5.2	5.7	5.8	5.2	5.7

a. Goods and nonfactor services except for centrally planned economies, for which net nonfactor services are included as net exports.

teriorate markedly in the 1980s, exports will still have to grow faster than imports in 1980–85 to reduce current account deficits. But for low-income oil importers, and especially Sub-Saharan Africa, exports could grow more slowly in 1980–85 than in the 1970s—underlining their need for foreign assistance to maintain their import capacity. With a strong recovery of world trade in 1985–90, their export prospects would improve and export growth could exceed that of imports.

If the High case is achieved, the share of developing countries in world trade would increase from 20.1 percent in 1977 to 21.3 percent in 1990 (see Table 2.3). The structure of their trade could change more dramatically, with exports

of manufactures growing about two and a half times faster than nonfuel primary exports. As a result, developing countries' exports of manufactured goods would rise from 24 percent of their total exports in 1978 to 39 percent in 1990 and from 10 percent to 14 percent of world manufacturing trade.

The biggest gains are likely to be in machinery and transport equipment (from 6 to 16 percent of developing country exports), in which Brazil, India and South Korea, for example, have become increasingly competitive in international markets. The developing countries' importance as markets for the industrial world would also increase: in 1978 they and the capital-surplus oil exporters already accounted for

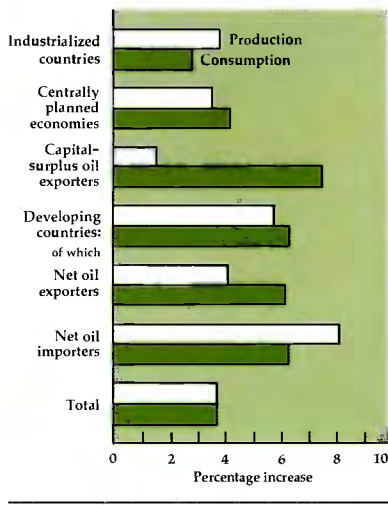
Table 2.3 Percentage shares in world exports of goods and nonfactor services (High case)

(1977 prices)

Country groups	Primary commodities		Fuels		Manufactures		Nonfactor services		Total	
	1977	1990	1977	1990	1977	1990	1977	1990	1977	1990
Developing countries	35.0	34.0	24.2	28.2	10.1	14.3	28.8	30.6	20.1	21.3
Industrialized countries	55.6	56.5	16.0	19.3	79.6	76.3	67.7	65.6	62.9	65.6
Other countries	9.4	9.5	59.8	52.5	10.3	9.4	3.5	3.8	17.0	13.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Figure 2.3 Energy production and consumption growth, by country group, 1980-90 (High case)

(average annual growth, million barrels of oil equivalent per day)



almost a third of North America's exports of manufactures, almost a half of Japan's and a fifth of Europe's.

Energy

Although uncertainty inevitably surrounds the prospects for new energy discoveries, the supply of energy is likely to remain tight during the 1980s. World production of primary energy from all (commercial) sources is projected to increase 3.8 percent a year over the decade (see Figure 2.3)—about the same as the industrialized countries' GNP growth in the High case, but considerably below that

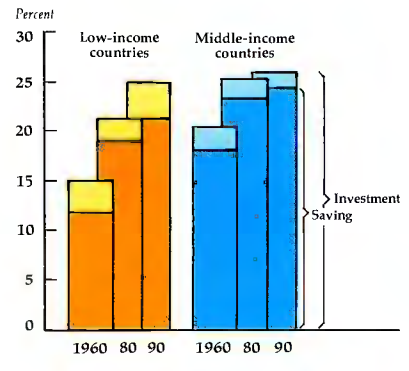
of the developing and centrally planned economies. As a result, real energy prices can be expected to rise further—though the rise is likely to be moderated and the energy constraint on growth eased if the industrialized countries achieve progress in both energy conservation and production (Figure 2.3 and Table SA.2 in the statistical appendix to Part I). The working assumption is that real oil prices will on average rise 3 percent a year.

For the industrialized countries, net energy imports (mainly oil, plus gas and coal) are projected to remain at some 20 million barrels a day of oil equivalent (*mbdoe*) throughout the 1980s. Among the developing countries, the oil exporters are expected to increase their energy exports by a third; some of today's oil importers either will be net energy exporters at some stage during the decade, or will have greatly reduced their energy imports by 1990.

But most developing countries will continue to import much of their energy needs. For all oil-importing developing countries, the "energy gap" under the High case is likely to widen from 5.6 *mbdoe* in 1980 to 6.3 *mbdoe* in 1985 (see Table SA.2). By 1990 the gap would have increased to 7.5 *mbdoe*, even if the countries succeed (as projected) in more than doubling production and restraining consumption growth. Their bill for

Figure 2.4 Developing countries' savings and investment rates, 1960, 1980 and 1990

(percentage of GDP, current prices)



imported oil for energy use (that is, excluding oil for such things as fertilizer production) would rise in nominal terms from \$29 billion in 1978 to some \$107 billion in 1985 and about \$200 billion in 1990 (Table 2.4). Without a rapid expansion of exports and substantial financial support from abroad, they could find their growth severely constrained by the cost of energy imports. Individual country analysis suggests that oil imports as a percentage of export earnings will rise substantially for many countries from 1980-85, particularly among the low-income countries.

Investment and efficiency

Developing countries have raised their savings and investment rates considerably in the past 20 years (see Figure 2.4). Further increases—and, still more important, improvements in the productivity of existing and new investment—can make a major contribution to adjustment and growth, as the experience of the 1970s has shown. Previous *World Development Reports* have discussed the importance of efficiency and policies for promoting it; Part II of this *Report* considers another important element in efficiency—the human factor.

The 1970s have shown which

Table 2.4 Net imports of oil by oil-importing developing countries, 1975-90

Oil imports for energy use only	1975	1978	1980	1985	1990
Volume (millions of barrels of oil per day)	4.9	5.8	5.3	5.8	6.9
Low-income countries	0.4	0.4	0.3	0.3	0.4
Middle-income countries	4.5	5.4	5.0	5.5	6.5
Cost (billions of dollars)	22.1	29.2	57.8	107.2	198.0
Low-income countries	1.8	2.1	3.3	6.0	11.1
Middle-income countries	20.3	27.1	54.5	101.2	186.9
Price per barrel c.i.f.					
Current dollars	12.33	13.70	29.80	50.30	78.30
Constant 1980 dollars	19.60	17.13	29.80	35.10	40.85

measures can raise efficiency fairly rapidly. In agriculture, examples include balanced packages of irrigation, inputs of fertilizer and selected seeds, extension services and credit, and ensuring adequate producer prices. Efficient industrialization can be helped by policies that discourage undue capital intensity and do not protect domestic industry excessively. Many countries have learned from painful experience how to improve the efficiency of publicly owned enterprises and how to apply more rigorous economic criteria to project selection.

But even with greater efficiency, more investment would be needed to achieve the High case—especially in the low-income countries. They would have to raise their investment to more than 23 percent of output by 1985, and to 25 percent by 1990, matching the already high level of the middle-income countries. Some increases in savings rates are possible (see Table 2.5), although there are real limits to how far consumption in low-income countries can be restrained. But substantial increases in investment can be achieved only with more capital from abroad. For low-income Africa foreign resources will be required to finance about 40 percent of investment, and for low-income Asia 13 percent. By contrast, higher savings rates in the middle-income countries could reduce their dependence on foreign resources by 1990.

International capital flows

The analysis of trade, energy and domestic investment highlights the role that foreign capital must play in a successful adjustment by the developing countries. But the actual capital inflow will depend on both the needs of countries and on the likely availability and cost of capital from all sources (see discussion in Chapter 3).

Table 2.5 Developing countries' savings and investment rates, 1980–90 (High case)

(percentage of GDP, current prices)

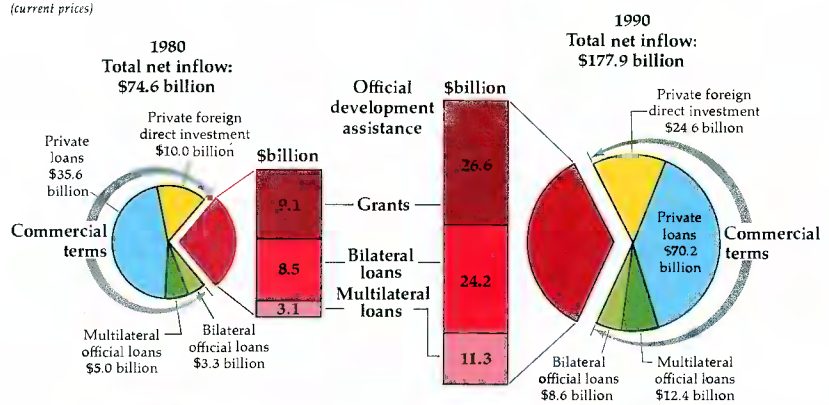
Country group	Gross domestic investment			Gross domestic saving			Resource gap		
	1980	1985	1990	1980	1985	1990	1980	1985	1990
Low-income countries	21.2	23.0	25.0	18.7	19.8	21.2	2.5	3.2	3.8
Africa	16.3	16.0	18.3	9.1	8.6	11.3	7.2	7.4	7.0
Asia	22.0	24.0	25.9	20.2	21.4	22.6	1.8	2.6	3.3
Middle-income countries	25.3	25.4	25.7	23.2	23.8	24.5	2.1	1.6	1.2
All developing countries	24.6	25.0	25.6	22.4	23.1	24.0	2.2	1.9	1.6

The projected pattern of net financing for all developing countries is shown in Figure 2.5. But the needs of developing countries for finance differ widely. Oil-exporting developing countries now look to be less dependent on foreign capital in the 1980s than was anticipated a year ago. Over the next five years, they can achieve High-case growth financed largely from their oil revenues. After running a current account deficit (before official transfers) of more than \$10 billion a year in 1975–77, they could have a surplus of about \$2 billion in 1980.

By the mid-1980s, however, the real value of oil export earnings is likely to be falling for some countries. If their imports are to rise to the level required for the High case, the oil exporters would have a current account deficit by 1985 of around \$16 billion. To maintain their growth in the second half of the 1980s, they would need to borrow more heavily; their net private borrowing could rise from only \$7 billion in 1985 to around \$25 billion in 1990. Private capital would meet about two-thirds of their financing requirements in 1990 (see Table SA.6).

Figure 2.5 Net flows of medium- and long-term capital to developing countries, 1980 and 1990 (High case)

(current prices)



Note: Uses of medium- and long-term capital (billions of dollars) are:

Use	Oil importers		Oil exporters		All developing countries	
	1980	1990	1980	1990	1980	1990
Current account deficit before interest payments ^a	42.7	42.2	-11.1	30.2	31.6	72.4
Interest payments	18.3	62.0	8.8	17.5	27.2	79.4
Changes in reserves (net of changes in short-term debt)	-4.4	23.5	20.2	2.6	15.8	26.1
Total finance required	56.6	127.7	18.0	50.2	74.6	177.9

a. Defined as net imports of goods and services (except interest) minus private (but not official) transfers. See tables SA.6 and SA.7 in the statistical appendix to Part I.

Table 2.6 Current account deficits of oil-importing developing countries, 1970–90 (High case)

Country group	Current account deficit ^a						
	1970	1973	1975	1978	1980	1985	1990
	<i>Billions of dollars, current prices</i>						
Low-income	1.2	2.3	5.4	5.7	10.0	18.6	32.0
Middle-income	7.1	4.4	34.2	21.4	51.0	59.7	72.2
Total	8.3	6.7	39.6	27.1	61.0	78.4	104.2
	<i>Billions of dollars, 1977 prices</i>						
Low-income	2.2	3.2	6.1	5.0	7.1	9.2	11.8
Middle-income	13.2	6.0	38.3	18.5	36.1	29.5	26.7
Total	15.4	9.2	44.4	23.5	43.2	38.7	38.5
	<i>As percentage of GNP</i>						
Low-income	1.6	2.2	3.8	2.7	3.6	3.8	3.9
Middle-income	2.5	0.9	5.3	2.2	4.0	2.6	1.8
Total	2.3	1.1	5.1	2.3	3.9	2.8	2.1

a. Excludes official transfers.

For oil-importing developing countries the outlook is very different. Although their current account deficit in 1980 is smaller as a percentage of GNP than it was in 1975, in constant prices it is roughly the same (see Table 2.6). The low-income countries in particular face serious financing problems. To achieve High-case growth of 1.7 percent per person a year in 1980–85, their current account deficits would have to rise to 3.8 percent of GNP by 1985 (the same as in 1975) and would rise further by 1990. Since the low-income oil importers have only limited access to commercial funds (other than some short-term borrowing and suppliers' credits), deficits of this size can be financed only if:

- Aid from DAC and OPEC members trebles in current prices over the decade.

- Support from the multilateral institutions is increased correspondingly.

- The share of the low-income countries in bilateral aid from the industrialized countries increases to around 50 percent from about 40 percent at present.

This requires only a marginal increase in the aid performance of the industrialized countries—from

0.34 percent of their GNP in 1979 to 0.35–0.36 percent of GNP in 1985, then staying at this level. Unfortunately, aid prospects are not encouraging (see Chapter 3)—and this has serious implications for low-income countries. For example, the Low-case assumption for DAC donors—lower GNP growth, aid falling to 0.30 percent of GNP by 1982, with 40 percent of bilateral aid to low-income countries—would account for 0.3 percentage points of the difference in average annual growth for low-income countries between the Low and High cases.

For the middle-income oil importers, bilateral official finance is not likely to be as freely available for funding current account deficits in 1980–81 as it was in 1974–75. And lending by the multilateral

institutions at market or near-market terms will depend on increases in the capital that backs their bond issues.

As for private finance, some countries that have borrowed heavily in the past and already have high debt-service obligations will need to be cautious about further borrowing. Given the High-case outlook for their current accounts, the debt-service payments of middle-income oil importers will peak at around 29 percent of their exports of goods and services in 1985 (see Table 2.7).

In the High case, private finance (including direct investment) provides a slightly larger proportion of the middle-income oil importers' net financing requirement in 1985 than in 1990, though smaller than in 1980 (see Table SA.7). If the Low case comes about, developing countries' export growth would fall more than their import growth—and hence they would remain about as dependent on nonconcessional finance as in the High case. If the necessary finance could not be obtained—because of concern about creditworthiness, for example—growth could slip even lower than the Low case, and the number of countries in serious debt difficulties would increase.

The extraordinary expansion of private commercial lending to developing countries that took place in the 1970s is unlikely to be repeated during the current

Table 2.7 Debt-service ratios of developing countries, 1977–90^a (High case)

Country group	1977	1980	1985	1990
Oil-importing developing countries				
Low-income	10.1	9.2	11.3	11.5
Middle-income	19.8	25.7	28.6	22.1
Oil-exporting developing countries	16.0	15.4	13.5	12.9

a. Interest and amortization payments on debt divided by exports of goods and services. Figures are from individual country analysis of 25 major oil-importing developing countries and 11 major oil-exporting developing countries.

adjustment; but the increases projected for the High case are not implausibly high. In nominal terms, net private lending to all developing countries would rise only 3.2 percent a year in 1980–85. This would lower debt-service ratios for oil exporters and slow their increase for oil importers. The 11 percent (nominal) annual rise projected for net private lending in 1985–90 would stem largely from increased borrowing by the oil exporters. Indeed, if major borrowers do adjust successfully in 1980–85, by building up their export base and earning good returns on capital invested, private lending may well rise more than is projected.

Regional growth in the 1980s

Whether the Low or the High case is achieved, most of the past decade's disparities in growth rates between different groups of developing countries can be expected to continue in both halves of the 1980s (see Table 2.8). There are too few oil exporters to identify systematic differences by region and income group in their prospects; but the aggregate figures for the oil importers hide wide differences.

With strong economic management, continuing agricultural progress and more aid, growth per person in low-income Asian countries could be substantially higher in the 1980s than in the 1970s. But it would still be well below that of middle-income oil importers, and in the Low case it would not be much more than 1 percent a year for the decade. The situation for low-income Africa is worse. These countries face a desperately hard adjustment period—coming on top of the economic stagnation of the 1970s. Even under the comparatively optimistic assumptions of the High case, their growth would be negligible in 1980–85. The

plight of these poor Asian and African countries—particularly the latter—deserves special attention from the international community.

As they adjust to less buoyant export prospects and higher energy costs, middle-income oil importers can also expect slower growth—from 3.1 percent per person a year in the 1970s to a range of 2.0–2.5 percent during the first half of the 1980s. It would take the favorable international environment and successful adjustment of the High case for growth in the second half of the 1980s to exceed the average of the 1970s (and match that of the 1960s).

The slowdown in 1980–85 would be most marked in Latin America and the Caribbean—from 3.5 percent in the 1970s to 2.2–2.6 percent in 1980–85. Even with a strong recovery after 1985, growth for the 1980s could still fall below that of the 1970s. In East Asia and the Pacific there would also be a slowdown in 1980–85, and these

countries too would not repeat their extraordinary growth of the 1970s. But they have made continuing progress in raising savings and investment rates, in expanding exports and in reducing population growth. As a result, they are likely to continue to achieve faster growth per person than any other region.

Growth in the comparatively high-income countries of Southern Europe has been slowing, and the trend could continue in the 1980s, since these countries are very dependent on oil imports and on trade with Western Europe. Some will join the European Community during the 1980s; the terms of their entry and how rapidly they adapt to membership will have a marked effect on their growth.

Finally, for the middle-income oil importers of Sub-Saharan Africa and the Middle East and North Africa, the slow growth of the past two decades seems likely to continue into the 1980s.

Table 2.8 Growth of GNP per person by region, 1960–90

Country group	Population, 1980 (millions)	GNP per person, 1980 (current dollars)	Average annual percentage growth ^a					
			1970		Low case		High case	
			1960–70	1970–80	1980–85	1985–90	1980–85	1985–90
Low-income oil importers	1,133	216	1.6	0.9	1.0	1.3	1.7	2.4
Africa (Sub-Saharan)	141	239	1.6	0.2	–0.3	0.1	0.1	1.1
Asia	992	212	1.6	1.1	1.1	1.5	2.0	2.6
Middle-income oil importers	701	1,638	3.6	3.1	2.0	2.4	2.6	3.5
East Asia and Pacific	162	1,175	4.9	5.6	4.1	4.1	4.7	5.2
Latin America and Caribbean	256	1,775	2.7	3.5	2.2	2.4	2.6	3.8
North Africa and Middle East	30	667	–0.2	0.4	0.0	0.6	0.6	0.8
Africa (Sub-Saharan)	125	867	2.4	0.9	1.3	1.3	1.6	1.4
Southern Europe	128	2,950	5.4	3.2	2.2	2.2	2.5	3.4
Oil importers	1,834	751	3.1	2.7	1.8	2.2	2.4	3.2
Oil exporters	456	968	2.8	3.5	3.0	3.0	3.5	3.4
All developing countries	2,290	791	3.1	2.9	2.0	2.3	2.6	3.3
All low-income	1,310	245	1.7	1.7	1.2	1.8	2.1	2.5
All middle-income	980	1,521	3.4	3.1	2.1	2.4	2.7	3.4
Capital-surplus oil exporters	69	4,614	7.3	5.0	2.3	2.3	2.8	2.8
Industrialized countries	671	9,684	3.9	2.4	2.5	2.5	2.8	3.5
Centrally planned economies	1,386	1,720	n.a.	3.8	3.3	3.3	3.3	3.3

Note: More detailed information, including GNP and population growth rates, is in Table SA.1 of the statistical appendix to Part I.

a. Calculated in 1977 dollars.

Compared with the industrialized countries, growth per person in developing countries will be slightly lower. The resultant widening in income disparities occurs primarily because of slow growth in the low-income countries and in the two slowest-growing middle-income groups. Research for this *Report* suggests that average growth per person of about 1.5 percent a year in low-income countries and about 2 percent in middle-income countries is needed to prevent the number of people in absolute poverty from rising. Thus, for these slow-growing groups (except South Asia in the High case) the extent of absolute poverty is likely to increase during the decade.

Policy implications by country categories

Given current policies, growth in oil-importing developing countries, with their total population of 1.8 billion, is likely to be unacceptably low. The steps needed to move toward, or beyond, the High case can be summarized by country group.

- For the oil-importing developing countries, faster growth depends heavily on economic management. This requires efforts to increase exports and investment, and to improve the efficiency with which existing and new investment is used. But increasing their import capacity and their ability to service debt will require buoyant export markets, and more capital from abroad.

- The oil-exporting developing countries can grow rapidly; but they must invest their oil revenues productively in the early part of the decade, and ensure that efficient production is encouraged in the nonoil as well as oil sectors of the economy. This will enhance their creditworthiness for the expanded borrowing needed to

maintain strong growth after 1985.

- The capital-surplus oil exporters can contribute to efficient recycling by expanding their holdings of real and financial foreign assets, by avoiding disruptions in oil supplies or sharp price fluctuations, and by extending more direct financial support—concessional and nonconcessional—to developing countries. And they can help the developing countries to expand foreign earnings by buying more from them and by continuing to provide employment for their migrant workers.

- The industrialized countries can help by avoiding excessive deflation and by promoting technical and policy innovations to overcome structural constraints, thus encouraging a rapid resumption of sustained growth. They will assist developing countries (and themselves) by importing more from them; this requires trade liberalization as well as economic growth. The industrialized countries should reverse the tendency for their aid to fall as a share of GNP and should encourage prudent expansion in lending from their commercial capital markets to developing countries. The low-income countries in particular need more external financial support than is currently in prospect. The richer centrally planned economies also have the capacity to extend considerably more aid to developing countries and to expand trade with them.

What would be required for even faster growth?

It will take the kind of strong efforts discussed above to reach the High case. But that growth is itself low—measured against that of the 1960s and the first part of the 1970s, and by any reasonable expectations for development. Both for the world economy and especially for the

developing countries, the potential exists for substantially faster growth. While the chances of exceeding the High case seem slim, it is important that all countries recognize the advantages—and the feasibility—of higher growth.

What would it require? One important element is more effective adjustment by the industrialized countries, particularly to higher energy costs. Another is a liberal trade environment, with less protection for products in which developing countries have an actual or potential cost advantage (this would help to reduce inflationary pressures). A third is more progress by all countries in producing and conserving energy, and some reasonable assurance that supplies would not be suddenly disrupted. Improvements in efficiency and some further increases in domestic savings in developing countries would also be valuable. Finally, capital flows to developing countries would need to increase substantially. Given increases in developing-country exports (and thus in debt-servicing capacity) and in the efficiency with which capital is used, developing countries would become increasingly attractive customers to commercial lenders. If the industrialized countries grew more rapidly, they would find it easier to provide more aid.

With good progress in all these areas, GNP per person in the developing countries perhaps could grow 4.3 percent a year in the second half of the 1980s (compared with 3.3 percent in the High case). This would mean growth of 3.9 percent a year in the oil-exporting developing countries, 3.6 percent in the low-income oil importers and 4.6 percent in the middle-income oil importers.

Achieving these results would require much more international cooperation than now seems likely. Aid of at least 0.5 percent of in-

dustrialized countries' GNP would be essential; still higher aid flows—approaching the 0.7 percent UN target—would raise growth further and help to reduce disparities between low- and middle-income countries. In addition, economic management would have to improve considerably. International efforts to encourage the steps required to increase growth—including those now being considered as part of the International Development Strategy of the United Nations—are therefore very much to be welcomed.

Broader implications of the projections

Since *World Development Report, 1979* was published, there have been major attempts to advance thinking and policies on development. The OECD study *Facing the Future* (Interfutures) was a result of three years' research on prospects for the global economy. The Independent Commission on International Development Issues (the Brandt Commission) published its findings in *North-South: A Program for Survival*, which called for bold reforms to avoid an otherwise grave future for international economic and political relations. The analysis of the present *Report* strongly endorses the Commission's emphasis on the interdependence—through trade, energy and capital flows—of all countries, as well as its emphasis on the importance of renewed efforts to reduce worldwide poverty.

There has been continuing, intense debate over an appropriate strategy for the Third Development Decade. But all agree on the need to raise the growth of the developing countries.

The advantages of higher growth are striking. To illustrate, Table

Table 2.9 Developing countries' GNP per person, 1980–2000

(1977 dollars)

Country group	1980	1985		1990			2000		
		Low case	High case	Low case	High case	Faster growth	Low case	High case	Faster growth
Low-income									
oil importers	168	177	183	188	206	218	215	261	311
Middle-income									
oil importers	1,275	1,408	1,448	1,585	1,719	1,813	2,009	2,423	2,843
Oil exporters	753	873	896	1,012	1,058	1,085	1,360	1,475	1,591
All developing countries	615	679	702	761	825	866	955	1,139	1,320

2.9 shows what would happen to GNP per person if the faster (than High-case) growth mentioned above could be achieved. Developing-country growth of about 1.9 percent above the Low case (and 0.9 percent above the High case) would start in 1985 and be maintained until the end of the century. The difference in growth may not seem large, but by 1990 for all developing countries it makes a difference of more than a seventh. By the end of the century, average real incomes with the faster growth would be almost two-fifths above those in the Low case and one-sixth above those in the High. And it is only with this sharp acceleration that growth of income per person in developing countries would match that of the industrial countries.

What does this growth mean for people's lives? The same method for estimating the link between income growth and poverty reduction used in the previous two *World Development Reports* suggests the following effects. In 1980 the number of people with incomes below the absolute poverty line is approximately 780 million. With the Low case this number would actually increase over the next decade to 800 million; in the High case it would fall slightly, to 720 million. If it were possible to achieve the faster growth mentioned, the number could fall sharply—to 590

million. The difference—reducing the number of people in poverty by between 60 million and 190 million during the next 10 years—is a powerful reminder of the benefits of higher growth. And as discussed in Chapters 4 and 5, growth in incomes is also vital for better nutrition, health and education, as well as for lower fertility.

The challenge of the decade

The world will reap great benefits from rapid growth. Without it, hundreds of millions of very poor people will live and die with little or no improvement in their lot. Many developing countries will find it hard to maintain political stability.

The developing countries face formidable obstacles on the way to rapid growth—many of which they will have to overcome themselves. But through their policies on trade, aid and other capital flows, the industrialized countries and the capital-surplus oil exporters have a striking impact on how much the developing countries can accomplish. Much will depend on the degree of international cooperation—which at present threatens to fall short of what is needed. For poverty, growth and political stability, the implications of the Low case—itsself not the worst possible outcome—show that the world can ill afford such failures.

3 International problems and policies

The analysis in Chapter 2 has emphasized that the international economic outlook poses particularly difficult choices for policymakers in the 1980s. A sustained recovery of the world economy from the slowdown expected in the next few years will depend largely on the policies pursued in the three areas of international concern discussed in this chapter—energy, trade and capital flows. Particular attention is paid to policies aimed at ensuring that current account deficits are financed—and over time reduced—with minimal loss in the growth of developing countries. Where projections are given, they are consistent with the High case described in Chapter 2, but the specific policy issues discussed here are not related to any particular set of projections.

Energy

Recent increases in petroleum prices (Figure 3.1) have ensured that the economic impact of energy will remain a central concern of policymakers everywhere. Their past concern, however, has achieved only limited success in producing coordinated energy policies—in part because of the emphasis given to managing immediate balance-of-payments difficulties. While this issue is again important, all economies will also have to adapt to higher energy prices. The long-term outlook is uncertain, but prudent energy policy should assume that real energy prices will

rise for the foreseeable future. Temporary fluctuations aside, what happens to prices will be determined by trends in energy conservation and production: this section considers each in turn, paying particular attention to the position of developing countries.

Conservation

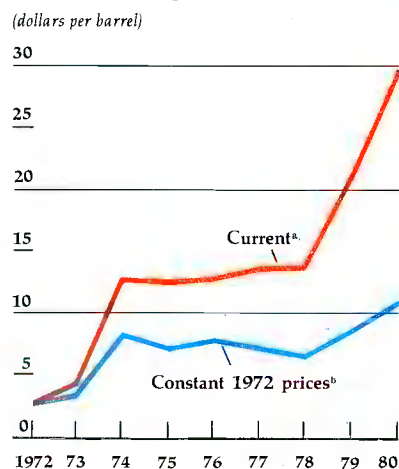
• Industrialized countries. The greatest scope for conservation lies with the industrialized countries; they account for more than half of world energy consumption (and more than a third of production).¹ On average the industrialized countries use about eight times as much commercial energy per person as the middle-income developing countries and more than 40 times as much as the low-income countries. This is partly because they are more industrialized; but their agriculture and households are also more energy-intensive. They have been reducing the ratio of energy use to GNP: between 1973 and 1977 this ratio fell 16 percent in Japan, 13 percent in France, 12 percent in the Federal Republic of Germany, 10 percent in both the United States and Italy, 9 percent in Canada and 7 percent in the United Kingdom. Moreover, Japan and Western Europe have held their absolute volume of petroleum use constant since 1973, and the United States has done so since 1978.

1. The word “energy” means commercial energy unless otherwise specified.

This represents considerable progress, but it is still inadequate. The evidence of the past six years shows that pricing policies (including taxes) have a major role to play in curbing energy demand (and, no less important, in encouraging domestic production). But political difficulties have often inhibited governments from passing higher energy prices through to final consumers. These difficulties have been most acute in the United States and Canada, less so in Europe and Japan.

Solutions need to be found that convey the right price signals to users—and here taxation can help (see box)—and provide incentives to producers. If higher prices mean that existing producers reap large

Figure 3.1 Petroleum prices, annual averages, 1972–80



a. Prices weighted by production shares.
b. Deflated by manufactured export prices.

windfalls, some of their extra profits can be appropriated directly—for example, by a “windfall profits tax” (the US solution) or by a “petroleum revenue tax” (as in the United Kingdom).

- **Developing countries.** Excluding the capital-surplus oil exporters, they account for only about 13 percent of the world’s use of commercial energy (and about 15 percent of production). About half of all the energy produced by low-income oil-importing countries is noncommercial—from wood and dung, for example. As their economies develop, much of this will have to be replaced by commercial energy. Even with appropriate pricing and other conservation measures, the consumption of commercial energy in developing countries is projected to rise more than 80 percent in the 1980s, compared with GNP growth of about 70 percent. (By

contrast, energy consumption in the industrialized countries is projected to rise by just over 30 percent and GNP by about 40 percent.) By 1990 the developing countries’ commercial energy requirements are likely to rise to around 17 percent of world use (See Table SA.2 in the statistical appendix to Part I).

In curbing demand growth, developing countries have experienced many of the same difficulties as industrialized countries—and usually more acutely. Domestic prices—particularly of domestically produced energy—often have not been raised in line with world prices. Until recently, domestic petroleum prices in Indonesia, for example, were less than 40 percent of the world price; Egypt, Ecuador and Venezuela have also underpriced their oil. This is a major reason why energy use in relation to GNP has tended

to grow much faster since 1973 in energy exporters than in energy importers like Brazil and South Korea. Some countries (Brazil, India and Pakistan, for example) have tended to pass on higher prices to domestic users relatively quickly; and others are now moving in the same direction. The alternative subsidizes energy use—thus draining budgets and discouraging conservation.

While there is a natural reluctance to inflict hardship on lower- and middle-income groups by raising energy prices, energy subsidies (if essential) should be reserved for products consumed primarily by poorer people. Even then, care is needed to prevent those products from being diverted to other uses. On grounds of equity or efficiency, there is little justification for subsidizing gasoline and domestic electricity (which in most developing countries are consumed primarily by richer groups), industrial fuels and the energy used by public sector agencies.

Production

- **The oil exporters.** For most major oil exporters, oil is the one reliable source of finance for their development over the medium term (at least 10–20 years). Accordingly, how much oil they produce depends on a variety of factors—such as how much investment their economies can absorb productively and without social disruption; the actual and prospective price of oil; and the (expected) yields on the foreign assets that can be bought with oil revenues.

For the capital-surplus oil exporters, current revenues far exceed immediate investment needs; their oil exports are not expected to expand rapidly. The other oil-exporting developing countries are therefore projected to increase their share of energy trade (see Table

Taxes and energy

Taxation policy has played only a small part in conserving energy in the past six years. Although higher base prices for energy have encouraged more economical use, their effects have been muted because energy taxes have not risen as much. Gasoline provides a good example: while crude oil prices rose three and a half times in real terms between the beginning of 1970 and mid-1979, real gasoline prices in the seven largest industrialized countries rose between 3 percent (Canada) and 37 percent (Italy). As a proportion of the final price, taxes fell in all seven countries (see table).

The sharp rise in oil prices in 1973–74 reduced the relative importance of taxation in every kind of petroleum product; little has been done since to restore it. In the early and mid-1970s, the reluctance of governments to add to inflation often took precedence over conserving energy by raising its price. There is now greater emphasis on conservation (an emphasis strongly endorsed by the major oil producers), with higher prices having a key role to play.

Energy taxation has two other advan-

tages. First, the revenues can be used to mitigate the overall effects on the cost of living (through subsidies, for example, or increased transfer payments). Second, taxes can be varied so as to cushion the shock of sudden increases in oil prices. Higher prices can be passed on in full over a period—but smoothly, with taxes sometimes rising more than oil prices, sometimes less. This could reduce uncertainty and assist energy planning by households and firms.

Effective rates of gasoline taxation, 1970 and 1979

Country	Gasoline tax as percentage of pretax price	
	1970	1979
Canada	82	48
France	290	180
Germany, Federal Republic of	264	126
Italy	364	209
Japan	142	72
United Kingdom	257	47
United States	44	18

Table 3.1 Shares of net world trade in commercial energy, 1977–90 (High case)
(percent)

Country group	Estimated		Projected	
	1977	1980	1985	1990
<i>Share of exports</i>				
Capital-surplus oil exporters	70	64	63	65
Oil-exporting developing countries	23	28	31	33
Centrally planned economies	7	8	6	2
Total	100	100	100	100
<i>Share of imports</i>				
Industrialized countries	79	78	77	73
Oil-importing developing countries	21	22	23	27
Total	100	100	100	100
<i>Memo item</i>				
Volume of total net trade (millions of barrels per day)	33.9	30.2	32.8	34.0
Of which bunkers and other ^a	4.6	4.6	5.8	6.5

a. These imports are not allocated to country groups.

3.1). This will require increased investment in exploration and exploitation; yet spending on exploration and the ratio of proven reserves to production are declining in some countries, while the domestic consumption of oil is rising in all.

Both oil exporters and importers share a common interest in ensuring that oil price rises and supplies do not change sharply or unpredictably. Steady changes would help investment planning and financial management in the importing countries; and all countries stand to gain from a stronger, more stable world economy.

- New supplies of energy. In 1974 producers and governments may have doubted that real oil prices would be maintained, so there was less pressure to commit the funds needed to develop alternative energy supplies. Today such doubts have disappeared. But considerable uncertainty remains about the returns from developing some potential alternatives to oil; and energy projects take many years to come on stream, and require large capital outlays. The projections in Figure 3.2 (and Table SA.3) take a positive view

of what can be achieved. With strong efforts to develop these alternatives, the share of petroleum in the world supply of primary commercial energy could fall from 46 percent in 1980 to 38 percent in 1990; by contrast, its share fell by only two percentage points between 1970 and 1980.

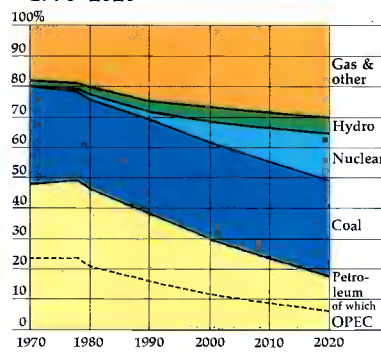
In addition to raising the profitability of developing domestic petroleum and other conventional sources of energy, higher oil prices stimulate research into new ways of producing, converting and using energy of all kinds. Many alternative sources are still in their technical and economic infancy, while

others—notably nuclear power—face opposition on environmental grounds. This is an important source of uncertainty about production prospects, particularly over the long-term; but in the next 5–10 years production will be determined mainly by projects now in the pipeline. For technological and financial reasons, the development of supplies of new energy to the stage of commercial production is mainly a task for the industrialized countries. How it is achieved will also influence the prospects for energy production in developing countries, considered in the rest of this section.

- Developing countries' energy production. Since 1973 several countries (including Cameroon, Ghana, Guatemala, Ivory Coast and the Philippines) have started producing petroleum; existing producers (such as India, Malaysia and—strikingly so—Mexico) have expanded capacity. Although exploration generally has been inadequate, discoveries of exploitable oil and gas deposits have been made (for example, in Chad, Pakistan, Tanzania and Thailand). Several developing countries (including India, Turkey, South Korea and the Philippines) have expanded coal and lignite production; others (among them Argentina, Brazil, Cameroon, Ivory Coast, Uruguay and Sri Lanka) have taken measures to increase hydroelectricity output; a few (most notably Indonesia and the Philippines) are tapping significant geothermal sources; and Brazil leads the world in producing alcohol fuel for automobiles.

In the 1980s progress should accelerate—but will require large increases in investment. The main gains are likely to be in petroleum and natural gas, coal, and primary (other than thermal) electricity generation—mainly hydro and nuclear. But much also needs to

Figure 3.2 Actual & projected shares in world primary energy supply, 1970–2020



be done to increase the supplies of the kinds of energy that are particularly important for poor people.

- **Petroleum and natural gas.** While the oil-importing developing countries have only about 2 percent of the world's proven oil reserves, their share of ultimately recoverable oil reserves may be 15 percent. One study (undertaken for the World Bank) estimated that 23 of 70 countries surveyed each might have ultimately recoverable reserves of at least 750 million barrels. (For comparison, net imports of oil for energy use by developing countries will amount to about 110 million barrels in 1980.) To realize their full potential, most countries must step up exploration activities; the same study judged that exploration was inadequate in 51 of 58 countries that were not producers.

Gas is widely spread; many countries can significantly expand production—both for domestic energy use and for petrochemicals—during the decade. A lot of gas associated with oil production is now wasted by venting or flaring; much of it could be recovered.

- **Coal.** For most developing countries, coal is still a minor fuel used mainly in electricity generation and—in larger coal producers (such as India, Turkey, South Korea and Yugoslavia)—in industrial applications. Coal can substitute for oil in electricity generation, but the potential for increased use is limited largely to new capacity—since converting existing plants is often uneconomic.

- **Primary electricity.** Two-thirds of the electricity generated in developing countries is used in industry (compared with 40 percent in the industrialized countries). Hydro-power, currently accounting for 44 percent of electricity output, can be greatly expanded in many developing countries—particularly in

Latin America. Despite considerable geothermal potential in up to 30 developing countries—among them Kenya, Mexico, El Salvador, Nicaragua and the Philippines—geothermal capacity will produce relatively little electricity in the 1980s. But nuclear power could produce 11 percent of the total by 1990 (2 percent in 1980)—mainly in the major existing producers (Argentina, Brazil, India, South Korea and Pakistan) but in other countries as well (for example, Romania, Thailand, Yugoslavia and the Philippines).

- **Other sources.** Any significant increase in the production of oil from tar sands in developing countries depends on a major technological breakthrough. Solar and windpower are also unlikely

to make much of a contribution over the next 10 years; shale oil and methanol have rather more potential. Alcohol produced from biomass (cereals, sugarcane, beets and so on) is now used as a partial substitute for gasoline. The technology for producing it is well established. A key question is the extent to which agricultural land should be diverted from food to fuel production (see box).

- **Energy for the poor.** The poor, especially those in rural areas, rely on noncommercial energy for cooking and heating; these forms of energy provide more than 85 percent of rural requirements in many countries. Yet their supplies are dwindling, thus inflicting several sorts of hardship. Much time is spent just in gathering fuel (for

Fuel from food

Alcohol produced from sugarcane or grains is becoming competitive with gasoline as real petroleum prices rise. Conventional automobiles and trucks can run on "gasohol," a mixture of alcohol and (at least 80 percent) gasoline. With engine modifications, they could run on pure alcohol; such engines are already being produced in Brazil. By 1977 the estimated national ratio of alcohol to gasoline use in Brazil was 4.3 percent; in 1979 it had risen to 19 percent, and will rise further as more cars run on pure alcohol.

Brazil's alcohol is still derived almost exclusively from sugarcane, but alcohol can be produced from a variety of crops. Ethanol, the cheapest alternative to gasoline in the 1980s, comes from fermenting sugar crops, principally sugarcane; root crops, mainly cassava; and cereals, especially corn and potentially sorghum. The United States also has ambitious plans for producing alcohol fuel, primarily from corn. The US target of 2 billion gallons of ethanol by 1985 would require 20 million tons of corn or its equivalent, one fifth of the current US exportable grain surplus. And other food exporters (including Argentina, Australia, New Zealand, the Philippines and South Africa) either have already launched

or have the potential for large "gasohol" programs.

This development could indirectly affect the availability and price of food for developing countries that either import grain on commercial terms or depend on international food aid to meet their deficits. Current plans in Brazil and the United States envisage that the area of cultivated land would be expanded to grow fuel crops, so that food production (and therefore price) is not significantly affected. In practice these goals may not be fully achievable.

Whether ethanol proves economic in other countries will depend on land availability, markets and prices for food exports, and the development of such alternative sources as wood, sorghum and agricultural waste. In the next five years or so, the quantity of agricultural production diverted into alcohol is likely to be small (with the exception of Brazil and the United States). But as more countries consider ways of reducing petroleum import costs, the "food or fuel" issue may become more serious. A satisfactory solution will require a major effort to develop alternative biomass sources of energy, including crops that can be grown economically on marginal land.

example, 5 to 19 work days a month for each family in upland Nepal); often the gatherers are children who might otherwise be in school. In many countries (including the entire Sahelian belt from Senegal to Somalia) forest land is being turned into desert. This pernicious process would be (at least partially) arrested if affordable energy were made available. As well as this, burning dung and vegetation carries health risks, and every year deprives the soil of enough fertilizer to produce 20 million tons of grain—enough to feed 100 million people.

Although there are no easy solutions to these energy problems, the essential policy initiatives remain as described in last year's *World Development Report*. Existing forests must be husbanded, new ones planted. Roughly 50 million hectares (125 million acres) of fuelwood planting may be required by the year 2000 to meet domestic needs for cooking and heating in developing countries. Their present rate of afforestation is less than a tenth of what is needed to ensure self-sufficiency in fuelwood by then. More efficient ways of burning wood (for example, improved stoves) can help; but new technologies need to be devised to use the sun, the wind and other renewable energy sources. And better use should be made of other traditional fuels (for example, through biogas generation, which does not destroy the fertilizer value of animal wastes).

The need for energy strategies

In the developing countries, national and regional planning is urgently needed to evaluate fuel minerals and other energy sources, to examine conventional and new technologies, and to assess the likely trends in demand for commercial and non-commercial energy.

But many countries do not have

formal energy strategies and adequate sector plans. Planning continues to be hampered by lack of essential data on fuel deposits, on consumption patterns and on how energy demand and supply are likely to respond to income and price changes. Geological and geophysical surveys and detailed market studies are still required before effective planning can take place. Many countries also lack some of the technical and managerial skills required to undertake the preliminary studies, draw up an energy plan and oversee the exploitation of domestic energy resources.

Countries facing these constraints can benefit from external capital and technical assistance. Although some assistance has been provided already (for example, by the UNDP and the World Bank), there is scope for considerable expansion of these activities.

International trade

International trade has been emphasized in previous *World Development Reports* for two reasons: first, trade is a principal means of promoting economic efficiency and growth; second, a strong trade base tends to be a prerequisite for attracting foreign capital. Given the world economic outlook, these benefits acquire added significance; but two policy questions stand out.

- What developments in world trade (and the resulting effects on the distribution of payments deficits) will contribute most to rapid growth?

- With a less buoyant outlook for world trade, do developing countries face a changed tradeoff between producing for the foreign or for the domestic market?

The first question turns mainly on the policies of the industrial and oil-exporting countries: they

are discussed first. The second question is largely a matter for developing countries: their policies are considered in the second part of this section.

Trade policy for industrialized countries

Most industrialized countries will run current account deficits in 1980. How they respond to these deficits will largely determine the climate for world trade. If they all simultaneously attempt to restrain imports while boosting exports, shrinking markets for each others' exports will defeat their purpose, and world trade and output will suffer—as happened in acute form in the 1930s.

After the 1973–74 oil price rises, some of the major trading nations (especially Japan and the Federal Republic of Germany) acted quickly to reverse the deterioration in their trade accounts. They were able to do so because some industrialized countries (notably the United States) and most developing countries financed much larger current account deficits, and because surpluses of the major oil-exporting countries were quickly reduced. Avoiding an excessive slowdown in world trade and output in the early 1980s requires that industrialized countries, as a group, run larger deficits—and for longer.

The countries best placed to run large deficits and thereby support growth are those with the capacity to borrow heavily (or run down reserves)—and those with the lowest inflation, since deflationary policies aimed at curbing inflation will tend to moderate demand for imports. Industrialized countries that restrain domestic growth to control inflation should minimize the effect on world trade by maintaining their demand for imports and avoiding beggar-thy-neighbor support for exports. They can do this by refraining from deliberate

exchange-rate depreciation, by avoiding subsidies to exporters and by opening their markets to imports.

Each of these policies will also serve to dampen inflation. Without them, the industrialized countries will find that the developing world cannot maintain its growth—or its demand for their exports.

- The outlook for exports. The sluggish demand from the industrialized countries expected in the early 1980s will harm developing countries' exports—particularly of primary commodities—as it did during 1973–77. The growth of developing countries' exports decelerated sharply in that period; their exports of primary commodities fell after growing at around 4 percent a year in 1963–73 (see Figure 3.3). Even excluding fuels, primary commodities account for about 55

percent of the merchandise exports of developing countries and they have grown roughly in line with the industrialized countries' GNP.

There is no reason to expect this relation to change, especially as exports of some agricultural products remain constrained by heavy protection in Japan and Western Europe. Even if demand were to grow rapidly, the developing countries may not be able to expand the volume of their agricultural exports very much (because of supply constraints), though they would benefit considerably from higher prices. In the short-term, most primary producers would be assisted by improved schemes to stabilize revenues or prices (see box overleaf). If the industrialized economies begin to pick up, there would be a recovery in demand for primary products.

The outlook for manufactured exports is much brighter; as in 1973–77, their growth is likely to be comparatively robust. At present, they account for only about 10 percent of the imports (and less than 2 percent of the consumption) of manufactured goods in the industrialized countries. But they are concentrated heavily in some products, and therefore have attracted protectionist attention. The developing countries most directly affected by protection have been the more successful exporters (particularly the major East Asian exporters of manufactures and Brazil); but they have continued to expand their exports rapidly by diversifying into new product lines. Current restrictions on items other than textiles and clothing are not (with some minor exceptions) an insuperable barrier to rapid export growth.

Harder to assess (but clearly important) is the longer-term disincen- tive—from both current restrictions and risks of their expansion—to countries at earlier stages of export development. Generally, they do not

have the manufacturing and market- ing skills required either to export a wide range of manufactures or to adapt quickly to changes in market conditions.

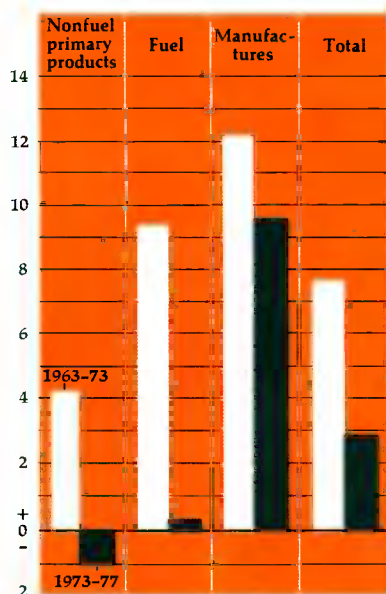
While no new major restrictions were imposed in the past year, some measures were consolidated. In some sectors (particularly textiles and clothing) elaborate mechanisms to control imports have become more entrenched, reducing the chances of their early removal. In some industrialized countries, imports of footwear and some consumer electronic goods are still subject to fairly stringent quotas. In shipbuilding, although substantial subsidies remain, there has been progress recently in cutting capacity in uncompetitive countries. France and the United Kingdom, in particular, have taken steps to reduce general subsidies to industry.

- The Tokyo round. The latest (Tokyo) round of multilateral trade negotiations (MTN) was largely completed in April 1979; it made valuable progress in some areas (see box on page 21); in some others, the results were a disappointment for the developing countries. Nonetheless, the MTN agreements have considerable potential to liberalize trade.

The extent to which this potential is realized, especially by develop- ing countries, will depend on how the agreements are implemented and on the outcome of continuing negotiations—the most important of which pertain to the safeguard clause. This attempts to limit the emergency protection that can be adopted on the grounds of serious injury to domestic industry. Safe- guard measures have been invoked frequently against imports from developing countries (often out- side the legal framework of the General Agreement on Tariffs and Trade—GATT). The main dis- pute holding up agreement is

Figure 3.3 Growth of developing countries' merchandise exports, 1963–73 and 1973–77^a

(average annual percentage change, 1970 prices)



a. Excludes exports to centrally planned economies (about 7 percent of developing-country exports in 1977). Country groups correspond to UN classification. Developing countries include capital-surplus oil exporters and exclude South Africa and most of southern Europe.

Stabilizing export earnings

Two international facilities already exist to help stabilize the export earnings of developing countries.

- The IMF's compensatory financing facility. A country in balance-of-payments difficulty is eligible to draw up to 100 percent of its quota, if exports fall below a defined trend for reasons generally beyond its control. After the facility was liberalized in December 1975, drawings by members rose sharply. Compared with 57 drawings totaling SDR 1.2 billion (about \$1.3 billion) in 1963-75, 107 drawings totaling SDR 4 billion (\$4.9 billion) were made from January 1976 to March 1980—accounting for nearly a third of the total credit extended by the IMF to all its members.

The scheme has several advantages: (a) it applies to exports in general—even receipts from tourism and workers' remittances qualify for support if data are available; (b) drawings are not at the expense of other rights to draw on IMF resources; and (c) potential access is now large—about \$16 billion for oil-importing developing countries once the seventh general review of quotas takes effect. But there are disadvantages too: because the amount a country can borrow is determined by its quota, it may be relatively little for countries (such as Zambia) that are heavily dependent on a single commodity export with sharply fluctuating prices. And it provides no compensation for a sharp increase in import requirements (for example, if a harvest fails)—which can be equally unpredictable and outside a member's control. (The IMF is studying the possibility of giving assistance to members adversely affected by higher costs for food imports.)

- The European Community's Stabex scheme. It covers the 58 African, Caribbean and Pacific (ACP) countries that are members of the Lomé agreement; 12 primary products were covered at the outset, 44 are eligible for support under Lomé 2. Proposed funding for Stabex in Lomé 2 is \$775 million for 1980-85,

compared with \$575 for Lomé 1.

There are some minor reforms in the new agreement but the principles remain the same. To qualify for support, a commodity must have accounted for at least 6.5 percent (7.5 percent under the old agreement) of a country's total exports to all destinations in the preceding year, or 2.0 percent (2.5 percent previously) for the 44 ACP members that are least developed, landlocked or islands. A Stabex transfer can be made if export earnings of a qualifying product fall below its average earnings over the four preceding years by 6.5 percent or more (2.0 percent for the 44 special cases)—down from 7.5 and 2.5 percent under the old agreement.

Stabex transfers to the 35 least-developed countries are grants; to other countries they are interest-free loans, to be repaid over seven years with two years' grace. Under Lomé 2 a related but different facility for minerals will also be introduced. A major advantage for ACP countries receiving payments is that Stabex offers "untied" foreign exchange on concessionary terms. But it is small, does not fully cover earnings losses resulting from inflation, and is not as automatic as its (complex) rules suggest.

In addition, there is the UNCTAD Common Fund—agreed upon in principle, but with legal and technical questions still to be resolved. The original proposal was for a fund of \$6 billion—\$4.5 billion to stabilize 10 "core" commodities, with a "second window" of \$1.5 billion for other measures (product diversification, research and processing). The idea is that a central fund would finance buffer stocks under separate international commodity agreements (ICAs), and would thereby stabilize commodities prices. The current proposal is for \$400 million for buffer-stock financing (from member governments and deposits by ICAs) and a second window of \$350 million from voluntary contributions (by April 1980, \$170 million had been pledged).

whether safeguard measures can be invoked selectively against specific countries—an approach favored by some industrialized countries but opposed by developing countries.

If developing countries sign (and

actively participate in) the Tokyo agreements, they are likely to add significantly to the benefits they obtain from it. Under its terms, only signatories can participate in the implementation and surveillance of the governing codes of

conduct. But most developing countries so far have refused to sign—partly because of dissatisfaction with the progress made and partly because they maintain that they should benefit from the codes without being bound by their provisions.

The reciprocal obligations of developing countries are a sensitive issue that will be increasingly important in future negotiations. In particular, the status of those developing countries that are major exporters of manufactures and are reaching a more advanced stage of development ("the graduates") is unresolved. If their eligibility for special treatment were reduced, there would be more scope for the lower-income countries to benefit.

The extent of the gains from the MTN nevertheless depends mainly on the industrialized countries. Stagnation or slow growth of their economies reduces alternative employment opportunities for displaced workers, and aggravates protectionist sentiment. (There is in fact no evidence that competition from developing countries is a major cause of unemployment. Several studies have shown that a balanced increase in trade with developing countries has insignificant effects on employment in industrialized countries, especially as compared with the job losses due to technological change; other studies show employment gains for some countries.)

In turn, protection impedes economic recovery by slowing the movement of resources from low- to high-productivity sectors, thus exacerbating inflation. And imports can reduce inflation directly, restraining the price rises that domestic producers seek and increasing the pressure on them to improve efficiency. A 1978 survey in the United States of all consumer goods (except food and automobiles) found that imports from

Table 3.2 World merchandise trade, by country group, 1970 and 1977
(percent)

Origin	Destination								World ^a
	Oil-importing developing countries		Oil-exporting developing countries		Capital-surplus oil exporters		Industrialized countries		
	1970	1977	1970	1977	1970	1977	1970	1977	
Oil-importing developing countries	17.4	20.5	3.5	8.4	1.5	3.1	69.0	61.8	100.0
Oil-exporting developing countries	21.8	21.5	3.9	2.2	0.5	0.8	66.6	72.6	100.0
Capital-surplus oil exporters	20.2	20.6	1.7	4.3	0.8	1.2	74.4	69.6	100.0
Industrialized countries	18.2	16.4	4.7	6.7	1.5	5.6	71.0	65.7	100.0
World ^a	18.0	16.9	4.1	6.1	1.3	4.3	65.4	62.2	100.0

a. Includes centrally planned economies and unallocated trade (usually about 1 percent).

Asia and Latin America were on average 16 percent cheaper than domestic products of similar quality.

Pressures for protection can be offset by policies to improve productivity within particular industries and to ease the movement of resources between indus-

tries. Policies to improve mobility were discussed at length in last year's *World Development Report*. These include quick and adequate compensation for affected individuals, retraining schemes and the creation of new industries, and removing obstacles to labor mobility, such as nontransferable pension

rights. These measures complement efforts to raise employment and growth and to reduce inflation. But if adjustment policies are not properly designed and implemented, they can delay rather than assist restructuring.

Trade issues for capital-surplus oil exporters

After the 1973-74 oil price increases the oil-exporting countries rapidly expanded their imports—thereby moderating the world economic slowdown. The imports of the capital-surplus countries are unlikely to grow in the 1980s at the extraordinary rate (more than 20 percent a year) of the 1970s; but they are expected to grow almost twice as fast as the imports of the industrialized countries (9 percent a year compared with 5 percent). This will offer buoyant opportunities for exporters in developing countries—but within limits, since the oil-exporters' market is still relatively small (see Table 3.2).

Multilateral trade negotiations: the Tokyo round

Several novel features are contained in the MTN agreements, including the incorporation of preferential treatment for developing countries into the legal framework governing trade and codes on nontariff barriers. But they largely exclude existing quantitative restrictions on textiles, clothing and agriculture.

Tariffs. Industrialized countries are to reduce tariffs 38 percent (simple average) over eight years, affecting trade worth about \$125 billion (1976 values). The simple-average tariff cut on developing countries' traditional exports would amount to 25 percent for industrial and 7 percent for agricultural products. The tariff reductions are less than average on products eligible for the generalized system of preferences; they are larger on finished manufactures than on semi-manufactures.

Nontariff barriers. The aims are as follows:

- To prevent increases in protection arising from use of arbitrarily determined customs values as a base for tariffs.

- To reduce discrimination against foreign suppliers for government contracts valued at SDR150,000 (about \$200,000) or more.

- To regulate export subsidies and, for countervailing duties, to require proof that subsidized imports caused material injury to the domestic industry in question.

- To ensure that technical regulations adopted for such reasons as health or environmental protection do not create unnecessary obstacles to trade.

- To prevent procedures for import licensing from constituting barriers to trade.

Framework for conduct of trade. This reforms several aspects of the GATT system. Its main features are: providing a legal basis within GATT for preferential treatment of developing countries, and special treatment of the least-developed countries; increasing the regulation of trade measures adopted for balance-of-payments purposes; recognizing the developing countries' need to take safeguard action not only for new industries

but also for modifying their production structure; revising GATT procedures for supervising adherence to international rules.

Others. Antidumping measures and restrictions on trade in dairy and certain meat products were amended.

Provisions for developing countries. Aside from the framework agreement, special provisions include:

- A five-year delay in implementing the customs code, and longer exemptions for certain goods.

- Fewer entities to be covered by the government procurement code; and technical assistance for tendering bids.

- Delays of up to two years in applying the import-licensing code.

- Export subsidies to nonagricultural products are not flatly prohibited; but developing countries should avoid using subsidies to harm the interest of trading partners, and phase them out gradually.

Aside from the safeguards clause, the areas of continuing negotiations are commercial counterfeiting, adequate access to vital imports and restrictions on agricultural trade.

Migration and money

Emigration once played a crucial role in reducing poverty in Western Europe: about 50 million people are estimated to have left for the "new world" in the second half of the 19th century. Whole families moved then, for good. Today many of the migrants are male workers who go abroad for a period and send much of their earnings home. Many of them are illegal; some of their remittances go unrecorded or enter official balance-of-payments accounts in ways that make it hard to disentangle them from other flows.

While estimates are imprecise, the broad picture is clear. There were roughly 20 million migrant workers in the world in the late 1970s, of whom 12 million were from developing countries. Some 6 million were in the United States (mostly Mexicans); 5 million in Western Europe; and 3 million in the Middle East (other main destinations include the West African coast and the mines of South Africa). The number in Western Europe increased from 2 million in the early 1960s to 6 million in the early 1970s and then declined, but this was more than offset by an upsurge in migration to the oil-rich countries of the Middle East. More than 2 million of the migrant workers in Europe are from developing countries (mainly Algeria, Morocco, Tunisia, Turkey and Yugoslavia); in the Middle East about 2 million come from

other countries of the region, most of the other 1 million from South Asia.

Remittances to developing countries have grown rapidly, from about \$3 billion in 1970 to an estimated \$17.5 billion in 1980, with more than \$3 billion going to South Asia, about \$5 billion to the Middle East and North Africa and close to \$7 billion to Southern Europe. Remittances are about a fifth as large as merchandise exports in South Asia, and in the Middle East and North Africa (excluding the capital-surplus countries). The proportion is especially high in Pakistan, Bangladesh, Jordan, Egypt, Morocco and the two Yemens. Other countries where remittances are particularly important include India, Turkey, Greece and Yugoslavia.

There has been controversy over the net benefits to developing countries when skilled people emigrate. The "brain drain" represents a serious loss of manpower for some countries, and there are social costs as well. But governments can often take steps to encourage vocational education and training to meet a demand for skills—in order to increase remittances while retaining enough trained people within their countries. In any event, most of the objections apply less strongly to the unskilled or semiskilled, the majority of migrant workers; for them, migration offers a chance of dramatic improvement in their often meager incomes.

The share of the oil-importing developing countries' exports going to both the capital-surplus and other oil-exporting developing countries increased sharply between 1970 and 1977 (Table 3.2)—exports to each group grew at annual rates exceeding 20 percent. Some developing countries (including South Korea and India) have won major contracts for "turn-key" plants and for construction and consultancy services; these areas offer many export opportunities.

Remittances from migrant workers in the oil-rich states have boosted the foreign exchange earnings of some developing countries considerably (see box above). Labor shortages remain

a significant constraint on growth for several oil-exporting countries. But migration raises sensitive social and political issues for countries of origin and destination; if investment programs in the capital-surplus oil exporters are more conservative and slow growth persists in the industrialized countries, migration is likely to grow less rapidly in the 1980s.

Trade policy for developing countries

Slower growth in world trade does not change the principles that should govern the trade policies of developing countries. Generally, the policies that maximize benefits from trade in good times will also maximize them in bad. But the likely

slowdown in trade poses markedly different policy problems for oil-exporting and oil-importing developing countries. As discussed in *World Development Report, 1979*, the main trade issue for oil exporters is to prevent their sharply increased foreign earnings from discouraging growth of other exports and import substitutes.

For oil-importing developing countries, the likelihood of a difficult external environment—rising oil prices and slower growth in world trade and capital flows—increases the urgency of taking steps to earn and save foreign exchange through export promotion and import substitution. The unfavorable environment makes it harder for the developing countries to achieve rapid export growth but makes it more important to do so. Also of great importance are efforts to reduce the import requirements of their overall growth strategies—by some combination of curbing nonessential imports, shifting production toward less import-intensive items and replacing more imports by domestic production.

BALANCE BETWEEN EXPORT PROMOTION AND IMPORT SUBSTITUTION. Several factors indicate caution in emphasizing import substitution.

- Most developing countries now have trade policies that are heavily biased toward import substitution at the expense of exports. These biases commonly result from excessive reliance on quotas and administrative controls, and indiscriminate use of tariffs. Frequently such policies have been introduced in response to temporary balance-of-payments crises but then maintained for long periods. They result in misallocated resources and create a constituency for retaining protection. Reducing the general bias toward import substitution should therefore continue to be of high priority.

- Inward-looking policies may prevent developing countries from taking advantage of the considerable export opportunities that will exist in the industrialized countries even if their growth slows, and may also retard the growth of developing countries' trade with each other.

- World trade could recover strongly by the mid-1980s—and

experience (particularly in the 1950s) illustrates the costs of excessive export pessimism, both in terms of lower import capacity and inefficiency in highly protected industries.

- Pricing and other policies that encourage efficient export growth encourage efficient import substitution as well.

Emphasis on selective import

substitution can, however, help growth. Many countries have unexploited opportunities for import substitution through the production of energy (see pages 16-17) and food (see box). And in most countries—including South Korea, for example—it played an important role in initiating industrialization. But South Korea, unlike many countries, eliminated

Food, farming and foreign exchange

Before 1939 only Western Europe among the world's regions was a net importer of grains. Today only North America and Oceania are not. Trade in grains has risen from 25 million tons in the late 1930s to 181 million tons in 1979—from 4 percent of global production to 14 percent. North America now accounts for 20 percent of world grain production and 80 percent of world grain trade.

The largest rise in net imports since the early 1960s has been in the middle-income developing countries—from 13 percent to 23 percent of their consumption (see table). Of the low-income countries, there has also been a sharp rise in Sub-Saharan Africa. In 1980 food and beverage imports are estimated to be \$7.7 billion in low-income countries (17 percent of their merchandise imports) and more than \$36 billion in middle-income countries (9 percent). Historically, a 10 percent increase in average incomes has led to a 7 percent increase in grain imports in developing countries.

The growth of imports has placed severe pressure on the grain handling and distribution systems of developing countries (when domestic production is included, their marketing and distribution capacity is today handling roughly four times the tonnage of only 20 years ago). In times of food shortfalls, distributional bottlenecks are often a more important constraint than the ability to procure imports. Both these constraints argue for a measure of self-sufficiency in food but within limits: the earnings forgone as a result of diversion of resources from other agricultural (or nonagricultural) investment can be substantial. Increased food production should be part of a broad-based effort to stimulate agriculture.

From 1955 to 1975 more than 150 million hectares of new farmland were

brought into production in developing countries (more than the acreage devoted to cereals in the United States, Canada, the EEC and Japan combined). But this expansion has slowed since the mid-1960s, and it can be expected to account for no more than a quarter of incremental food production in the 1980s.

Hence the importance of increasing yields. Typical constraints include: undue emphasis on large-scale irrigation at the expense of smaller projects; wasteful use of water; inadequate support for research and extension; and pricing policies that discriminate against agriculture. Several countries went a long way to removing these constraints during the 1970s. India is a good example. In the early 1970s prices to farmers were raised, and there was increased emphasis on small-scale irrigation and agricultural extension. Helped by good weather, these policies contributed to record grain crops in 1977-78 and 1978-79; in 1979-

80, when the country experienced one of its worst droughts, output fell 8 to 9 percent—but the crop was still the third largest ever (some 20 percent bigger than in 1973-74, when there was a comparable drought).

Water may become a critical constraint in agriculture in the next 25 years. Over the past 50 years the area under irrigation has trebled. Costs of irrigation have risen far more rapidly than water charges generally; the result is inefficient use and a lack of funds for maintaining and operating irrigation systems. Water wastage is immense: in many parts of the world only 25 percent of water released from dams is used to grow crops. Improved management of water systems would result in major increases in grain production. But for large parts of the world and many of the world's poorest people, the key to greater food production lies in a breakthrough in dryland farming (see Chapter 4, page 37).

Grain consumption and trade

(millions of tonnes)

Country or country group	Average annual consumption ^a		Average annual net trade balance ^a	
	1960-63	1977-79	1960-63	1977-79
United States	139.8	173.5	32.7	94.9
Canada	15.1	22.5	10.2	17.7
EEC	92.0	118.3	-21.5	-8.0
Other	50.3	83.6	-3.0	-18.5
Eastern Europe	64.3	106.5	-6.4	-12.4
USSR	119.0	217.6	7.3	-17.9
China	112.3	225.2	-4.0	-8.7
Developing countries ^b	254.1	427.3	-11.1	-36.0
Low-income	139.3	214.0	-5.6	-8.7
India	73.1	109.4	-4.1	-1.3
Middle-income	101.3	191.8	-12.7	-44.7
Major exporters ^c	13.5	21.5	7.2	17.4

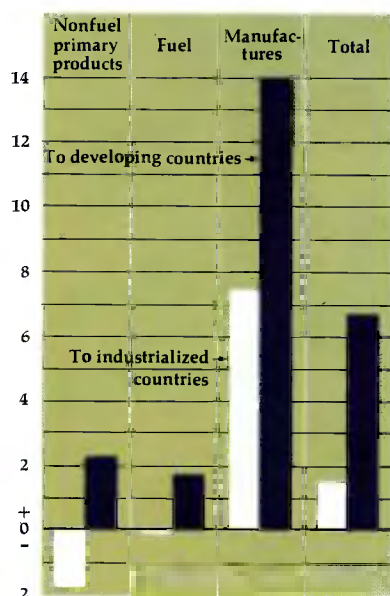
a. Excludes Albania, Cuba, Mongolia and Southern Africa (South Africa, Lesotho and Zimbabwe).

b. Includes capital-surplus oil exporters and excludes Southern Europe (Greece, Portugal, Yugoslavia, Romania and Israel).

c. Thailand and Argentina.

Figure 3.4 Growth of developing countries' merchandise exports, by destination, 1973-77^a

(average annual percentage change, 1970 prices)



a. Country groups correspond to UN classification. Developing countries include capital-surplus oil exporters; industrialized countries include South Africa and most of Southern Europe.

the bias in favor of producing for the domestic market at an early stage of industrialization. That resulted both in a surge of export-led growth and in rapid and efficient growth in production for the domestic market—illustrating the strong underlying complementarities between the two.

SOME POSSIBILITIES FOR EXPANDING EXPORTS. The industrialized countries' market for finished manufactures offers developing countries the biggest scope for expanding exports. But they have opportunities for raising exports in other areas as well.

- **Processed primary products.** Primary producers face more serious export constraints than countries exporting manufactures. For many of them, processing their primary products offers a way of increasing the value of export

earnings. For some primary products, the potential gains from increased processing can be exaggerated: some stages of processing certain commodities (for example, nickel and bauxite) are highly capital- or energy-intensive; others (for example, some edible oils) can cost less to transport in their unprocessed form. This does not necessarily mean that such processing activities are unsuitable for a developing country, but in these cases a more careful evaluation of the costs and benefits is required.

The decision to do more processing, however, is seldom in the hands of developing countries alone. The tariff structures of industrialized countries typically impose low (or no) duties for unprocessed primary products; but in many cases these rise progressively with the degree of processing (often to high levels). Unfortunately, this protects advanced stages of processing in the importing countries and inhibits exports of processed products from developing countries. Another brake on processing is that transport charges for processed products, where set by "conferences" of shipping firms, may not reflect genuine differences in the costs of carrying processed rather than raw materials. The location of processing activities is also influenced by the policies of transnational corporations.

- **Trade between developing countries.** Recent growth in "south-south" trade has been robust, and the outlook is promising. Developing countries' exports of both manufactures and nonfuel primary products to each other have been growing faster than they have to industrialized countries (see Figure 3.4). UN data (in which developing countries include capital-surplus oil exporters but exclude the semi-industrialized nations of Southern Europe) show that trade between developing countries ac-

counted for barely more than a quarter of the increase in their manufactured exports during 1963-73, but almost half in 1973-77.

Most of such trade in manufactures is from more- to less-industrialized developing countries, or between adjacent countries that are not otherwise major exporters of manufactures. In the composition and characteristics of the products, south-south trade differs significantly from developing countries' manufactured exports to industrialized countries; in particular, it is more skill- and capital-intensive, with a higher proportion made up of engineering and chemical items (see Table 3.3). Trade in capital goods, including turnkey plants, is expanding very rapidly; but its value is still small.

Regional integration schemes offer a means for expanding south-south trade, but experience has been mixed. They often lead to

Table 3.3 Product composition of developing countries' merchandise exports to industrialized countries and other developing countries, 1977^a

(percent)

Product group	To industrialized countries	To developing countries ^b	Share of product group going to industrialized countries
Machinery and transport equipment	19.9	30.2	53.5 ^c
Textiles	10.2	16.3	48.4
Clothing	23.1	6.2	85.3
Chemicals	7.4	11.6	50.3
Iron and steel	3.0	5.1	49.6
Other manufactures	36.4	30.6	67.2
Total	100.0	100.0	62.4

a. UN classification (South Africa and most of Southern Europe are included in industrialized countries).

b. Includes capital-surplus oil exporters.

c. About 80 percent for electronics and electrical machinery; much lower shares for other products.

inward-looking policies, with high protection and low overall trade growth. But they could play a bigger role if properly designed and implemented. One promising avenue for improving the benefits from regional cooperation is to coordinate large-scale investments to avoid excess capacity (as members of ASEAN—the Association of South-East Asian Nations—have begun to do). But the main vehicle for expanding south-south trade is more likely to be those general policies that liberalize developing countries' import regimes and strengthen their export capabilities (for example, by expanding export credit and insurance facilities).

Capital flows

The links between the growth projected for developing countries and the capital flows required to sustain it received close attention in Chapter 2. The projected capital inflow to developing countries reflects judgments both about the availability of finance and the amounts the countries will want to borrow. But the flows that in fact materialize will be determined by savings and investment behavior in the industrialized countries and the capital-surplus oil exporters—and specifically on how much of their saving they choose to invest in the developing world.

This choice cannot be forecast with precision. The High case described in Chapter 2 requires aid and commercial capital from industrialized countries totaling about 0.5 percent of their GNP in 1990. By historical standards, this is not a large amount: it was 0.8 percent of their GNP in 1970 and still about 0.5 percent in 1975.

It implies, however, a substantial turnaround from 1980, when the industrialized countries themselves are likely to have a net inflow of capital (before official transfers)

of about 0.5 percent of GNP—the counterpart of their current account deficit. Moreover, by 1990 much of the projected net capital inflow to developing countries would be needed to meet interest payments on loans. The share of gross lending that is available for buying imports and adding to reserves would fall sharply during the 1980s (see Figure 3.5).

Clearly, the uncertainties in these projections are high. Considerably more resources could be available to developing countries over the decade, and the result could be more growth. But it looks as though their capital inflow will be relatively modest in the 1980s, because of constraints both on their capacity to borrow and on the supply of funds.

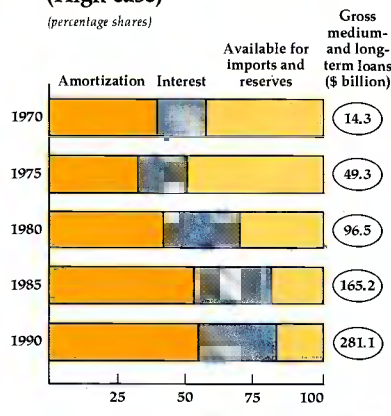
Factors affecting borrowing decisions

In general, the oil exporters face few financial constraints on their growth. Their major challenge (especially if the real price of oil continues to rise throughout the 1980s) is to use their oil revenues efficiently and not to exceed their capacity for absorbing investment. If they succeed, they will not need much foreign capital over the next five years or so. For major borrowers (such as Algeria or Mexico) this means that debt-service ratios will tend to decline despite strong economic growth.

Later in the decade, however, their position will change. The initial surge of revenues from the oil price rises of 1979–80 will have been digested; their ability to absorb more foreign investment productively will have risen. With oil providing them with a strong credit standing, the oil exporters could choose to finance further rapid growth by more foreign borrowing.

The position of the oil-importing developing countries is altogether different. In 1978 net oil imports (for energy uses) cost them \$30

Figure 3.5 Developing countries' use of borrowed funds, 1970–90 (High case)



billion; in 1980 the same amount of imports would cost them about \$65 billion. Their potential financing gap is widened further by slow growth in the industrialized countries, as a result of which their exports in 1980 could be about \$6 billion lower than they might otherwise have been. In the short-term this means they will run higher current account deficits than in earlier years for any given rate of growth.

In these circumstances the policy options of the low-income oil importers are limited. They cannot borrow much capital on commercial terms, nor would it be prudent to do so. Their growth rates depend essentially on three factors: their own efforts to raise investment and saving; the availability of concessional finance; and how efficiently they use domestic and foreign resources. Without much more aid (beyond the increases currently projected), GNP per person in these countries is unlikely to grow faster than 1.7 percent a year in the first half of the 1980s.

The hardest decisions lie with the middle-income oil importers, for whom prudence will have to remain the watchword. In the short-term (perhaps until the end

of 1981), they can resort to the temporary expedients of compressing imports and running down inventories—and in some cases using foreign exchange reserves (which were boosted by heavy borrowing in 1977–78). These measures will not prevent external deficits from rising, so more finance will be needed to maintain growth, even at the comparatively low rates of 1977–80.

But these countries may find their options increasingly restricted by a key constraint—their creditworthiness for larger and larger amounts of borrowing on commercial terms. This means not only creditworthiness as perceived by lenders, who may be willing to continue to lend to countries that have demonstrated an ability to manage their debt. Developing countries themselves must determine how much they will benefit from continued heavy commercial borrowing—allowing for their existing levels of debt and debt-servicing obligations, their uncertain export prospects and the likely return on additional investment. Some countries have already run into debt-servicing difficulties. In the absence of more official finance, the wise policy for some oil importers may be to borrow less and accept slower growth in the near term, while current account deficits are reduced and debt-servicing capacity and creditworthiness are strengthened.

Countries that can finance higher deficits and more rapid growth will also have to take steps to restructure their domestic economies and their external payments. They, too, will be faced with the need to raise exports rapidly, to use imports efficiently, to control domestic expenditure and inflation and to invest productively so that their debt-servicing ability and creditworthiness will not be impaired. A lesson that has been learned

from the 1970s is that foreign capital—especially on commercial terms—cannot substitute for structural adjustment but can ease it.

The outlook for capital availability

To meet their needs in the 1980s, developing countries will seek finance from private sources (mainly commercial banks, but also bonds and direct investment) and from official sources, both on concessional and on market terms.

OUTLOOK FOR CAPITAL FROM COMMERCIAL BANKS. Despite the increased liquidity of the international banking system, arising from the surpluses of the capital-surplus oil exporters, developing countries will find it harder to maintain rapid growth in borrowing in the 1980s than they did in the 1970s. Apart from the considerations of creditworthiness already discussed, they can expect greater competition for funds and direct constraints on bank lending. These factors are likely to affect borrowing more in the next few years than over the whole of the decade.

- **Increased competition.** Developments in the 1970s have highlighted the need for heavy investment in the industrial economies, to overcome structural weaknesses. The increased cost of energy provides a strong incentive for governments to stimulate both public and private investment in energy programs. Investment is thus unlikely to be compressed much further, even in the short-term when demand will be depressed. Unless savings rates rise sharply, the industrialized countries are not likely to eliminate their current account deficits as rapidly as they did in 1974–78—especially as the real price of oil is expected to rise further in the 1980s.

Borrowing by industrialized nations is therefore likely to take a larger share of the surpluses of

the capital surplus oil exporters than in previous years. In addition, the European centrally planned economies are likely to increase their demands on the capital market. They have been substantial borrowers in the past and (apart from the USSR) are net importers of energy with large debts to service. Finally, China seems poised to enter the market to finance ambitious modernization; over the decade China could become a sizable borrower.

While developing countries will therefore face more competition for loans in the 1980s, this does not mean that net lending to them will not increase. But the pace will be slower than in the past, and they will probably pay higher spreads (the margin over interbank deposit rates) than they have done in recent years. Interest rates themselves are likely to be higher as well—because of competing demands for funds, and because of restrictive monetary policies (in the next few years, at least) in industrialized countries.

From 1976 to 1978 the relative ease of monetary policy (especially in the United States) helped to boost international liquidity and thus facilitate the rapid expansion of commercial lending. The current stance of monetary authorities suggests that the 1980s will see tighter monetary policy to combat domestic inflation. But the dramatic fluctuations in interest rates over the past year underline the potential for error in this kind of prediction.

- **Constraints on banks.** The two previous *World Development Reports* have noted the potential constraints on commercial bank lending to developing countries that arise from portfolio concentration, higher debt-equity ratios and the associated concern of bank regulators. The danger to developing countries is not that banks will stop lending to them; rather that lending growth will slow be-

cause individual banks or banking groups may have to restrain their lending—and it will take time for new lenders to expand their activities.

The main factors behind these constraints still exist and may have become more acute. The rapid growth in lending by the main money center banks in the United States, the Federal Republic of Germany and Japan has meant that their capital base (shareholders' equity plus retained earnings) has failed to keep pace with lending. For the major US banks at least, how much they can lend in the future will be affected by how fast they can expand their capital. But this is difficult in a world of low spreads, high inflation (which increases loans and deposits relative to capital) and low prices for bank stocks. Second-tier banks that are comparatively underlent relative to their capital will probably expand their international lending. But because these banks are smaller, less experienced and probably more risk-averse than the large international lenders, developing countries are likely to pay more for their services.

In addition, some banks may wish to limit their exposure in some countries, since lending has been very concentrated (see Table 3.4). Regulatory agencies reinforce this caution: they have become increasingly concerned that foreign lending should not pose a threat to domestic banking systems. The effect of regulatory constraints on lending is not certain; it depends on the attitudes of regulators. In the past, banks have been free to interpret quite liberally the guidelines within which they operate. There have been moves to tighten control of international lending (for example, banks are increasingly having to report foreign and domestic operations on a consolidated basis); but the monetary author-

Table 3.4 Commercial bank claims on developing countries, 1976–79

Country ^a or group	Percentage composition of amounts outstanding ^b			
	1976	1977	1978	June 1979
Brazil	16.7	16.6	16.2	16.1
Mexico	16.2	13.4	11.4	11.7
Venezuela	6.2	6.0	6.9	7.5
Spain	6.6	7.6	6.5	6.5
Argentina	3.0	3.2	3.4	4.8
Subtotal, 5 largest borrowers	48.7	46.8	44.4	46.6
Next 5 borrowers	17.4	18.7	18.8	18.0
Next 10 borrowers	20.4	19.6	19.9	19.2
All others	13.5	14.9	16.9	16.2
All developing countries	100.0	100.0	100.0	100.0
Amount (billions of dollars)	110.5	151.1	203.9	221.5

Source: Bank for International Settlements and US Federal Reserve Board.

a. Rankings according to outstanding claims on June 30, 1979.

b. Excludes offshore banking centers—Bahamas, Barbados, Bahrain, Bermuda, Cayman Islands, Hong Kong, Lebanon, Liberia, Netherlands Overseas Territories, New Hebrides, Panama, Singapore and West Indies.

ities of many countries as well as the Bank for International Settlements are concerned to avoid undue constraints.

While these factors may cause lending to developing countries to grow more slowly, banks could be encouraged to lend more if spreads (between deposit and lending rates) widen. These spreads have a major influence on the profitability of lending; they have narrowed considerably since 1976 (see Table 3.5), but this trend seems to have been arrested in 1980. Since 1977 spreads have not been a major element in the cost

of borrowing; at current levels of both spreads and interest rates, the latter should have more effect on the developing countries' willingness to borrow.

OUTLOOK FOR OTHER FORMS OF PRIVATE FINANCE. Both bonds and private direct investment offer some alternative to bank lending, though their main impact will be felt in the longer term.

- The bond market. Developing countries made few international bond issues before the end of 1975, when outstanding external bonds of 96 developing

Table 3.5 Average spreads over LIBOR for external borrowing, 1974–79^a

(percentage points)

Item	1974	1975	1976	1977	1978	1979
All developing countries	1.13	1.68	1.72	1.55	1.20	0.87
Typical industrialized country (France) ^b	0.58	1.42	1.09	0.92	0.63	0.36
Difference	0.55	0.26	0.63	0.63	0.57	0.51
Memo item						
LIBOR rate ^c	11.32	7.74	6.26	6.54	9.48	12.12

a. LIBOR is the London interbank offered rate; the rate charged by banks in London for dealings with each other.

b. Spreads reflect the credit standing of the borrower as well as market costs. This explains the very low difference in 1975.

c. Calculated as an annual average from monthly averages for the Eurodollar bid (deposit) rate plus one-eighth of a percent.

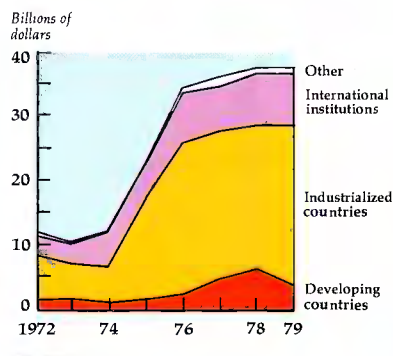
countries totaled an estimated \$5.5 billion. (By comparison, the World Bank alone then had outstanding bond issues of \$12 billion.) And only a handful of (mainly higher-income) developing countries had tapped the bond market: Israel accounted for 40 percent of outstanding bonds, while Argentina, Mexico and Spain together contributed a further 35 percent.

Issues by developing countries increased rapidly after 1975 (see Figure 3.6). They totaled \$6.0 billion in 1978, of which \$5.9 billion was the debt of middle-income countries. But their share of a slow-growing (if turbulent) market for international issues turned down sharply in 1979, to \$3.9 billion (compared with issues by the international organizations of \$8.3 billion).

Over time, bond issues should become more important as a source of funds for developing countries. But the bond market is a conservative one in which investor acceptance is acquired only slowly; borrowers must approach the market cautiously until they establish sound reputations. This suggests that in the foreseeable future bonds will not substitute to any great extent for commercial bank lending.

This conclusion is reinforced by the regulations imposed on bond transactions in many countries. These regulations do not discriminate among borrowers; they are intended to protect national investors and currencies. But their effect is to favor established borrowers and to make markets inaccessible for inexperienced borrowers. For example, the Securities and Exchange Commission imposes strict disclosure requirements on public offerings in the US bond market that new borrowers often find difficult to satisfy. The United States and

Figure 3.6 International bond issues, 1972-79



most European countries restrict the foreign bond portfolios of some types of institutional investor. And in practice a foreign borrower must make a successful public offering in another foreign bond market before it can enter the Japanese market. Governments and regulatory agencies could help developing countries by improving their access to bond markets, but quick results cannot be expected.

- **Direct foreign investment.** Direct investment could provide more capital to developing countries, with the capital-surplus oil exporters playing an increasingly important role. But in the short-term its potential is limited—partly because many projects take so long to come on stream, but also because developing countries are often concerned about foreign ownership and influence in their economies. Because the risks are high, the foreign investor typically requires high returns on capital (and in some cases substantial control of the enterprise). Any major increase in direct investment is likely to need greater agreement between governments about the role of transnational corporations. Barring that, direct investment over the next 5 to 10 years would probably grow at only about 3 percent a year in real terms.

OUTLOOK FOR OFFICIAL CAPITAL.

Given this relatively uncertain outlook for private capital flows, official agencies will have to help secure the financing needs of the developing countries (especially the low-income oil importers), as they did in 1974. Finance from the centrally planned economies is modest and probably will remain so. Official capital from the industrialized countries and the capital-surplus oil exporters—together with the international financial institutions they support—will effectively determine the capital inflow to low-income countries and will supplement the middle-income countries' private borrowing.

- **Prospects for concessional assistance.** The aid projections that underlie the High case are shown in Table 3.6. They show aid from DAC donors reaching no more than 0.36 percent of projected GNP in 1985 and 1990. Measured against the target (0.7 percent of GNP) established by the United Nations for the Second Development Decade, the performance of DAC donors has been most disappointing. Real growth from 1965 to 1979 averaged only 1.5 percent a year. Excluding countries that have already reached the UN target (Denmark, Netherlands, Norway and Sweden), the aid performance of most of the remaining 13 DAC members deteriorated from 1975 to 1979. There is little assurance of significant progress in response to the Brandt Commission's call for rapid growth in aid, and the evident needs of developing countries.

Recent actions give cause for concern. The aid cuts announced by the British Government could cause their aid to fall to 0.38 percent of GNP by 1985, from the 0.48 percent average for 1977-79. Aid bills continue to face difficulties in the US Congress, suggesting that support from the biggest donor is likely to remain the lowest, relative

to GNP, of all large industrial nations. Some countries, such as Japan and the Federal Republic of Germany, have indicated their intent to continue their recent improvements in aid flows. Nevertheless, achievement of the projected overall increase (a tripling of aid in nominal terms, or 4 percent real growth throughout the decade) is far from certain; it depends on strong growth in industrialized countries as well as on maintenance of their aid shares.

Economic difficulties in the industrialized countries are an important—but not a sufficient—reason to explain their lack of support for aid. Most governments simply have not found it expedient to expand foreign assistance while restricting domestic spending. The failure even to maintain the share of aid in GNP will have serious long-term economic and political consequences for the developing countries—particularly for the poorest among them. The inadequate provision for development aid contrasts starkly with the sums devoted by all countries to military expenditures (see box).

Close examination suggests, however, that political factors will inhibit a rapid redistribution of concessional aid. France and the United States, in particular, maintain strong political ties with some

higher-income aid recipients. Nonetheless, there is an extremely strong case for donors to provide at least 50 percent of their aid to low-income countries; this redistribution is built into the capital-flow projections underlying the High case in Chapter 2. If it fails to take place, total aid flows from DAC members will have to be very much higher (\$85–90 billion in 1990 rather than the projected \$69 billion) to achieve the projected bilateral flow to the low-income nations.

• Official capital on market terms. The other major source of funds for developing countries is official capital on nonconcessional terms (that is, with a grant element of less than 25 percent); this is provided principally through official export credits, government-to-government lending, the World Bank and the regional banks and the International Monetary Fund. While it offers limited support for the low-income countries, for middle-income countries it has been and could remain a very important supplement to private capital.

Prospective aid from OPEC members is also uncertain. The Arab countries that are the major donors have been generous in their support of developing countries in the past. In the peak year,

Military spending

Although data are imprecise and estimates vary widely, one estimate puts global military expenditure at more than \$400 billion in 1977. The proportions of GNP that industrialized and developing countries devoted to it were rather similar (see table). For industrialized countries, the outlay on arms was 17 times higher than that on aid. And for developing countries, it was one-and-a-half times more than on education and health combined.

Public expenditures on defense, aid, health and education, 1977
(percentage of GNP)

Country group	Defense	Aid	Health	Education
Industrialized countries ^a	5.6	0.33	3.0	5.9
Developing countries ^b	5.9	n.a.	1.0	2.7

a. Include centrally planned economies.
b. Include centrally planned economies and capital-surplus oil-exporters.

Source: *World Military Expenditures and Arms Transfers 1968–77* (US ACDA)

1975, the oil producers together gave 2.7 percent of their GNP as aid, while the major Arab donors—Saudi Arabia, Kuwait, Qatar and the United Arab Emirates—gave proportionately much more (a range of 5 to 15 percent of their GNP). By 1978, however, aid in real terms was only about 60 percent of what it had been in 1975; estimates for 1979 indicate a further real decline.

The increase in oil revenues should permit a substantial increase in the oil producers' aid in 1980 and beyond. OPEC donors have not yet agreed to boost substantially their aid through multilateral channels; much therefore depends on the expansion of the national programs of the major bilateral donors—the four mentioned above, plus Iraq and Libya. Iraq has become the third largest OPEC donor in absolute terms, partly because of its interest-free

Table 3.6 Aid flows to developing countries and multilateral institutions, 1975–90 (High case)

(billions of dollars)

Country group	1975	1978	1979 ^a	1980	1985	1990
DAC ^b	13.8	20.0	22.3	25	44	69
(As percentage of GNP)	(.36)	(.35)	(.34)	(.36)	(.36)	(.35)
OPEC	5.5	4.3	4.7	5	10	15
(As percentage of GNP)	(2.71)	(1.35)	(1.28)	(n.a.)	(n.a.)	(n.a.)
Centrally planned economies and other ^c	0.6	1.1	1.0	1	2	2
Total	19.9	25.4	28.0	31	56	86

a. Preliminary figures.

b. Reporting by DAC members has changed to a uniform system (see the technical notes for Table 16 of the World Development Indicators). Under the old system of reporting, the 1975 figure was \$13.6 billion, the 1978 figure \$18.3 billion.

c. Includes OECD countries that are not members of DAC.

loans to poorer countries to compensate them for higher oil prices.

- Improving aid to benefit the poorest. To maintain energy imports at their 1978 levels, the poorest oil-importing countries need extra aid of about \$2.2 billion in 1980 (for 36 low-income countries). This could be provided by increasing aid from DAC and OPEC donors by only 8 percent. Yet even this additional aid will not be made available without strong efforts; and it would not compensate for the losses in trade and aid from the slowdown in world growth.

Besides expanding aid, donors should redistribute it toward the poorest nations. Some donors send a comparatively high proportion of their aid to the middle-income countries. In 1978 DAC donors distributed 38 percent of their bilateral aid to low-income countries (see Table 3.7) and 52 percent to middle-income countries (data on the country distribution of the remaining 10 percent are unavailable). Although only seven DAC donors currently give less than 55 percent of their bilateral aid to low-income countries, this group includes the four largest donors—France, the Federal Republic of Germany, Japan and the United States. Bilateral aid to the low-income countries from OPEC donors has fallen since 1976 and there is scope for redistribution. Flows from multilateral institutions, by contrast, are concentrated more on the poorest countries.

Official export credits are difficult to separate statistically from associated officially supported private flows. Together, however, they have grown rapidly over the past two decades; in 1978 net disbursements from DAC members to developing countries were more than \$13 billion (exceeding net bilateral aid from the DAC countries for the first time, and con-

Table 3.7 Distribution of DAC donors' bilateral official development assistance, 1970-78

Country group	Percentage shares				
	1970	1975	1976	1977	1978
Low-income countries	47	44	38	35	38
Middle-income countries	44	46	51	56	52
Unallocated by country	9	10	11	9	10
Total	100	100	100	100	100

siderably above private direct investment of \$11 billion). Continuing growth is likely, but the limitations on what is financed by official export credits (usually, only specified capital goods) restrict their ability to compensate for slow growth of other capital.

Government-to-government lending affords a more direct means of assisting developing countries. The greatest potential seems to lie with OPEC governments, which provided \$2.5 billion a year in 1975-76 (mainly on market terms to low-income countries) compared with their aid of \$5.5 billion a year. Current and projected surpluses of the capital-surplus oil exporters could support a much larger volume of such lending.

- The role of multilateral institutions. While the machinery exists to assist developing countries in the difficult times ahead, the international agencies are hampered by a shortage of resources, especially to finance longer-term adjustment. Most of their proposed major capital increases and replenishments have run into authorization or appropriation delays.

The Inter-American Development Bank's capital increase (agreed to in 1979) was to sustain nominal lending growth of about 14 percent a year, but legislative ratification has been delayed. The Asian Development Bank's current replenishment period extends to 1982, during which time both concessional and nonconcessional lending in nominal terms are

expected to grow 12 percent a year. The African Development Bank, despite the expansion of resources resulting from the admission of nonregional members in 1980, will be similarly constrained. The aid program of the European Community under the Second Lomé Convention, and the United Nations Development Program will increase at a somewhat slower rate.

Higher inflation will erode the real value of capital increases and replenishments. The capital increase for the World Bank was intended to support 5-6 years of lending growing at a nominal rate of 12 percent a year with an implied inflation of 7 percent a year (at present, that inflation rate looks a distinct underestimate). The sixth replenishment of IDA (a proposed \$12 billion) was planned to provide for an annual real increase in loan commitments of 5 percent for fiscal years 1981-83 (July-June). Again, however, the real resource flow will be eroded by inflation.

Against this backdrop, the Board of the World Bank has accepted a proposal that will provide loans to support developing countries' structural adjustment programs. But agreement has not yet been reached that these loans will be in addition to the previously planned lending programs. Over the decade, unless the international agencies get more funds, they will only be able to reallocate funds already earmarked (and allowed for in the High-case projections

in Chapter 2). Ways of increasing their lending capacity should be considered, within the constraints of the capital available to them from the industrialized countries.

- The IMF. The seventh quota increase is expected to become effective in 1980, raising the quotas of the oil-importing developing countries to around \$16 billion. And in response to members' needs for financial assistance to ease their current adjustment problems, the Fund is studying initiatives designed to raise the amount of finance it offers; to extend credit for longer periods;

and to emphasize its role as a supplier of finance. The maturity of loans under an extended arrangement has already been lengthened from 8 to 10 years to encourage a smooth transition to lower deficits. For countries that have severe deficits the IMF has been willing, in some instances, to provide financial support amounting to six times their quotas.

More multilateral finance is needed

From 1970 to 1978 multilateral flows on nonconcessional terms grew 11 percent a year in real terms (concessional flows grew 12

percent). On present plans, they are likely to grow at less than half these rates between now and 1990. But there remains a clear need for additional resources to allow the developing countries to adjust to changed external conditions and at the same time maintain acceptable growth. Without such resources, the chances of successful adjustment in 1980-85 will be much reduced; consequently, the recovery projected for 1985-90 would be weakened and longer-term development goals jeopardized.

Part II Poverty and human development

An unfavorable world economic environment casts shadows over the lives of people in developing countries; the poorest in particular face acute hardships. Part I of this *Report* has stressed the steps that developed and oil-producing countries in particular must take to improve the international environment for growth—without which, efforts to help the poor will be of limited avail. Part II concentrates on certain other measures to reduce absolute poverty.

In the 1970s it was increasingly recognized that economic growth alone would not reduce absolute poverty at an acceptable speed. So those involved with development—including the ILO and the World Bank—gave attention to four different, though largely complementary, strategies: increasing employment, meeting basic needs, reducing inequalities in income and wealth, and raising the productivity of the poor.

This part of the *Report* draws on all these approaches to overcoming poverty. But it combines them with a strong concern for growth. And it integrates them with a related strand of thinking—human resource development, here called human development to emphasize that it is an end as well as a means of economic progress.¹ Human development encompasses education and train-

ing, better health and nutrition, and fertility reduction.

The focus is on *absolute* poverty—a condition of life so characterized by malnutrition, illiteracy and disease as to be beneath any reasonable definition of human decency. Yet within a particular society at a particular time, poverty is often (and for many purposes should be) defined *relative* to average living standards. It would be wrong, for example, to use the same poverty line in appraising policy, say, in Argentina and Bangladesh. Relative poverty is also important because the distribution of assets, incomes and power has a profound impact on prospects for reducing absolute poverty. And reducing relative poverty is regarded as important in itself in most countries.

Despite these links between absolute and relative poverty, there are fundamental differences. Equal sharing of poverty or of low life expectancy is not the purpose of development. Conversely, some policies that benefit large numbers of poor people have an ambiguous effect on the overall distribution of income and may even make it more unequal. And while countries differ considerably in the priority they attach to distributional objectives, there appears to be unanimity on the need to reduce, and at some point

eliminate, absolute poverty.

The role of human development in alleviating poverty has been debated for several hundred years. In Europe in the 16th to 18th centuries, there was a vigorous dispute between those who believed that education would make the poor more productive and better citizens, and those who believed that it would make them challenge the established order. (With hindsight, both were clearly right.) Political as much as economic considerations impelled the United States and Japan toward universal primary education in the 19th century.

Economists, meanwhile, have seldom given prominence to the quality of the labor force, especially in their formal models. In the 1950s and early 1960s, there was a wave of optimism about the contribution of education to economic development. Partly for want of quick and obvious results, enthusiasm then waned. But research continued—and the chapters that follow draw together its results.

The case for human development is not only, or even primarily, an economic one. Less hunger, fewer child deaths and a better chance of primary education are almost universally accepted as important ends in themselves. But in a world of tight budgetary and manpower constraints, the governments of developing countries must ask what these gains would cost—and what the best balance is between direct and indirect ways of achieving them.

1. Earlier *World Development Reports* have covered other aspects of development policy. In 1978 the central topic was the problems and prospects of low-income

Asia and Sub-Saharan Africa. In 1979 industrialization, employment and urbanization were the main issues addressed.

4 Poverty, growth and human development

The poor are a mixed group. Some cope reasonably well; others are on the margin of survival. Their well-being can fluctuate widely: the marriages and ceremonies after the harvest are in stark contrast to the hunger and illness that often precede it. A good crop with a new seed, or the chance to work on a nearby road project, may push a poor farm family's income to the point where they can buy a plow with a metal blade or some clothing for their children. But two years of inadequate rain, or a bout of illness, may cost them their land or their livestock—a degree of vulnerability that understandably makes for caution and aversion to risk.

The poor have other things in common, apart from their extremely low incomes. A disproportionate number of them—perhaps two in five—are children under 10, mainly in large families. More than three-quarters of them live in (often very remote) rural areas, the rest in urban slums—but almost all in very crowded conditions. Many poor families own a small piece of land, some animals or some tools. But both they and other poor people live mainly by working long hours—men, women and children alike—as farmers, vendors and artisans, or hired workers.

As much as four-fifths of their income is consumed as food. The result is a monotonous, limited diet of cereals, yams or cassava—with a few vegetables and in some places a little fish or meat. Many

of them are malnourished to the point where their ability to work hard is reduced, the physical and mental development of their children is impaired, and their resistance to infections is low. They are often sick—with tropical diseases, measles and diarrhea, and cuts and scratches that will not heal. Complications of childbirth are a common cause of death. Of every 10 children born to poor parents, two die within a year; another dies before the age of five; only five survive to the age of 40.

The great majority of poor adults are illiterate; their children, though having a much better chance of attending school than in the past, usually do not complete more than a year or two. Unable to read a road sign, let alone a newspaper, their knowledge and understanding remain severely circumscribed. Yet they learn about the possibility of a better life from direct observation, from friends and relatives, and perhaps from small improvements in their own circumstances; and they hope that their children will somehow be able to climb out of poverty.

Dimensions of poverty

It is difficult to measure the extent of poverty. To begin with, absolute poverty means more than low income. It also means malnutrition, poor health and lack of education—and not all of the poor are equally badly off in all respects. There is also room for disagreement about

where to draw the line between the poor and the rest, and about the correct way to calculate and compare incomes and living standards at different times and in different places.

To compound these difficulties, the data are inadequate. Household surveys, if they exist, sometimes underrepresent the poor. Very few follow the fortunes of individuals and families through time, or disaggregate the household to examine the well-being of women, children and the elderly. Nor is direct observation necessarily a reliable basis for generalization, especially in the countryside, where many of the poor are beyond the gaze of the casual visitor to villages and rural development projects—away from the roads, away from the markets and project sites, or on the outskirts of the villages.

Despite all this, no one seriously doubts that a very large number of people are extremely poor. Taking as the cutoff a level of income based on detailed studies of poverty in India, the number of people in absolute poverty in developing countries (excluding China and other centrally planned economies) is estimated at around 780 million. In 1975 about 600 million adults in developing countries were illiterate; and only two-fifths of the children in these countries currently complete more than three years of primary school. In 1978, 550 million people lived in countries where the average life

Figure 4.1 Three decades against poverty

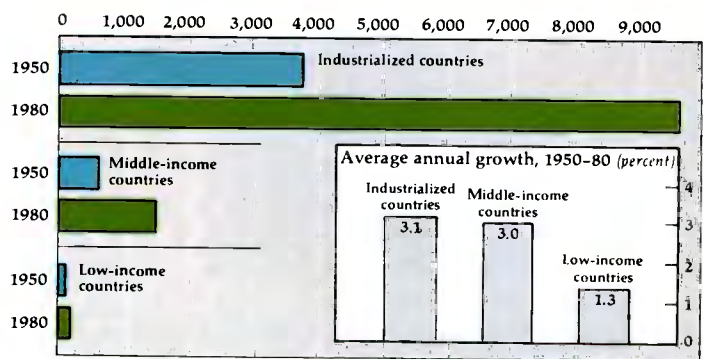
Income

GNP per person* (1980 dollars)	1950	1960	1980
Industrialized countries	3,841	5,197	9,684
Middle-income countries	625	802	1,521
Low-income countries	164	174	245

Average annual growth (percent)	1950-60	1960-80
Industrialized countries	3.1	3.2
Middle-income countries	2.5	3.3
Low-income countries	0.6	1.7

a. Excludes all centrally planned economies

GNP per person (1980 dollars)

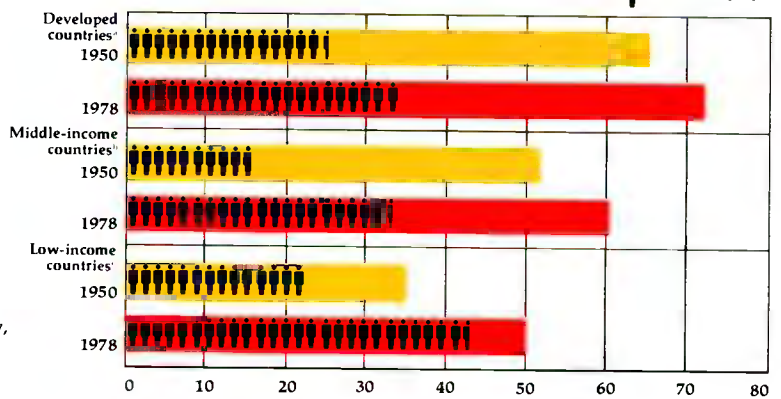


Health

Life expectancy at birth (years)	1950	1960	1978	Increase, 1950-78
Industrialized countries	66.0	69.4	73.5	7.5
Middle-income countries	51.9	54.0	61.0	9.1
Low-income countries	35.2	41.9	49.9	14.7
Centrally planned economies ^c	62.3	67.1	69.9	7.6

a. Includes Bulgaria, Czechoslovakia, German DR, Hungary, Poland, Romania, USSR
 b. Includes Albania, Cuba, North Korea, Mongolia
 c. Excludes China

Life expectancy at birth (years)

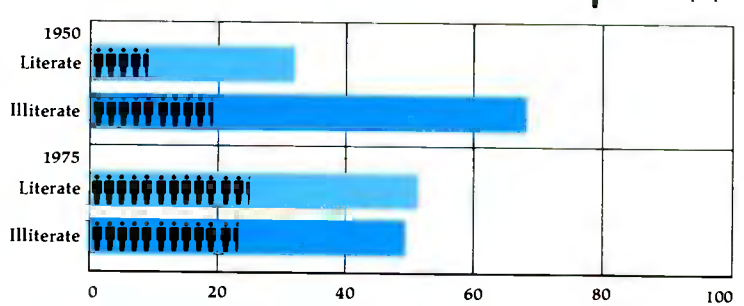


Education

Adult literacy rate (percent)	1950	1960	1975
Industrialized countries	95	97	99
Middle-income countries	48	54	71
Low-income countries	22	29	38
Centrally planned economies	97	98	99

a. Excludes centrally planned economies

Adults in all developing countries (percent)^a

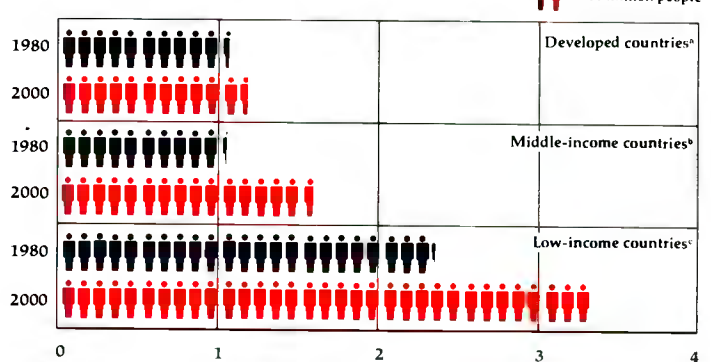


Population

Average annual percentage growth	1950-60	1960-70	1970-80
Industrialized countries	1.2	1.0	0.7
Middle-income countries	2.4	2.5	2.5
Low-income countries	1.9	2.5	2.3
Centrally planned economies	1.9	1.7	1.3

a. Includes Bulgaria, Czechoslovakia, German DR, Hungary, Poland, Romania, USSR
 b. Includes Albania, Cuba, North Korea, Mongolia
 c. Includes China

Total population (billions)



expectancy was less than 50 years, 400 million in countries where the average annual death rate of children aged one to four was more than 20 per 1,000—20 times that in the industrialized countries.

Nor is there any serious disagreement about who the poor are. Half of the people in absolute poverty live in South Asia, mainly in India and Bangladesh. A sixth live in East and Southeast Asia, mainly in Indonesia. Another sixth are in Sub-Saharan Africa. The rest—about 100 million people—are divided among Latin America, North Africa and the Middle East. With the partial exception of Latin America (where about 40 percent are in the towns) the poor are primarily rural dwellers, overwhelmingly dependent on agriculture—the majority of them landless (or nearly landless) laborers. Some minority groups—for example, the Indians in Latin America and the scheduled castes in India—are also overrepresented among the poor. And there is a tendency for absolute poverty in particular places, families and social groups to persist from generation to generation.

Three decades of poverty reduction

In aggregate, however, considerable progress has been made in reducing the incidence of poverty over the past 30 years (see Figure 4.1). Progress would have been greater still but for the dramatic growth of population, which has doubled the number of people in the developing world since 1950 and has begun to slow down—though as yet slightly—only since the mid-1960s.

Since 1950 income per person in the developing world has doubled. But in low-income countries, the average increase has been half that, and in both low- and middle-

income countries the incomes of the poor have grown more slowly than the average. The *proportion* of people in absolute poverty in developing countries as a group is estimated to have fallen during the past two decades (though probably not in Sub-Saharan Africa in the 1970s—see Chapter 2). But because population has grown, the *number* of people in absolute poverty has increased.

There has also been progress in education. The proportion of adults in developing countries who are literate is estimated to have increased over the past three decades from about 30 percent to more than 50 percent; the proportion of children of primary-school age enrolled in school rose from 47 percent in 1960 to 64 percent in 1977. These advances have been shared by most countries and regions, including those that initially were furthest behind, such as Sub-Saharan Africa. But the quality of schooling remains low in many countries; and because of population growth, there has been an increase of about 100 million in the absolute number of illiterate adults since 1950.

The most striking advances against poverty have been in health. Average life expectancy in middle-income developing countries has risen nine years over the past three decades. In low-income countries, the increase has been even greater—15 years. But even though infant mortality rates (which are a major determinant of life expectancy) have fallen substantially in developing countries since 1950, there now are so many more children born that the absolute number of infant deaths probably has not declined.

Another way of viewing the progress of the past three decades is to compare the developing with the industrialized countries. The gap in income per person between

them has widened, even in proportional terms (though in the case of the middle-income countries only slightly). But the gaps in education and health have narrowed—by 15 percentage points in adult literacy and five years in life expectancy.

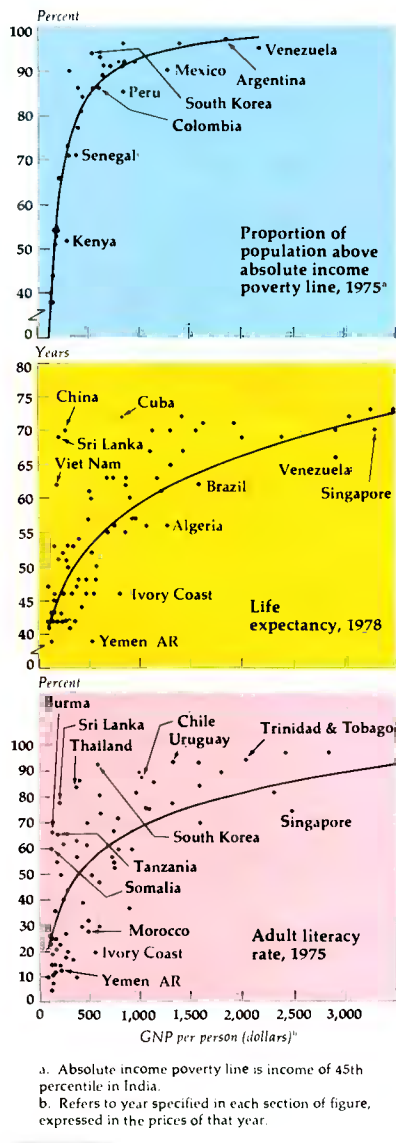
Poverty and growth

Most poor people live in poor countries. Whether absolute poverty is measured by low income, low life expectancy or illiteracy, there is a strong correlation between the extent of poverty in a country and its GNP per person (see Figure 4.2 overleaf). This suggests that the solution to poverty is economic growth. There is a great deal of truth in this proposition, but it needs to be carefully qualified.

First, comparing countries, the relation between the extent of their absolute poverty and the level of GNP per person is (as the dispersion of points in Figure 4.2 shows) far from perfect. Because of differences in income distribution, the proportion of the population below the poverty line in 1975 was more than twice as high in Colombia as in South Korea, even though the average incomes of the two countries were close. Sri Lanka is a low-income country, yet the life expectancy of its people approaches that of the industrialized countries. Some middle-income countries, such as Morocco and the Ivory Coast, have literacy rates below those of the average low-income country.

Second, looking at changes over time within particular countries, the connection between growth and poverty reduction over periods of a decade or two appears inexact. There is general agreement that growth, in the very long term, eliminates most absolute poverty; but also that some people may (at least temporarily) be impover-

Figure 4.2 National income and national poverty



ished by development—as when a tenant farmer is displaced by his landlord’s tractor or a shoemaker by mass-produced shoes. Because relevant data are sparse and unreliable, however, it remains a matter of dispute how consistently growth over comparatively short periods has reduced the proportion of the population in absolute poverty.

What is clear is that different countries have had different experiences. The proportion below

the absolute poverty line apparently has not fallen in some slow-growing countries (including rural India between 1956 and 1974) or in some periods in faster-growing countries. But it appears to have fallen markedly over the past 25 years in several fast-growing countries (including Thailand and Yugoslavia) and in some slower-growing ones (including Costa Rica and Sri Lanka). The association between economic growth and improvements in education and health has also been imperfect.

Third, the connection between economic growth and poverty reduction goes both ways. Few would dispute that the health, education and well-being of the mass of people in industrialized countries are a cause, as well as a result, of national prosperity. Similarly, people who are unskilled and sick make little contribution to a country’s economic growth. Development strategies that bypass large numbers of people may not be the most effective way for developing countries to raise their long-run growth rates.

The rest of this chapter looks more closely at some of the elements of absolute poverty and at policies to deal with it. Since economic growth (despite the qualifications) is crucial to reducing poverty, its causes will be considered. The focus then shifts to factors and policies that particularly affect the incomes of the poor. Under both headings the potential contribution of human development is examined.

Economic considerations and policies will predominate. But it is important to stress the contribution (over long periods) of social, political and cultural factors to the poverty of particular countries and particular groups. Nor should this chapter’s emphasis on better education and health as a means to raise incomes detract from

their tremendous importance as ends in themselves.

Sources of growth

Economic growth comes about in two ways, both of which can be powerfully influenced by government policy. One is building up a larger stock of productive assets and human skills. The other is increasing the productivity of these assets, skills, and the country’s natural resources. This involves moving capital and labor between sectors, developing new institutions, inventing and introducing new techniques of production and new products, making better choices among existing techniques, and taking steps to cut costs and eliminate waste. Growth thus involves continuous change—it has aptly been described as a process of perpetual disequilibrium.

Natural resources

The natural resources of countries are not consistently correlated with either income levels or income growth. Some of the richest and most rapidly growing economies—Austria, Japan and South Korea, for example—have few natural resources; some well-endowed ones—Zaire, for instance—have remained poor.

Nonetheless, no account of the causes of national prosperity and poverty should overlook land, water, minerals, energy and climate. Many countries—among them Argentina, Australia, Saudi Arabia and the Soviet Union—owe a good part of their affluence to natural resources. Nor is it coincidental that most poor countries are in the tropics and, more particularly, that many of the poorest people in the world live in the arid and semiarid regions of Asia and Africa.

But the link between natural resources and income is affected by

population density (see page 39). It also depends on the availability of capital and skills and on the development strategy adopted. And it is very much a function of world demand and the state of technology. Malaysia's early progress was founded on tin for plating and rubber for automobile tires. Bangladesh's jute industry suffered from the invention of synthetic fibres (especially because, in contrast to Malaysia, little relevant research was undertaken). A technical breakthrough in "dry" farming would—perhaps more than any other feasible technical advance—transform the prospects of a large proportion of the world's poor.

Investment in physical capital

The accumulation of physical capital is a necessary and very important part of economic growth. The productivity of workers in industrialized countries is greater than in developing countries partly because they have more capital to assist them. Similarly, most of the innovations and structural changes that generate growth clearly require substantial physical investment—in roads, machines, inventories, irrigation systems and so on.

Developing countries that have invested a higher proportion of their output have on average grown faster, but the contribution of investment to growth has varied widely. Some, including the fast-growing East Asian countries, have managed to squeeze as much as half an extra unit of annual output from each extra unit of capital. Others, such as Ghana and until recently Uruguay, have invested to much less effect.

Part of the discrepancy is attributable to differences in the share of investment devoted to activities (such as housing) that do not contribute directly to production, but more to variations in the

efficiency with which productive investment has been allocated and used. This efficiency has in turn depended on the availability of natural resources and skilled labor and on government policies toward agriculture, industry and foreign trade (discussed at length in the past two *World Development Reports*).

It has sometimes been suggested that income inequality is conducive to higher investment (since the rich save a larger proportion of their incomes than the poor). But in practice this relation is muffled by government and corporate saving and by variation across countries in incentives and attitudes to saving. High investment rates are observed both in countries with relatively unequal income distributions, such as Brazil and Kenya, and in countries with relatively equal distributions, such as China and South Korea. Low investment rates also appear compatible with income distributions that are both more unequal, as in Senegal, and less unequal, as in Burma.

Human resources

It has long been recognized that the qualities of a nation's people have an important influence on its prosperity and growth. This is not simply because better labor adds to output in the passive way that, say, more fertilizer or better machinery does. It is also because human beings are the source of ideas, decisions and actions on investment, innovation and other opportunities.

Technical, scientific and professional skills are clearly essential to producing many modern goods and services. Entrepreneurial and administrative abilities are vital in both public and private sectors. Less immediately obvious, but equally fundamental, are the skills, knowledge and attitudes of the great mass of ordinary workers, including small farmers and traders.

What governs the quality of human resources, and how can it be improved? There is no simple answer, no simple best policy. One important ingredient is practical experience. Another consists of the knowledge and attitudes that children acquire from their parents and from society at large. Then there are the many different kinds of formal education and training: general primary and secondary schooling, technical and vocational schooling, general and specialized higher education—all of which impart specific skills, enhance the ability to learn further and mold attitudes toward work and change.

Partly because measurement is difficult, the evidence is not complete—either on the contribution of human resources to production and growth, or on what determines their quality. But a lot of research has been done on the economic contribution of formal education. In all countries more educated people tend to earn more—to a degree that makes educational spending (especially for primary education and especially in developing countries) often appear an attractive investment (see pages 48–49).

Studies have also shown that primary schooling can contribute to the productivity of farmers (see page 48) and to industrial productivity. In addition, there is evidence that basic education can contribute to national growth (see box overleaf). Developing countries with higher literacy rates have tended to grow faster, even after allowances are made for differences in incomes and physical investment, and they have had higher physical investment rates.

The results of this research reinforce a body of less systematic observations, and some historical evidence, that formal education can aid economic development. The outstanding growth records of Japan and South Korea prob-

Human resources and growth: macroeconomic evidence

How can the effect of human resources on growth be assessed? The microeconomic studies of the effects of education, nutrition and health on the incomes and productivity of particular people and enterprises provide important evidence. So do the "growth accounting" exercises, which have in effect added up the results of microeconomic studies to measure the contribution of human resources to aggregate growth.

But microeconomic evidence is not enough. For example, it has sometimes been suggested that the higher earnings of more educated people are partly offset by indirect reductions in the earnings of less educated people—and thus that the microeconomic evidence overstates the effects of education on total (or average) income. Conversely, though, it has been suggested that the earnings of more educated people may understate their contribution to total production, innovation and growth.

It is thus important to complement the microeconomic evidence with studies that look directly at the relation between human development and aggregate growth. One way of doing this is through historical case studies. Another is by cross-country comparisons—looking at a large sample of countries to see whether those with better, or more rapidly improving, human resources have grown faster. Cross-country studies, however, must tackle two basic problems—in addition to shortages and inaccuracies of data, which are particularly severe for developing countries.

- Disentangling other influences. A correlation across countries between human resource indicators and growth may be generated—or obscured—by other factors (such as income) that influence one or more of the variables. Many of these other factors—such as income levels, investment rates and even some aspects of natural resources and climate—can be measured; their influence can be controlled for by multivariate statistical methods. Other relevant factors—culture and economic policies, for instance—cannot be so readily measured, and hence are difficult to control for.

This problem, however, can be substantially overcome by focusing on changes over time within countries, rather than on levels at a particular time. That eliminates the influence of factors (politics and institutions, say) that affect both the level of income and the level of human development in particular countries. Even then, though, the possibility remains that such unmeasured factors are influencing the rates of change in all the variables of interest. To reduce this risk, additional variables can be used to allow for, say, regional or cultural differences.

- Establishing the direction of causa-

tion. Even if it were possible to control for all other influences, the existence of a correlation between human resources and economic performance does not answer the question of which is causing which—especially pertinent, since there are reasons for believing that the causation flows in both directions.

One way of addressing this question is to look at the sequence of events. The table in this box, for example, compares literacy rates and life expectancy in 1960

with growth over the period 1960–77. It shows that the 10 fastest-growing developing countries started the period with literacy rates that were on average, despite substantial variation, 16 percentage points higher than would have been expected at their income levels. It also shows that the 10 developing countries with the highest life expectancy in relation to their income levels in 1960 subsequently attained growth rates that on average were 1.6 percentage points above those of all the developing countries for which data are available.

Another (complementary) approach is to use "simultaneous equations" techniques to estimate the relations in both directions at once, thus trying to identify the strength and characteristics of each while allowing for the existence of the other.

As part of the background work for this *Report*, the methods outlined above have been applied to the recently enlarged and improved data base from which the World Development Indicators are drawn (see the studies by Hicks and Wheeler mentioned in the bibliographical note). The purpose of these studies is primarily to double-check at the macroeconomic level the results derived from the microeconomic and experimental work discussed in Chapter 5. Thus they attempt to measure not only the effects of human development on growth, and of growth on human development, but also the effects of the various human development indicators—education, health, nutrition and fertility—on each other.

The results, and especially the estimated magnitudes of the effects, are not beyond dispute. But in general they reinforce the other evidence. Among the most clear-cut results are these: (1) increases in literacy contribute both to increased investment and (given the level of investment) to increases in output per worker; (2) literacy, as well as nutrition and income, affects life expectancy; and (3) variations in life expectancy, literacy, income and the strength of family planning programs explain between them most of the variation in fertility rates across countries.

The impact of health (measured by life expectancy) and nutrition on economic growth is less clear-cut. Although life expectancy on its own, controlling for income, appears to have a positive effect on both investment and output per worker, these effects largely disappear when other variables that influence life expectancy are introduced. Increases in average calorie supply appear to have a clear, positive effect on growth; but the possibility cannot yet be ruled out that this may reflect the effect not of nutrition but of agricultural output.

Literacy, life expectancy and growth

Top 10 countries ranked by growth of GNP per person	Growth rate of GNP per person, 1960–77 (percent)	Literacy: deviation from norm, 1960 ^a (percent)
Singapore	7.7	..
South Korea	7.6	43.6
Hong Kong	6.3	6.4
Greece	6.1	7.5
Portugal	5.7	1.7
Spain	5.3	1.2
Yugoslavia	5.2	16.7
Brazil	4.9	8.6
Israel	4.6	..
Thailand	4.5	43.5
Average ^b : top 10 countries	5.8	16.2
Average ^b : 83 developing countries	2.4	0.0

Top 10 countries ranked by life expectancy in relation to income	Life expectancy: deviation from norm, 1960 ^a (years)	Growth rate of GNP per person, 1960–77 (percent)
Sri Lanka	22.5	1.9
South Korea	11.1	7.6
Thailand	9.5	4.5
Malaysia	7.3	4.0
Paraguay	6.9	2.4
Philippines	6.8	2.1
Hong Kong	6.5	6.3
Panama	6.1	3.7
Burma	6.0	0.9
Greece	5.7	6.1
Average ^b : top 10 countries	8.8	4.0
Average ^b : 83 developing countries	0.0	2.4

a. Deviation from expected value derived from equations relating adult literacy and life expectancy to GNP per person for all developing countries. For example, in the top part of the table, South Korea's literacy rate in 1960 was 43.6 percentage points higher than expected for a country at its income level.

b. Unweighted mean.

ably could not have been achieved without their distinctively early mass literacy and numeracy, which (together with land reform, more advanced education and good economic management) contributed to increased agricultural productivity, to the expansion of labor-intensive manufacturing and exports, and to their remarkable ability to adapt to changes in technology and world demand. At the other end of the spectrum, the poor economic performance of the countries of Sub-Saharan Africa is at least partly attributable to extremely low literacy and the scarcity of highly educated and experienced people.

Knowledge, skills and attitudes are not the only aspects of human resources that affect economic performance. A healthy and well-fed labor force is more physically and mentally energetic than one that is sick and hungry, and therefore gets more work done and is more innovative. This is confirmed by a number of experiments and project-level studies—see pages 55 and 60. The aggregate evidence is less clear-cut.

At the same time, however, there are examples that refute any suggestion that education, health and nutrition are in themselves sufficient to induce rapid growth. Burma and Jamaica, for example, with high levels of literacy and life expectancy for their income levels, achieved annual growth rates of only 1.0 and 2.0 percent per person over the period 1960–78. It is also possible (though difficult if economies heavily dependent on petroleum, other minerals or expatriate skilled labor are excluded) to find cases of fairly rapid growth even with low levels of literacy and life expectancy—Pakistan in the 1960s is an example.

The linkage is imperfect partly because literacy and life expectancy are crude indicators of edu-

cation and health—and are often measured inaccurately as well. But the main reason is that growth also depends on other factors—the availability of natural resources and physical capital and the efficiency with which all resources are used.

Without modern inputs, the right technology and ready access to markets, even educated farmers find it hard to innovate (see page 48); and they can be discouraged from increasing production by low prices. Without rapid accumulation of physical capital, and policies to ensure that this is associated with rapid growth of productive employment opportunities, the earnings of even a healthy and educated labor force will stagnate. Without the right mixture of education and training, shortages of specific skills will hold back growth, while chronic surpluses of other sorts of manpower may emerge.

Population

Another important influence on the growth of income per person is population growth. One way it has an effect is by increasing population density. In some sparsely populated countries, this in itself might (within limits) have a beneficial effect on average incomes—as it has done in Argentina—by permitting and stimulating more

efficient exploitation of natural resources. But in many countries high and growing densities are likely to be a continuing source of poverty. In 1975 the agricultural population per hectare of cropland in Egypt, Bangladesh and probably China was already more than five times that in the Netherlands (see Table 4.1). The scope for compensating by higher yields per hectare is limited—in Egypt because yields are already close to those in developed countries, and in Bangladesh (where yields are much lower) by the high cost of improving water management.

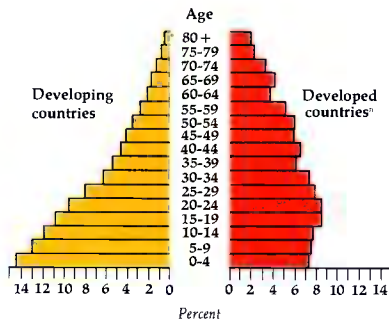
Population growth can affect economic growth in other ways, too. In some circumstances, faster labor force growth can permit faster growth of income per person. That may have happened with the flow of foreign workers into Switzerland and the Federal Republic of Germany in the 1960s and early 1970s. But in the great majority of developing countries, including most of those whose current population density is low, the growth of income per person could be accelerated by slower population growth—for three reasons.

- Lower fertility would reduce the proportion of people who are young and not productive. At present, two-fifths of the people in developing countries are under the age of 15; in developed

Table 4.1 Agricultural population in relation to crop area

<i>Country</i>	<i>Crop area, 1975 (100,000 hectares)</i>	<i>Agricultural population per 100 hectares of crop area, 1975</i>	<i>Projected agricultural population in 1990 per 100 hectares of crop area in 1975</i>
Bangladesh	951	660	980
Burundi	126	256	380
Dominican Republic	100	302	430
Egypt	286	687	890
India	16,720	244	310
Indonesia	1,860	458	540
Pakistan	1,945	204	280
South Korea	242	641	520
Japan	557	289	130
Netherlands	84	107	60

Figure 4.3 Population distribution by age, 1980



a. Include industrialized countries, the USSR and Eastern Europe.

countries the ratio is about a quarter (see Figure 4.3). In the Federal Republic of Germany and the Soviet Union, for example, there are two people of working age for every one who is too young or old to work; in Mexico and Nigeria, there is only one.

- Slower growth of the labor force would mean that less investment, hence a smaller sacrifice of consumption, would be needed to maintain or increase the amount of capital per worker. In most developing countries the working-age population has roughly doubled in the past 25 years. At its current growth rate it will double again in the next 25 years. In Japan and France, by contrast, the working-age population would at its present growth rate take about 90 years to double.

- Human resources could be developed more effectively. About 25 percent of the population of a typical developing country is of primary-school age, compared with 15 percent in developed countries. As a result, for any given amount of spending on education, a developing country has to have either a lower enrollment rate or lower spending per child enrolled. One of the earliest economic effects of declining fertility is a (relatively) smaller school-age group. The

number in this group in Colombia, for example, doubled between 1950 and 1970; but because of a fertility decline that began in the mid-1960s, it then increased only slightly in the 1970s—and fell as a proportion of the total population. In South Korea, where fertility has fallen steadily, the number of school-age children has stopped growing.

There are other effects apart from reducing pressure on the formal education system. Studies in developed countries (even those controlling for socioeconomic class) have shown that children in smaller families tend to be larger, more intelligent, and to have a longer life expectancy. When high fertility is associated with repeated and closely spaced pregnancies, the mother's health can suffer; the results—low birth weight and early weaning—then damage the child's health. In the Colombian town of Candelaria, for example, the likelihood of malnutrition among preschool children in low-income families was directly related to how many brothers and sisters they had. Furthermore, a child's capacity to learn is affected by the amount

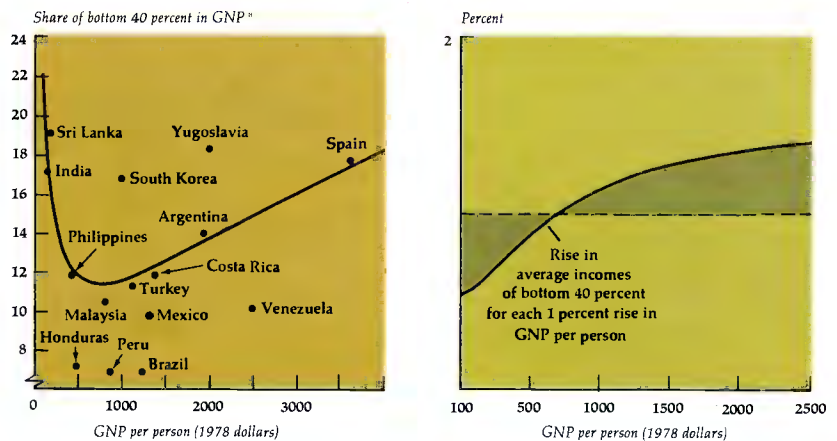
and quality of attention received from parents and other adults in the first few years—and that is generally less in large families.

Raising the incomes of the poor

Faster growth of average incomes is essential to reducing absolute poverty, especially in low-income countries, where half or more of the people may be poor. But growth alone is not enough. This is partly because rising population is tending to swell the numbers in absolute poverty even where they are a diminishing share of the population, and partly because in many developing countries there is a large gap between average incomes and the incomes of poorer groups. It is also because (except at fairly high average incomes) growth tends to widen this gap.

This pattern is described by the Kuznets curve, which shows that the incomes of the poorest 40 percent of the population normally grow more slowly than the average until income per person reaches a range of \$700 to \$900 (see Figure 4.4). Beyond this range, the incomes of poorer groups tend to grow faster than the average. Thus the distri-

Figure 4.4 Income of poorest groups



a. Dates as in Table 24, World Development Indicators.

bution of income typically is less unequal in developed countries than in developing countries.

The initial rise in inequality occurs chiefly because the impulses and opportunities for harnessing modern technology in a backward economy are unevenly spread. Those who perceive (and can take advantage of) these opportunities forge ahead of those who stay in traditional lines of activity—who in some cases may be undercut and impoverished. As development proceeds, though, the modern sectors in industry, commerce and agriculture become increasingly dominant, drawing most of the labor out of the traditional sectors and pulling up the earnings of those who remain in them.

The Kuznets curve is not an iron law. As Figure 4.4 shows, some countries lie well above it, others below. (Information on changes in income inequality in particular developing countries confirms that they do not all follow a path of the same shape.) Much depends on government policy, which can reduce the unevenness of the modernization process—and accelerate growth—by promoting productivity gains in traditional small-scale agriculture, increasing the rate at which labor is absorbed into the modern industrial sector, and not concentrating public investment and services on a few places and social groups.

In addition, governments can take measures to reduce the inequality of incomes by improving the distribution of productive assets (land, capital, labor skills); avoiding price and wage policies that benefit the urban middle classes at the expense of small farmers; discouraging the exploitation of public position for private gain; and making taxes more progressive. They can also take measures to improve the lot of the dependent poor—children, the aged and many women.

The rest of this section looks more closely at the range of things that can be done—in the context of strategies aimed at increasing average incomes—to raise the incomes of those in absolute poverty.

Land and land tenure

Land reform—the redistribution of land ownership in favor of the poor—has been tried in many countries, with mixed results. In some (South Korea, for example) it has raised the incomes of the rural poor considerably—though better access to credit and extension services for small farmers has proved an essential adjunct. In most developing countries there is scope for further land reform.

Because small farms tend to apply more labor per hectare and to use land and capital at least as productively as large farms, land reform will usually increase agricultural output after a period of adjustment (see box overleaf). But it faces social and political opposition—from landlords and from urban groups that benefit from the bigger marketed surpluses of large farms.

As an alternative to distributing individual parcels of land—which is easier where resettlement on uncultivated land is possible, as in Brazil, Indonesia and Upper Volta—some countries (Algeria, China and Peru, for example) have established cooperatives and communes. But these have tended to encounter, in varying degree, serious problems of incentives and management. Other countries have revised land tenure rules: greater security of tenure gives tenant farmers more incentive to invest. Schemes that encourage landlords of sharecroppers to share the cost of seeds and fertilizers have also tended to increase efficiency. But rent control has proved hard to enforce—especially if there have been plenty of landless laborers willing to

replace existing tenants, or if landlords (in their alternate roles as moneylenders and employers) have been able to compensate for loss of rent by extracting more favorable terms from their tenants in other transactions.

Despite the difficulties, land and tenure reform (in urban as well as rural areas) remains a vital element of poverty reduction in many countries, and it merits strong support.

Capital and credit

The poor conspicuously lack every kind of physical capital, but their poverty limits their demonstrated ability to respond to good investment opportunities (such as new seed varieties) by saving more. The alternative is to borrow, which can enable the poor not only to buy pumps and fertilizers for their farms, and tools and materials for their workshops, but also to get their children educated, to pay for transport to better jobs in urban areas, and to tide themselves over periods of illness and unemployment.

But government efforts to help the poor by supplementing traditional informal sources of credit have had only limited success. For long-term credit especially, lenders want collateral—so those with few assets, or who want to acquire intangible assets (such as education) are at a substantial disadvantage. In addition, governments and public agencies usually have not charged an interest rate high enough to make credit programs self-supporting. And the limited amounts of subsidized credit available have often been channeled away from the poor toward more influential groups.

For the poor to benefit from physical investment, however, they do not necessarily have to own or control the assets themselves. Public investment (and private investment by people who

Small is productive

Although most farms in developing countries are small, the small minority of large farms account for most of the area. Yet there is wide-ranging evidence that (comparing similar types of agriculture) smaller farms outperform larger farms in value added per acre. For example:

- India. The Farm Management Studies of the 1950s, covering about 3,000 farms in six states, found that the larger the farm, the smaller its output per acre. Nor has the green revolution—high-yielding varieties of seed—changed this conclusion. The National Council of Applied Economic Research surveyed 4,000 households throughout the country in 1968–69, 1969–70 and 1970–71; more than 2,500 of them were farming throughout the period. Although the productivity gap between large and small farms tended to narrow as the green revolution spread, it remained significant—even after controlling for differences in land quality and irrigation. The proportion of land under high-yielding varieties did not vary by farm size. Tests relating capital and labor use to farm size showed that as farms became larger, they used proportionately less capital and labor—and particularly the latter, which costs less on small farms making use of family labor than on large farms relying mainly on hired labor.

- Brazil. The World Bank and SUDENE, the official regional development authority, carried out a detailed study of 8,000 farms in the poor northeastern region in late 1973 and early 1974. It revealed that the intensity with which land and labor were

used declined sharply and consistently as farm size increased. Depending on the subregion, small farms applied 5 to 22 times as much labor per hectare as large farms, although the proportion of high- or medium-yielding soils did not vary significantly with the size of the farm. Small farms tended to employ more labor than profit maximization would warrant, probably in part because family members have difficulty in obtaining employment elsewhere, while large farms employed less.

Such studies suggest that redistribution of land in larger farms into smaller ones in many cases would increase output and employment (and of course equity) significantly. But there are important qualifications. For example, where literacy rates are low among small farmers, middle-size farms tend to be quicker to adopt innovations. After a certain point fragmentation inhibits productivity growth, and significant land is lost through field boundaries (for example, in parts of Asia a holding of one hectare may comprise 15 or 20 tiny parcels). For some combinations of crops and soils, mechanization—and thus large fields—may increase output: research in South Asia provides little support for the yield-increasing effect of tractor cultivation, which may simply cause agricultural laborers to get fewer days of work. But where labor is in relatively short supply, and timely cultivation and harvesting are critical to increasing yields, large mechanized farms may be economically rational.

are not poor) can have a powerful effect on their earnings. Irrigation schemes, which can double the amount of labor required per hectare of land, raise the incomes of landless laborers, even though farmers (especially those who own their land) derive even greater benefits—see Table 4.2. Similarly, roads that reach remote villages and provinces where some of the poorest people live have (in Liberia and Thailand, for example) increased their incomes by giving them access to new seeds, insecticides and markets, as well as by enabling them to move more readily to

places where they can earn more.

The construction phase of infrastructural investments can also provide employment and higher wages for the poor. The record of employment through public works is a checkered one—there have been too many cases where for one reason or another local labor has not received much benefit or where the road or dam concerned has been of little economic value.

But there are enough examples of successful schemes (as in Morocco and the Indian state of Maharashtra) to suggest that the approach is worth pursuing, albeit with care.

Nor, as Chinese experience shows, need schemes of this kind be only temporary. With good organization, investment in rural infrastructure can continue indefinitely. In this as in all areas, governments should not encourage excessive capital intensity and thus discourage employment creation. The policies required, which were discussed at length in Chapter 4 of last year's *Report*, are partly a matter of avoiding subsidies for capital and taxes on labor, but also involve general development strategy (including that for foreign trade).

Education, health, nutrition and fertility

The employment opportunities and earning power of many of the poor are also limited (in ways to be discussed further in Chapter 5) by sickness, insufficient food and lack of education. Their standard of living is also depressed by their high fertility and large family size—each adult's earnings have to support more dependents than in richer families (see Table 4.3).

Better health and nutrition can permit poor people to work more days in each year (which among other things increases their eligibility for employment in modern industry) and can increase their effectiveness at work. Studies of construction projects in India and Indonesia showed that poor health and nutrition were among the factors which tended to make the use of capital-intensive techniques more economical, even where labor was cheap and abundant.

Even a primary education can raise the productivity of small farmers (see page 48) and, though this has been studied much less, make the poor better entrepreneurs in other lines of business. Moreover, basic education is usually a precondition of employment in modern manufacturing and services. In Brazil, for example, the growth of modern industrial

Table 4.2 Irrigation and income, selected projects

Country and beneficiary	Household income (current dollars)			
	Without irrigation	With irrigation ^a	Absolute increase	Percentage increase
<i>Cameroon (northern: rice) 1978</i>				
Farmers	178	1,013	835	469
<i>South Korea (Pyongtaek-kumgang: rice) 1976^b</i>				
Farmers	286	500	214	75
<i>Malaysia (Muda: rice) 1974</i>				
Large-scale farmers	190	361	171	90
Small-scale farmers	237	448	211	89
Landless laborers	131	247	116	89
	73	166	93	127
<i>India (Uttar Pradesh: rice, wheat, sugarcane) 1978</i>				
Large-scale farmers	181	359	178	98
Medium-scale farmers	384	738	354	92
Small-scale farmers	218	464	246	113
	148	264	116	78

a. All studies control for changes in other influences on incomes.

b. Household income per person.

employment is slowest among uneducated people. Literacy and numeracy are necessary not just in clerical work, but also in the many manual jobs that involve following written instructions or keeping simple records. Schooling has also been shown to increase the capacity to learn from subsequent formal training and practical experience.

It should be emphasized that better education, health and nutrition—while they may be necessary to increase the earning power of the poor—are not sufficient. Complementary measures are also needed to expand the demand for labor and to furnish the incentives and material resources required for innovation.

Nor will all the gains in income that can result from better education, health and nutrition among the poor necessarily accrue to the poor. In some circumstances, the increased productivity of a farmer will partly benefit his landlord—or consumers, for that matter, who may be able to buy food more cheaply. These distributive issues are difficult and poorly understood,

but they do not detract from the fundamental point that poor health and lack of education are likely to aggravate the exclusion of the poor from modern development. If the innovations of richer and better educated farmers increase agricultural output and reduce its price, the incomes of the poor farmers who do not innovate will fall.

Table 4.3 Dependency ratios, by income group

Income group ^a	Average household income (percentage of national average)	Dependency ratio ^b
<i>Peninsular Malaysia, 1973</i>		
Richest 10 percent	332	0.4
Poorest 10 percent	18	1.2
<i>Sri Lanka, 1969–70</i>		
Richest 10 percent	240	0.5
Poorest 10 percent	46	1.3
<i>Nepal (seven towns), 1974–75</i>		
Richest 10 percent	167	0.4
Poorest 10 percent	51	1.2

a. Households ranked by income or expenditure per person.

b. Children (0–14) and the aged (over 65 for Peninsular Malaysia; over 60 for the others) as percentage of the rest.

While others may benefit from the poor being educated, the converse is also true. More and better extension workers are needed to reach poor farmers. Technicians and accountants are needed to run factories. More managerial and administrative training and experience could increase the rate of industrial and agricultural expansion, create more jobs and raise the incomes of everyone.

Research and technology

Nor should specialized scientific and technological education be overlooked. Their role in reducing poverty is particularly apparent in agriculture. The introduction of high-yielding rice and wheat varieties—the green revolution—has substantially improved the lives of poor consumers and (on balance, with many exceptions) small farmers in the wetter parts of Asia. But more research is urgently needed on dry farming (the economic rate of return to this sort of research has typically been as high as 20–30 percent) and on the cultivation of poor soils and subsistence crops on which many low-income farmers depend. And in countries where climate and soil conditions vary widely from place to place, much more research is needed to determine the best farming methods for each place—in Tanzania this is being held back by a shortage of scientists at local research stations.

Industrial research also has a part to play in reducing poverty (as does research in such fields as education and health). Many technical advances stem from work done by large firms in industrialized countries. The resulting innovations, which tend to be concentrated on capital-intensive methods of large-scale production, often benefit the poor—as in the case of fertilizer. But small enterprises are

disadvantaged, job creation is limited, and some of the goods bought by the poor are not improved or made cheaper as rapidly as those bought by the rich. More research, especially if undertaken in developing countries, could reduce these biases. Progress has already been made, for example, in small-scale food processing and labor-intensive construction.

Migration

Technology is one way of making progress in places where poverty stems from poor land or poor climate. Another is for people to move to places where opportunities are better. Expansion of rural employment, both on and off farms, will reduce the need for migration; but it is clear that the industrialization of poor countries (like that of the now-developed countries) will in the long term require large-scale migration from rural to urban areas. International migration has

also been important in reducing poverty—particularly in Northern Europe in the 19th century, but also more recently in Mediterranean and other developing countries where a significant proportion of the relatively unskilled labor force has migrated to the Middle East or elsewhere (see box on page 22).

The relation between rural-urban migration and poverty remains somewhat controversial; but views on this subject have evolved over the past decade (see Chapter 6 of the *World Development Report, 1979*). It now is increasingly recognized that those who move generally make themselves better off. Their incomes go up, and they and their dependents have better access to health and education services. Studies in India show that the chances of girls from poor families going to school are more than twice as high in large cities as in rural areas.

On the other hand, there is still widespread concern about the fiscal, social and political costs of rapid rural-urban migration, which, by holding down urban wages and adding to pressure on government services, retards the rate of improvement in the living standards of the urban poor. But these living standards, low as they often are, tend to be above those of the rural poor. Where they are not, as in Calcutta, migration usually ceases or goes into reverse. Indeed, reverse and repeated migration in response to changing job opportunities has been found to be common.

The effects on those who remain in the countryside—other than the families of migrants that benefit from remittances—appear to vary from case to case. In some, non-migrants gain because the labor market tightens when people leave, and because there is less pressure on agricultural land. In others, remittances have been spent on concentrating land ownership—to

the detriment of the poor. And in a few cases the exodus of bright young people may have held back agricultural progress. The impact of rural development programs on migration is not clear-cut, either; land redistribution, expansion of the cultivated area, and lower fertility reduce emigration; but improved communications and the commercialization of agriculture appear to increase it.

The extent to which the poor benefit from migration depends partly on the extent to which they have had access to at least a primary education (see box). Illiterate people do migrate, and often gain substantially by it (though sometimes they become destitute wanderers). But Indian evidence suggests that they move mainly to other rural areas. If they try to move to urban areas, where earnings prospects are generally better, the uneducated are much more likely (as a study of Bombay showed) to fail to get jobs and to be forced to leave.

The same is true of international migration. The poor and uneducated are less likely to find out about opportunities for working abroad. More important, they have less chance of being accepted by prospective employers. It has been estimated that more than three-quarters of the foreigners now working in the Middle East are literate, and almost all of them have some skills. Even if no formal training is needed, good health is invariably a prerequisite of foreign employment, and one which many poor people are unable to fulfill.

Migration of all kinds can have harmful social and economic effects. But on balance the evidence suggests that, by enabling labor to be used where it is most productive, migration aids both growth and poverty reduction—and would do so even more if the poor were better equipped to migrate. Develop-

A strategy that backfired

The experience of two subclans in western Kenya illustrates some of the interactions between education, migration and agricultural development.

In the 1930s the head of the more powerful subclan, anxious to conserve his people's land, caused the colonial administration's schools to be built on the land of the other subclan. This had unexpected consequences.

The education received by members of the less powerful subclan enabled some of them to get jobs in the local town. The money they remitted was used to purchase improved livestock, to switch into cash crops (especially coffee) and to establish more schools. In addition, the movement of people to the town slowed the rate at which land was subdivided, making the introduction of improved livestock (which required a minimum grazing area) more profitable.

By 1974, although the division of political power was still the same, the less powerful subclan had become the richer of the two.

ment strategies that assume that the productivity of the poor must necessarily be raised in the places where they now live may be both inefficient and inequitable. Not least, the children of the landless in stagnant rural areas may be best served by a primary education that will increase their geographic, as well as economic, mobility.

Transfers and subsidies

In industrialized countries the mainstay of antipoverty policy is income transfers aimed at offsetting life-cycle poverty among the old and the very young, and at compensating for loss of earnings through sickness, unemployment and so on. In developing countries, too, these are important causes of extreme poverty (though they tend to be mitigated more through the extended family); and they are not touched directly by measures to raise earning power. Brazil, Turkey and a number of other middle-

income countries have fairly extensive social security programs. But the scope for such programs in low-income countries is necessarily limited.

An alternative approach, used in both industrialized and developing countries, is to subsidize (and sometimes also ration) items that are particularly important for poor people. Such subsidies can raise the real incomes of the poor considerably—witness the increase in Peru's infant mortality when subsidies were reduced and unemployment rose in 1976. Indeed, the three low-income countries with life expectancy above 60 years all provide guaranteed or subsidized food. But programs of this sort (discussed further on page 62) have to steer a tricky course between the financial rocks of general subsidization and the administrative and political rocks of effectively reaching the poor.

□ □ □

The next three chapters examine in more detail one aspect of antipoverty policy—human development. Chapter 5 looks at the consequences and determinants of education, health, nutrition and fertility; at policies that affect them; and at the way in which they (and incomes) interact. Chapter 6 considers some of the common practical problems—political, financial, administrative—of human development programs. Chapter 7, in the context of a discussion of the several regions of the developing world, addresses some practical questions of priorities and tradeoffs: How do the benefits and costs of human development programs compare with those of the other approaches to poverty reduction discussed in the present chapter? How does the best allocation of resources vary according to the circumstances of particular countries and the specific objectives being pursued?

5 Human development issues and policies

This chapter looks at the four main areas of human development—education, health, nutrition and fertility—and at the links between them. In each, it considers the causes and effects of poverty and various ways of breaking its grip on the poor and their children.

Ten years ago this chapter would have been written very differently. In certain areas thinking has changed substantially—for instance, about the nature of malnutrition and its causes. Good progress has been made in unraveling some complex and highly controversial issues—for example, the respective roles of family planning and social development in reducing fertility. And in all areas, research and practical experience have improved understanding of the nature of poverty and what can be done about it.

Education

Every individual is born with a collection of abilities and talents. Education, in its many forms, has the potential to help fulfill and apply them.

In some societies the economic function of schooling is regarded as minor—since the cultivation of the mind and the spirit, curiosity, contemplation and reasoning have more than economic purposes and justifications. But in the context of this *Report*, it is the role of education in overcoming poverty—increasing incomes, improving health and nutrition, reducing

family size—that receives most attention.

A decade or two ago, there was a widespread view that trained people were the key to development. Universal literacy was a political objective in many countries, but money spent on primary schooling was often regarded as diverted from activities that would have contributed more to economic growth. Planners favored the kinds of secondary and higher education that directly met the “manpower requirements” of the modern sector. People who worked with their hands were thought not to have much need of formal education.

Over the past decade, views have changed substantially. Adequate provision of secondary and higher education and training remains an important priority. But the value of general education at the primary level is now more widely recognized. This section discusses more of the evidence that lies behind this change in

views, and its implications for development strategy.

Recent progress

The major educational progress of the past two decades reflects heavy investment by developing countries. Their total public expenditure on education rose in real terms (in 1976 dollars) from about \$9 billion in 1960 (2.4 percent of their collective GNP) to \$38 billion in 1976 (4.0 percent of GNP). Costs vary widely by region—and by type of education (see Table 5.1). The potential for continued enrollment growth at different levels will, of course, be strongly affected by these costs.

But school attendance in some parts of the world remains low, especially among the poor, in rural areas and by girls (see Figure 5.1 and Table 5.2). This is not simply because schools are unavailable—not everyone who has an opportunity for education accepts it. Among those who do enroll, moreover, in developing countries on

Table 5.1 Public expenditures on elementary and higher education per student, 1976

<i>Region</i>	<i>Higher (post-secondary) education</i>	<i>Elementary education</i>	<i>Ratio of higher to elementary education</i>
Sub-Saharan Africa	3,819	38	100.5
South Asia	117	13	9.0
East Asia	471	54	8.7
Middle East and North Africa	3,106	181	17.2
Latin America and Caribbean	733	91	8.1
Industrialized	2,278	1,157	2.0
USSR and Eastern Europe	957	539	1.8

Note: Figures shown are averages (weighted by enrollment) of costs (in 1976 dollars) in the countries in each region for which data were available.

average 40 percent drop out before the fourth year. In Brazil's poor rural Northeast region in 1974, despite an enrollment rate of 46

percent (less than half the national urban average), nearly two-thirds of the students dropped out before the second year—and it is estimated

that at most 4 percent completed four years. Even the completion statistics conceal the very low quality of some of the schooling provided (see pages 52–53).

Nonetheless, the very substantial growth in enrollment (Figure 5.1) is a sign of great educational advance. There are several mechanisms through which this has contributed to growth in incomes.

Effects of education on earning power

Schooling imparts specific knowledge and develops general reasoning skills (its “cognitive” effects); it also induces changes in beliefs and values, and in attitudes toward work and society (“noncognitive” effects). The relative importance of these effects is much debated, but poorly understood; both are extremely important.

In the cognitive area, developing a generalized capacity for thinking and learning has to be found to be more important than the specific subjects learned. On-the-job training, informal education and vocational training all build on learning abilities acquired earlier. And although literacy and numeracy deteriorate if left unused, the educational experience still generally provides an improved foundation for subsequent learning.

Many of the noncognitive effects of schooling—receptivity to new ideas, competitiveness, and willingness to accept discipline—are directly relevant to productive economic activity. Others—tolerance, self-confidence, social and civic responsibility—are more personal or political in nature, but may also affect economic performance.

Some of the evidence on the effects of education rests on attempts to measure attitudes directly. Studies in several countries have shown that “modernity” of outlook toward activities ranging from voting to family planning, saving and

Figure 5.1 Enrollment ratios, by region, 1960–75

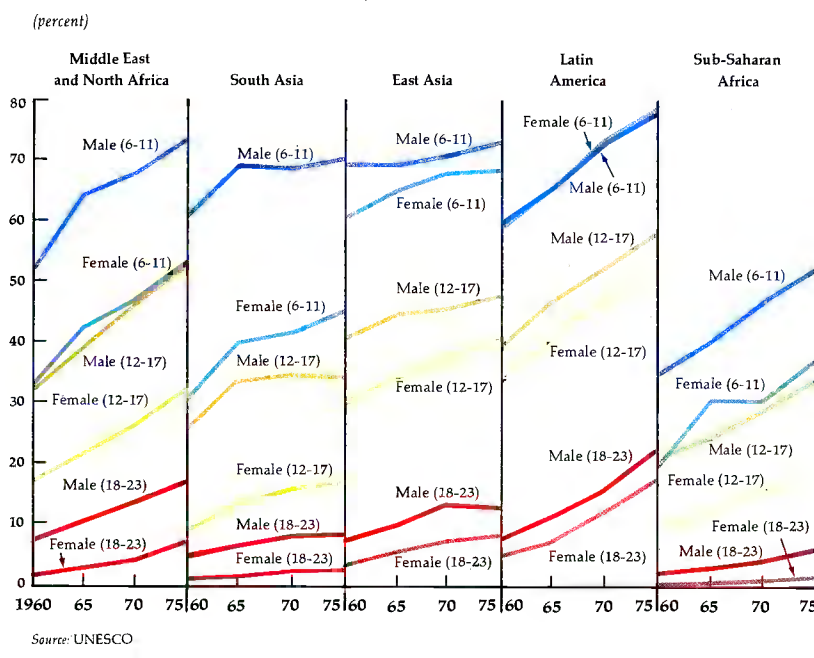


Table 5.2 Primary school enrollment, by income group

(percent)

Country	Boys (aged 5–9)		Girls (aged 5–9)	
	Poorest households	Richest households	Poorest households	Richest households
Sri Lanka, 1969–70	70.3	89.8	65.8	81.9
Nepal, 1973–74				
11 towns	29.5	77.8	15.3	71.2
India: Gujarat state, 1972–73				
Rural	22.7	53.9	8.6	50.9
Urban	42.1	77.7	30.8	69.5
India: Maharashtra state, 1972–73				
Rural	24.6	54.6	16.6	52.9
Urban	40.4	86.3	42.1	87.0
	<i>Both sexes (aged 6–11)</i>			
		Poorest households	Richest households	
Colombia, 1974				
Large cities		69.6	94.6	
All urban		62.0	89.5	
Rural		51.2	60.0	

Note: Enrollments are expressed as a percentage of the number in the age group. Poorest and richest refer (in the case of India, Nepal and Sri Lanka) to the bottom and top 10 percent of households ranked by expenditure per person, and (in the case of Colombia) to the top and bottom 20 percent of households ranked by income per person.

working, is more influenced by the level of the individual's schooling than by any other factor. But there are also many studies of the direct effect of schooling on individual productivity and earnings, which are examined here under two heads—those relating to the self-employed and those relating to employees.

THE SELF-EMPLOYED. The hypotheses are straightforward: that primary education helps people to obtain and evaluate information about improved techniques and new opportunities, to keep records and estimate the returns of past activities and the risks of future ones. More generally, primary schooling is a training in how to learn, an experience in self-discipline and in working for longer-term goals.

Most of the empirical evidence comes from agriculture—studies comparing the productivity, yields and innovative activity of schooled and unschooled farmers. Not all these studies controlled adequately for other influences, particularly wealth; but many did (for example, by including farm size as a proxy for wealth).

The general weight of the evidence (see Table 5.3) lends strong and consistent support to the hypotheses—and is particularly compelling because the studies measure productivity directly, not through wages. Where the complementary inputs required for improved farming techniques were available, the annual output of a farmer who had completed four years of primary schooling was on average 13.2 percent more than one who had not been to school. As expected, where complementary inputs were not available, the increase in output resulting from additional schooling was on average smaller—but still substantial.

Whether these increases should be regarded as large or small de-

Table 5.3 Farmer education and farmer productivity

Study	<i>Estimated percentage increase in annual farm output due to four years of primary education rather than none</i>
<i>With complementary inputs^a</i>	
Brazil (Garibaldi), 1970	18.4
Brazil (Resende), 1969	4.0
Brazil (Taquari), 1970	22.1
Brazil (Vicosa), 1969	9.3
Colombia (Chinchina), 1969	-0.8
Colombia (Espinal), 1969	24.4
Kenya, 1971-72	6.9
Malaysia, 1973	20.4
Nepal (wheat), 1968-69	20.4
South Korea, 1973	9.1
Average (unweighted)	13.2
<i>Without complementary inputs</i>	
Brazil (Candelaria), 1970	10.8
Brazil (Conceicao de Castelo), 1969	-3.6
Brazil (Guarani), 1970	6.0
Brazil (Paracatu), 1969	-7.2
Colombia (Malaga), 1969	12.4
Colombia (Moniquira), 1969	12.5
Greece, 1963	25.9
Average (unweighted)	8.1
<i>No information on availability of complementary inputs</i>	
Average of eight studies (unweighted)	6.3

a. Improved seeds, irrigation, transport to markets and so on.

pends on the cost of achieving them. It is thus significant that studies that went on to compare the increase in production resulting from education with the costs of that education (for example, in Korea, Malaysia and Thailand) found rates of return comparing very favorably with investment in other sectors. It is, of course, impossible to predict which places will offer scope for improved farming techniques in 10 years' time, when children leave school. In some, effects on farm productivity may be low. But given past progress in agricultural research, it is probable that some places with stagnant technology now will offer greatly improved possibilities. Thus, on growth as well as equity grounds,

it would be short-sighted to leave a large part of the next generation of farmers illiterate.

EMPLOYEES. The second type of study relates the educational levels of individuals to their wages and salaries. If education affects the capacity to learn, innovate and adapt, its effects should be particularly important for employees doing nonroutine or changing tasks. For employees in modern enterprises, primary education also promotes disciplined work habits and responsiveness to further training, as well as offering the advantages of literacy and numeracy.

Studies of the rate of return to education for wage earners deal mainly with relatively large urban enterprises; but a few have included small businesses and agricultural workers. All find that more schooling leads to higher earnings. And when the extra earnings resulting from primary education are weighed against its costs, high rates of return are consistently found. Similar studies for secondary and higher education find lower, though nonetheless substantial, returns (see Table 5.4 and box).

Investment priorities in education

Primary education is of particular importance in overcoming absolute poverty. But secondary, higher, vocational and adult education and training also have major roles to play.

PRIMARY EDUCATION. In countries where it is far from universal, the case for increasing the proportion of children who complete primary education is strong. While there have been high economic returns in the past, it has been suggested that the rate of return to primary schooling (especially in certain jobs) may decline as the proportion of the labor force with primary education increases. But

this may be offset by shifts in the pattern of production toward more skill-intensive goods. In Table 5.4 the rates of return to primary education in countries with adult literacy rates above 50 percent, while somewhat below those in countries with adult literacy below 50 percent, are still strikingly high.

And in the few countries where studies have been done at different periods, rates of return have usually declined, but only mildly.

There are also favorable effects on equity. As primary education becomes more widespread, additional spending will be increasingly concentrated on backward

rural areas, girls, and the poorest urban boys. In general, primary education tends to be redistributive toward the poor (see Table 5.5). In contrast, public expenditure on secondary and higher education tends to redistribute income from poor to rich, since children of poor parents have comparatively little opportunity to benefit from it.

Primary education, especially of girls, has favorable effects on the next generation's health, fertility and education (see box overleaf). Finally, it enriches peoples' lives. Many would regard this as sufficient justification for universal primary education, independent of its other benefits.

SECONDARY AND HIGHER EDUCATION. Renewed emphasis on the importance of primary education, and its high returns relative to secondary and higher education, should not start the pendulum swinging too far in the other direction. High levels of knowledge are necessary for many people who serve the poor, both directly as teachers, health workers and agricultural extension workers, and indirectly as researchers, technicians, managers and administrators. While their skills must be developed to a considerable extent through practical experience and in other ways, there is for some purposes no better or cheaper substitute for the formal disciplines of conventional schooling. Even allowing for doubts about the estimated rates of return to secondary and higher education, and for the existence of some educated unemployment (see box on next page), there are unquestionably severe shortages of skilled people in many developing countries.

More economical ways of producing skilled people need to be found. First, greater use of in-career and on-the-job training should be

Table 5.4 Rates of return to education
(percent)

Country group	Primary	Secondary	Higher	Number of countries
All developing countries	24.2	15.4	12.3	30
Low income/adult literacy rate under 50 percent ^a	27.3	17.2	12.1	11
Middle income/adult literacy rate over 50 percent	22.2	14.3	12.4	19
Industrialized countries	..	10.0	9.1	14

Note: In all cases, the figures are "social" rates of return: the costs include forgone earnings (what the students could have earned had they not been in school) as well as both public and private outlays; the benefits are measured by income before tax. (The "private" returns to individuals exclude public costs and taxes, and are usually larger.) The studies refer to various years between 1957 and 1978, mainly in the latter half of the period.

a. In this sample of 30 developing countries, those countries with low incomes also had literacy rates below 50 percent (at the time the studies were done). All the middle-income countries had literacy rates above 50 percent.

Schooling, screening and productivity

The interpretation of rates of return to education—especially secondary and higher education—is still controversial. It has often been argued that educational qualifications are simply a "screening" device, signaling an individual's productive qualities to an employer without actually enhancing them. In some developing countries, moreover, the public sector—and some heavily protected parts of the private sector—are the main employers of university and even secondary-school graduates: it has been suggested that the salaries they pay are often artificially inflated and bear little relation to relative productivity; and that educational requirements serve merely to ration access to these inflated salaries. In both cases, earnings differences associated with different levels of education would overstate the effect of education on productivity.

On the other side, it is argued that school "screening" is by no means all wasteful and is preferable to such other screening methods as caste or family connections. It is also argued that labor markets are not so monopolistic, and

thus that relative wages are not such imperfect indicators of productivity, as those who have concentrated on their institutional characteristics and determinants have supposed. In developed countries the relative wages of different occupations have gradually but steadily changed in response to increases in the supply of educated labor. That the same process operates even in the public sector in developing countries is suggested, for example, by the fact that the relative salaries of teachers and civil servants are much higher in Africa, where educated manpower is much scarcer, than in Asia, where it is more abundant.

The conventional economic interpretation of the association between schooling and wages is further strengthened by a few studies showing that more educated workers have increased output in specific manufacturing industries, by evidence of substantial returns to education even in agriculture and other traditional small-scale activities, where one would expect educational credentials to be much less important, and by the macroeconomic evidence discussed in the box on page 38.

Table 5.5 Public education spending per household, by income group
(dollars)

Income group ^a	Malaysia, 1974 ^b		Colombia, 1974 ^c	
	Primary	Postsecondary	Primary	University
Poorest 20 percent	135	4	48	1
Richest 20 percent	45	63	9	46

a. Households ranked by income per person.

b. Federal costs per household.

c. Subsidies per household.

The benefits of women's education

Educating girls may be one of the best investments a country can make in future economic growth and welfare—even if girls never enter the labor force. Most girls become mothers, and their influence—much more than the father's—on their children is crucial:

- In health. Studies in Bangladesh, Kenya and Colombia show that children are less likely to die, the more educated their mothers, even allowing for differences in family income.

- In nutrition. Among households surveyed in Sao Paulo, Brazil, for any given income level, families were better fed the higher the mother's education.

- In fertility. Education delays marriage for women, partly by increasing their chances of employment; and educated women are more likely to know about, and use, contraceptives.

Yet in most parts of the developing world, there are many more boys than girls enrolled at school (see Figure 5.1). True, female enrollment grew faster than male between 1960 and 1977; but when boys' enrollments were where female enrollments are today, they were growing even faster. The educational bias is most pronounced in South Asia, the Middle East and North Africa, and parts

of Sub-Saharan Africa; but it exists to some extent in every region.

Why? From the parents' point of view, education for their daughters may seem less attractive than for their sons. They may fear that education will harm their daughters' marriage prospects, subsequent domestic life and even spiritual qualities. A girl's education brings fewer economic benefits if there is discrimination against her in the labor market, if she marries early and stops working or if she ceases after marriage to have any economic obligations toward her parents.

But parents and their daughters do respond rapidly to changing opportunities. When women took on key roles in the Anand Dairy Cooperative in Gujarat, India, education for girls became more valued. When a nutrition project in Guatemala offered employment to educated girls, the test scores of younger girls improved.

More generally, education does increase the chance of paid employment for girls. In Brazil married women with secondary education are three to four times more likely to be employed than those with primary education only—who in turn are twice as likely to work as women with no education at all.

explored. Second, steps should be taken to reduce the high unit costs of secondary and higher education (shown in Table 5.1).

- For example, the number of university specializations can be reduced, relying on foreign universities (not necessarily in developed countries) for specialized training in areas in which small numbers of students lead to excessive teaching and equipment

costs per student. Care must be taken to encourage repatriation and to prevent foreign training from becoming exclusively the privilege of the children of the rich and influential.

- Correspondence courses can dramatically reduce the cost of secondary and higher education and teacher training. The Korean Air-Correspondence High School, for example, provides secondary

education at about a fifth the cost of traditional schools, and allows would-be students who have to earn a living to continue their education at the same time. Recent studies (in Brazil, Kenya and the Dominican Republic) have also concluded that correspondence courses have effectively taught people in remote areas.

- In most countries the families of postprimary students pay too little for education. They are generally much better off than the national average: in Tunisia, for example, the proportion of children from higher income groups is nine times larger in universities than in elementary school. Since the rewards from higher education are large, it is highly desirable (though often politically difficult) to charge tuition and other fees to cover costs. Scholarships can be given to students whose families cannot afford to pay.

The cost of secondary and higher education makes it inevitable that in most countries demand for places will exceed supply for the foreseeable future, although some countries, such as South Korea, already have very high enrollment rates. But economic considerations are not the only relevant ones: secondary education often helps in lowering fertility and reducing child mortality (over and above the effects of primary education). All developed countries have found universal free secondary education to be desirable in its own right. The question for developing countries is less "whether" than "when." Higher education clearly also has scientific, cultural and intellectual objectives, as well as economic ones.

VOCATIONAL EDUCATION AND TRAINING. Experience shows that it is often inefficient to rely heavily on schools (as opposed to the workplace and short-term training

Unemployment among the educated

Unemployment statistics in developing countries are sparse and often hard to interpret. Evidence on open unemployment (persons without a job and actively seeking employment) indicates that it is primarily an urban phenomenon heavily concentrated among workers in their teens and early twenties. Since these are the ages at which individuals typically leave school or university, there has been concern that educational expansion in developing countries will produce a growing problem of "educated unemployment." But despite the increased outflow of students over the past decade, particularly secondary-school graduates, there is no evidence of rising trends in open unemployment rates. Unemployment statistics from a number of countries do, however, suggest that secondary-school leavers experience higher rates of unemployment than the uneducated or those with postsecondary education.

By and large, educated unemployment appears to be associated with the processes through which the labor market adjusts to an increased supply of school leavers. First, the earnings expectations or job preferences of school leavers may not keep pace with changes in labor market conditions brought about by increased numbers of workers with educational credentials. Second, the structure of wages may be slow to adjust—especially if the public sector is a major employer of educated workers. School leavers may then be encouraged to wait for jobs in well-paid occupations rather than immediately accept a job that pays significantly less; if the wage difference is high enough and the probability of obtaining a higher-

paid job is sufficiently large, a period of job-seeking or unemployment will yield a higher expected "lifetime" income.

The educational pattern of unemployment is consistent with this explanation. It is not worthwhile for uneducated workers to remain unemployed as they search for a well-paid job. At the other extreme, highly trained people are scarce in many countries—so college graduates can get well-paid jobs immediately. But those in between—the secondary-school leavers—are neither assured of high-wage jobs nor completely out of the running; for them, there may be high returns to a full-time search for a job. Since the unemployed are young, with few dependents and often supported by their families, and since most of them eventually find jobs, neither the social nor the private costs associated with this unemployment are as serious as might appear.

Moreover, the fact that some primary- and secondary-school leavers are unemployed does not imply that the economy is unable to make productive use of more of them. Various studies have shown that the social rate of return to investment in education may be high despite the number of educated unemployed. But in the eyes of governments, frustrated school leavers or college graduates can form a politically volatile group. Some governments have therefore virtually guaranteed public-sector jobs for post-secondary leavers whether or not there has been socially productive work for them to do. This can result in a major drain on government revenues and impede the diffusion of educated manpower into more productive uses as well.

institutions) to develop vocational skills. Vocational and technical schools often find it difficult to strike the right balance between general preemployment training and the provision of specialized skills, and are often slow to adjust to the economy's changing needs. In many school systems where competition for higher education is strong, they also suffer from low prestige.

By contrast, institutions that provide training in skills with wide applicability as a foundation for

later on-the-job training or short-term courses (which may be needed more than once in a lifetime) are more likely to be successful, especially if, as in Brazil, Chile and Singapore, there is coordination with potential employers.

ADULT EDUCATION. Certain types of adult education play a useful role. To be effective, adult education must be conducted by dedicated and responsible teachers, and must address specific, felt needs; after a major review,

UNESCO concluded that the poor results of most adult literacy programs were due to lack of demand. Where there is an explicit need, results have been better. For example, a recent review found that agricultural extension—which is essentially an applied form of adult education—generally helped to raise productivity; and the World Bank's experience with the "training and visit" (T & V) approach to agricultural extension, which puts great weight on careful training and supervision of field workers, is consistent with this. In West Bengal, for example, T & V was introduced in 1975 and helped to raise the proportion of land area planted with high-yielding wheat and paddy varieties from less than 2 percent to 40 percent, in a single year. While T & V is effective even with illiterates, literate farmers tend to be more responsive to suggested changes.

Implementing investment priorities

The education received by poor children depends on three things. The first is accessibility—are there school places for them within a reasonable distance from home? The second is use—do their parents send them to school, and are they allowed or encouraged to drop out? The third concerns the quality of the education that schools provide.

ACCESSIBILITY. Financing constraints will often be compounded by difficulties in reaching the poor—distance, low-density populations and poor communications—so that building schools and supplying books, equipment and qualified teachers is a difficult and expensive task. For example, the Nepalese government estimates that it costs more than twice as much to build and equip a school in mountainous regions as it does

in the plains; and attracting qualified teachers to remote areas has proved to be extremely difficult.

There is often much that can be accomplished by administrative action with relatively little capital investment. Repetition of classes and early dropout may be the result of excessively high promotion standards. In these circumstances, the flow of students can be accelerated by more automatic promotion—while maintaining quality by correcting some of the causes of repetition or dropout. In many situations, resources can be freed for extending education by raising student-teacher ratios, which are the main determinant of unit costs (given teacher salaries) and are largely determined by class size. Extensive research shows that class size has surprisingly little effect on learning (see box). It is important to maximize the use of available facilities—by rotating classes, with staggered scheduling and double shifts in areas of high population density. If there are not enough pupils within an acceptable distance from school to fill individual classes, student-teacher ratios and the use of space can be significantly improved by taking new students only in alternate years (as has been done successfully in a project financed by the World Bank in Malaysia) and by teaching more than one grade in a class, as in another World Bank-financed project in El Salvador.

USE. Since most poor parents believe that education would benefit their children—in terms of status and the ability to stand up to officials and merchants, as well as in a more narrowly economic sense—they must have strong reasons for not sending their children to school if they have the chance. They may question whether they will benefit themselves; they may even regard the school as a threat

Big is not necessarily bad

Class sizes vary widely in the developing world—at elementary schools, from more than 60 in four countries (Chad, Malawi, Congo-Brazzaville and Central African Republic) to less than 25 in seven (Iraq, Barbados, Bolivia, Uruguay, Romania, Mauritania and Mauritius). Yet once classes have more than 40 students, varying their size has almost no effect on student learning (though larger classes may weaken discipline and teacher morale). Between 15 and 40, students learn more in smaller classes (and still more in even smaller classes), but the benefits are slight. For example, reducing an elementary-school class from 40 pupils to 15 can be expected to improve average achievement (in a standard test) by only about 5 percentage points. By the same token, a modest increase—from 35 to 40 pupils, say—might reduce achievement by only a single percentage point. While there are obvious practical limits to increasing classes much above 50, the research does suggest that, for classes initially below 50, little will be lost if they are increased.

In sparsely populated areas, larger classes—if that means fewer schools—may increase the time it takes children to get to school. That could be a genuine discouragement, though in most places population density is high enough not to make it so.

to their traditional way of life; or they may simply believe that social or ethnic barriers are too great, or the quality of the available schooling too low, to make education worth its costs. For poor families, the help of children at home—in animal care, fetching fuel and water, taking care of young children while adults work, and in agricultural work during busy seasons—may conflict with a fixed school schedule. For some families, malnutrition and poor health of children may lead to poor attendance, inattention while in school, repetition of grades and, eventually, dropping out. And there are particular reasons that girls receive

less education than boys (see box on page 50). Since the mere existence of a school does not automatically mean it is used by all those eligible to attend, special measures may be needed to ensure that the education offered is attractive to the families for whom it is intended (see pages 78–79).

QUALITY OF EDUCATION. This is generally low in developing countries, and has been found (for example, in studies undertaken in Thailand, Malaysia and the Philippines) to be lower still for poor and rural pupils. Poor quality public schools may lead the well-to-do to choose private schools for their children, reinforcing social and economic inequality.

Casual observation and small-scale studies have long suggested that poor training of teachers, lack of textbooks, and inadequate school facilities lead to poor educational results and provide a weak basis for subsequent training. But broad-based evidence to demonstrate the extent of the resulting learning losses has only recently become available—from a large research project, the International Evaluation of Educational Achievement. But only four developing countries (Chile, India, Iran and Thailand) were among the 19 countries covered.

While international comparisons of student achievement must be approached gingerly, particularly when different languages or testing styles can affect the results, a clear pattern nonetheless emerges from the study. Differences in average performance of students varied somewhat from subject to subject and country to country; but the differences by and large were small. The developing countries, however, did far less well—in all subjects tested, and at each of the three age levels examined.

A typical finding showed the mean score for students in a developing country to be in the bottom 5 to 10 percent of students from a developed country. Some of the handicaps of children in developing countries may be due to lower levels of parental education (which has a substantial impact, particularly in the preschool years) or in some cases to prolonged malnutrition. But the evidence suggests that they are mainly a reflection of low-quality schooling.

There are a number of promising approaches to improving educational quality in developing countries.

- The curriculum should take into account the linguistic and home backgrounds of students. Frequently curricula are too demanding, which only exacerbates tendencies to repeat classes or drop out, particularly for those from poor homes. Whenever possible, subjects should be illustrated with examples that draw on the child's experience.

- The selection and training of teachers should be improved through more training facilities, greater use of in-service training, and more resources—teachers' guides, advisory services, mass-media programs and bulletins. This takes time, however; for many countries, better teaching will be as much a consequence as a source of improved quality in schools.

- The design, production and distribution of learning materials should be upgraded. This applies particularly to textbooks, because research indicates that increasing their availability is the most consistently effective way of raising educational standards. A nationwide textbook project supported by the World Bank in the Philippines significantly increased student learning while increasing costs per student by only 1 percent. When school budgets are squeezed, it is all too easy to cut

or defer spending on learning materials. But this is a costly alternative if costs are considered in terms of the education provided rather than simply per student in school.

- Properly designed and supported radio projects have potential for improving learning (and in certain cases reducing costs). To take a well-documented example, in Nicaragua regular radio broadcasts achieved dramatic improvements in mathematics for primary students. Although new technologies and growing experience are increasing the educational potential of television, lack of rural electricity and the high costs of capital, maintenance and operation put it out of reach for most countries.

Research into these approaches has indicated important potential, but it remains to be seen how much they can improve quality within the constraints of politically feasible budgets. This underlines the importance of finding cheap ways to improve quality if the educational gaps between developing and developed countries, and between rich and poor in developing countries, are to be narrowed.

Health

In general terms, the determinants of health have long been well known. One is people's purchasing power (which depends on their incomes and on prices) over certain goods and services, including food, housing, fuel, soap, water and medical services. Another is the health environment—climate, standards of public sanitation and the prevalence of communicable diseases. A third is people's understanding of nutrition, health and hygiene.

Knowledge is still evolving, however, on the relative importance of these different factors, and on the best ways to deploy government

resources to improve health. By the end of the 1960s it was increasingly plain that health care systems modeled on those in the developed world were not the quickest, cheapest or most effective way to improve the health of the majority of people in developing countries. The 1970s have thus witnessed the evolution of a much broader approach to health policy, including an emphasis on universal low-cost basic health care. But despite some successful experiments, "primary health care" is still more of a slogan than a nationwide reality in most developing countries. To change this is the greatest health challenge of the 1980s.

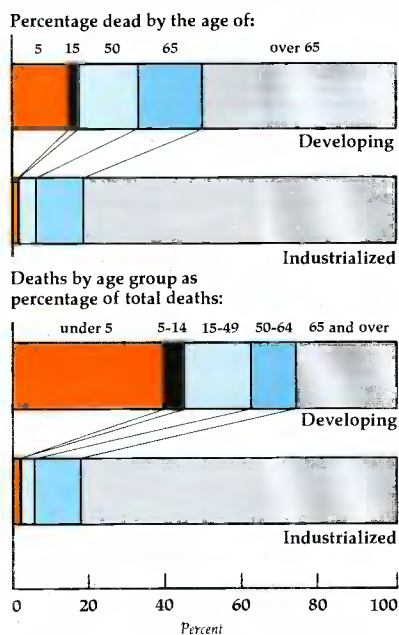
Life expectancy and mortality

There is considerable variation among developing countries. In 11 of the richer ones, life expectancy is 70 years or more—close to the average level (74 years) in industrialized countries. But in low-income countries, life expectancy averages only 50 years, and several countries are under 45. Thus despite the health improvements that have occurred throughout the developing world over the past three decades, the gap between developed and developing countries remains wide.

Babies born in a developing country will on average live 20 years less than those born in the industrialized world. About half of this difference can be explained by what happens in the first five years of life. Some 17 percent of children in developing countries (and more than 30 percent in several of the poorest) die before their fifth birthday; in industrialized countries, only about 2 percent do. Mortality rates among children aged one to four in low-income countries are frequently 20–30 times those in industrialized countries, and sometimes even more. Although the gap tends to narrow

as average incomes rise, in a number of countries with 1978 incomes of more than \$900 (including Jordan, Turkey, Algeria and Guatemala) the chances of a child dying between its first and fifth birthdays were still at least 10 times as great as in industrialized countries. On average, for children in developing countries who reach the age of five, further life expectancy is still eight to nine years

Figure 5.2 Death by age groups: developing and industrialized countries, 1980^a



a. At current mortality rates.

less than in developed countries—and they are much more likely to suffer from disease (see next page).

The very high death rates among young children, combined with high birth rates, mean that a tragically large proportion of the deaths in a developing country occur among children under five (see Figure 5.2). For example, in Brazil in 1975 they were 48 percent of all deaths. In Sweden they were

1 percent. The main causes of child deaths in developing countries are diarrheal diseases and respiratory infections, especially influenza and pneumonia. (It has been estimated that diarrheal diseases cause 5–10 million deaths a year and respiratory diseases 4–5 million, making them by far the biggest killers for the population as a whole.)

Other diseases that make adults ill may be fatal in young children. Malaria, for example, has been estimated to kill 1 million African children a year. Common childhood diseases, such as measles, diphtheria, whooping cough and polio, which have either been virtually eliminated from developed countries or else reduced to minor nuisances, can be fatal or crippling in developing ones. A case of measles is often more than 200 times more likely to kill a child in a developing country than in an industrialized one. All of these diseases can be prevented by vaccination, yet fewer than 10 percent of the children born each year in the developing countries are being protected.

A major reason that these infections so often lead to death in preschool children in developing countries is their interaction with malnutrition, especially among children between six months and three years old. As a result, malnutrition appears to contribute to between one-third and two-thirds of all child deaths, and perhaps even more in the poorest countries. A comprehensive study of 35,000 deaths in 14 communities in Latin America found that 34 percent of deaths of children under five had serious malnutrition as an underlying or associated cause. An additional 23 percent of deaths were associated with premature births, which themselves partially reflected maternal malnutrition.

Compared with children, adult mortality patterns in developing countries show a much greater

similarity to those in developed countries. There is also less difference between urban areas in developed and developing countries than between rural areas, since people who live in urban areas have higher incomes, are better educated and have better access to health care. About 60–70 percent of physicians in Africa work in urban areas, where about 20 percent of the population lives. Latin America is relatively well endowed with physicians, but two-thirds of them serve the large cities where only a third of the population lives. This gap is much wider than can be justified on the grounds that specialized referral services must be located in towns.

Some of the health problems of developed countries, however, are magnified in developing ones. The need to achieve competitive costs has led industries in some developing countries to adopt lower standards of job safety than prevail in advanced countries, and accident rates are high. Similarly, the number of deaths per automobile is much greater than in advanced countries; for example, it is more than 100 times higher in Nigeria than in the United States and 16 times higher per vehicle-mile. The joint use of roads by pedestrians, animals, bicycles and motor vehicles is a major reason for this.

Even though many of the diseases and much of the death in developing countries reflects an unhealthy environment, there are significant differences between rich and poor (see Table 5.6). The poor, whether urban or rural, are more likely than the rich to live where diseases are endemic, and less likely to take preventive measures or to seek prompt medical care even when it is available. A poor family is much less able to tide itself over while a breadwinner is ill; even a relatively minor illness may plunge it from poverty into destitution.

Table 5.6 Differences in life expectancy within countries

Country and region	Income (national average = 100)	Life expectancy (years)
<i>Brazil, 1960-70</i>		
Northeast region	54	47.9
Southeast region	122	62.8
<i>Tanzania, 1973</i>		
Kigoma region	46	43.0
Kilimanjaro region	215	55.0
<i>Thailand, 1969-70</i>		
North region	78	55.6
Bangkok region	248	63.7

Illness

Nonfatal diseases are more common and more serious in developing than developed countries. But the relatively small proportion of people over the age of 65 in most developing countries considerably reduces the significance of chronic, degenerative diseases—which affect about a third of the elderly in the United States, for example.

The most widespread diseases in developing countries are those transmitted by human feces—the intestinal parasitic and infectious diseases, but also poliomyelitis, typhoid and cholera. These spread easily in areas without safe community water supplies and good hygiene practices. While they are leading causes of death in young children, they are frequently chronic and debilitating rather than causes of acute illness or death. Their incidence is high. For example, the WHO estimated that in 1971 about 650 million people had ascariasis (roundworms). A World Bank study of construction workers at three sites in West Java, Indonesia, found 85 percent infected with hookworm.

Of the other diseases that usually cause debilitation in adults rather than death, tuberculosis in particular remains extremely widespread. Most debilitating diseases transmitted by insects or other carriers

tend to be geographically more concentrated—although in 1976 it was estimated that 850 million people lived in areas where malaria persisted despite efforts to control it, and another 345 million in areas with little or no control. Schistosomiasis (bilharzia) is carried by snails, which flourish in slow-moving water. It is severe in East Asia, East Africa and in irrigated areas of Latin America; an estimated 180-250 million people are infected.

Trypanosomiasis (sleeping sickness) is found in a wide band in the middle of Africa. It is generally fatal if untreated in the early stages. Carried by the tsetse fly, it was largely under control in the 1950s, but has revived because control measures have slackened. It constitutes a serious risk to the life and health of at least 35 million people and has imposed great losses on animal herds. Chagas' disease, the Latin American form of trypanosomiasis, remains endemic in many rural areas.

Onchocerciasis (river blindness), carried by the simuliid fly that breeds in swift-running water, is hyperendemic in parts of West Africa and Central America. In some areas it has led to the depopulation of fertile river valleys.

Attempts have been made to control these diseases by eliminating disease carriers through chemical and environmental mechanisms, but with only limited and in some instances temporary success. In some cases effective drugs exist. Control requires a well-developed health service to monitor outbreaks of the disease and take remedial measures.

For children, illness obviously disrupts their attendance at school and reduces their ability to concentrate and learn. As for adults, research on the consequences of their diseases has been very limited and has not produced consistent or generally applicable conclusions.

Some studies have shown that malaria control sharply reduced absenteeism—from about 35 percent to about 3 percent in one program in the Philippines in 1947. Anthropological research suggests that settlement on fertile lands has often been prevented by major diseases. There have been surprisingly few detailed studies of the effects of illness on productivity of individual workers; more research is needed in this area.

It is also likely that disease discourages innovation, by making people more reluctant to take risks or to commit themselves to activities where precise timing is crucial. A study of Paraguayan farmers suffering in varying degrees from malaria found that severely affected families obtained lower yields, cleared less land and avoided cultivating crops that required labor at specific times. In industry, capital may be substituted for labor where workers are frequently absent because of endemic disease.

Difficulties of improving health

In its early stages, slowly declining mortality in Europe largely reflected improved nutrition, housing and hygiene brought about by rising incomes. The spread of education also helped. The initial stages of declining mortality in developing countries have been based on an additional factor—new technologies that affect masses of people, such as pesticides and vaccinations. It is estimated that life expectancy in developing countries in 1970 would have been eight years less than what it was without the contribution of these changes in public health technologies.

But some diseases, including most causes of diarrhea and many respiratory infections, cannot be prevented by currently available immunization or pesticides. Their reduction comes through improvements in sanitary conditions and

nutrition, and changes in individual health habits. These diseases have declined least in developing countries and contribute most to mortality in those countries today.

There has been considerable concern that developing countries, particularly in the high mortality areas of Sub-Saharan Africa and South Asia, have not maintained the momentum of the 1950s in reducing disease. This is largely because countries have moved beyond the "technological" phase of improving health: the closer they come to developed-country levels, the harder it is to progress at the same rate. It also reflects the fact that some communicable diseases have increased. The number of cases of malaria, for

example, rose nearly threefold between 1972 and 1976; other diseases have also spread, though not so sharply.

These reversals have happened partly because authorities became overconfident and allowed control programs to run down. In addition, control became much more expensive in the early 1970s. Pesticide prices escalated and disease carriers developed a tolerance for common, inexpensive pesticides (especially DDT). Economic development has sometimes made matters worse: small-scale irrigated agriculture has expanded agricultural production—but also the habitat of snails that carry schistosomiasis.

Programs to control endemic diseases—especially malaria and

sleeping sickness—now exist in most of the affected areas. They can be operated effectively without people changing their behavior (though this is less true of schistosomiasis, since people as well as snails play a role in its transmission). Pesticides can often be used more efficiently.

There is also room for better coverage by immunization programs, even in areas not otherwise provided with government health services. Sierra Leone, for example, employs recruitment teams; they enlist the help of local leaders in gathering together everyone who needs to be immunized immediately before the vaccinators arrive in the village.

Apart from these efforts, major progress in family health behavior and in the provision of health services is needed. Simple treatment can frequently be effective: for example, the lives of children with acute diarrhea can often be saved by feeding them a solution of water, salt and sugar (see box). Education, especially of mothers, is important. Studies in 29 developing countries have shown that infant and child mortality were consistently lower the better educated the mothers; each extra year of schooling on average meant nine per 1,000 fewer infant and child deaths. Cross-country studies (see box on page 38) confirm that literacy has a strong, favorable effect on life expectancy. And as discussed below (see pages 66 and 67) family planning services can contribute directly to better health of mothers and children.

Improved water supplies and waste disposal are important in the long run in reducing disease. But they must be accompanied by better hygienic practices if they are to be fully effective. Where funds are short, water supply networks in urban areas usually deserve priority over sewers, which

Oral rehydration

A simple innovation has revolutionized the treatment of a major killer in developing countries. Diarrhea normally stops on its own accord after three to five days, but it occasionally causes a severe loss of body fluid; the resulting dehydration is often fatal, particularly to young children. Replacing that fluid can prevent most deaths.

For more than a century, fluid has been intravenously "dripped" into sufferers—a method with obvious drawbacks in countries where there are few medical facilities. In the past 12 years it has gradually been established that an oral dose has just the same effect. Even during diarrhea, the intestine continues to absorb glucose—and glucose will carry water and essential salts with it.

Oral rehydration had its most impressive initial success in 1971, in camps for refugees from the Bangladesh war. More than 3,700 patients were treated in two months under extraordinarily difficult circumstances, with a case fatality rate of 3.6 percent instead of the 30 percent before the treatment began. Oral rehydration has since been used to prevent or treat dehydration due both to cholera and to other diarrheas in many countries of Asia, Africa and Latin America. Properly delivered, it could save millions of lives a year.

The WHO currently recommends an

oral rehydration mixture consisting of: table salt (sodium chloride), 3.5 grams; bicarbonate of soda, 2.5 grams; potassium chloride, 1.5 grams; and glucose, 20 grams. These ingredients are usually mixed and packaged beforehand; the health worker (or a child's mother) simply dissolves the mixture in one liter of water. Pre-packaged mixes range in cost from \$0.07 to \$0.10, and one to three packets might be needed while the diarrhea lasts.

There now is considerable interest in the possibility that mothers could mix a dose from the two ingredients that are available in most homes—sugar and table salt. But the recipe lacks potassium and bicarbonate (both of which are lost during diarrhea), and using too much salt could be dangerous for the child.

Home-mixing and the standard WHO formula are not, of course, mutually exclusive. One report (based on a field experiment in Narangwal, India) recommended home-mixing for relatively mild cases of diarrhea, with a variant of the WHO formula used only for more severe ones. This experiment placed principal responsibility for treatment in the hands of auxiliary nurse-midwives (who live in the villages) and the mothers of affected children. While the incidence of diarrhea changed little after the new treatment was introduced, the case fatality rate declined by almost half—from 2.7 per 1,000 to 1.5 per 1,000.

are more expensive and less critical to health. (Latrines, septic tanks and other lower-cost alternatives to conventional sewerage are less likely to contaminate water supplies if the water is centrally treated and distributed under pressure in pipes.) But water supply systems must be maintained—something that is frequently neglected. A World Bank review of village water supplies found two countries in which systems were failing faster than they were being constructed.

Although heavy investment in water supplies is often warranted as a means of raising living standards, it is unlikely to produce quick or dramatic improvements in health—and is expensive for low-income countries. Even public standpipes and yard taps, while much cheaper than conventional house connections with internal plumbing, can cost more than \$40 per person (in 1978 prices). In contrast, immunization against all common childhood diseases costs at most \$5 per child.

Availability of health care

The amount spent on health care varies widely throughout the developing world, though it is typically very low. Government health budgets in low-income Africa and Asia are usually less than \$5 per person a year (and frequently much less). Private outlays are often larger—in Bangladesh, for example, individuals spent an estimated \$1.50 each in 1976, or three times what the government was spending. But the combined total of \$2 compares with about \$700 in the Federal Republic of Germany. This gap would remain huge even if allowance were made for differences in prices. It is thus not surprising that in the mid-1970s in Bangladesh there were 9,260 people per physician, 5,600 per hospital bed, and 42,080 per nurse or midwife,

compared with 490 per physician, 80 per hospital bed, and 260 per nurse in the Federal Republic of Germany. (Some of the middle-income countries, though, have almost as many physicians per person as the developed countries do.)

For many necessary but simple medical tasks, paramedical workers are likely to do a better job than physicians, who may be dissatisfied with their work in rural areas and so turn to private practice. In many countries, however, there are even fewer nurses than there are doctors.

In many developing countries, people typically live in scattered, often small villages and cannot travel far. They are therefore unwilling or unable to seek out modern health facilities in urban areas, except in extraordinary emergencies. Moreover, where rural health facilities are available, they are usually far too small to employ a physician full time—and certainly too small to make efficient use of equipment and auxiliary staff. Although occasional visits by traveling doctors and nurses can help, they are obviously unable to provide services at short notice. They may also not develop sufficient individual rapport with patients.

Primary health care

The widespread provision of basic preventive and curative medical services is essential. But in an attempt to tackle both the broader causes of health problems and administrative, political and other implementation problems (see Chapter 6), the WHO and UNICEF have recently sponsored a concept called "primary health care" that goes far beyond these services. It is an integrated approach to health that also spans food production, education, water and sanitation; in addition, it emphasizes self-

reliance and partnership between communities and government.

The concept has achieved widespread intergovernmental support, especially from the 1978 International Conference on Primary Health Care. This has been no mean political achievement; but in most countries the rhetoric still must be translated into more money and reorganized health systems.

A key element of primary health care, or of any health care system that attempts wide coverage at relatively low cost, is the use of community health workers (CHWs) with limited training both to provide front-line services and to refer seriously ill patients or special cases to larger dispensaries and hospitals (see box overleaf). The potential duties among which their time must be allocated are maternal and child health care, midwifery, family planning, treatment of injuries and helping to move seriously injured people to referral facilities. In addition, they may organize immunization and mass treatment programs, provide guidance on nutrition, family planning and hygiene, and monitor epidemics, water quality and sanitation.

Although several examples (including China—see box on page 74) have shown that effective primary health care is feasible even for low-income countries, it makes fairly heavy administrative demands. An effective coordinated approach is needed—involving careful selection and training of CHWs, thorough supervision, referral of serious cases to better trained and equipped people, and adequate (but controlled) availability of drugs and other supplies. Without this, CHWs are likely to become demoralized, discredited and inefficient—and their recommendations for curative and preventive care disregarded.

Moreover, the emphasis that this *Report* (and others) gives to

Lessons of experience

National experience with primary health care systems is still very limited. The Chinese barefoot doctors date from the mid-1960s (see box on page 74). During the 1970s countries as diverse as Iran, Brazil, Sudan, India, Jamaica, Botswana and Tanzania began large-scale systems. Their experience has shown which are the key requirements of success.

- Political support and finance. It is vital to secure the support of a substantial share of the country's "health establishment"; without this, sound medical supervision and adequate finance will not be possible, and primary health care will be little more than an empty gesture toward the poor. It is also important to ensure that this type of medicine is not mislabeled as "second rate."

The Community Health Worker (CHW) should work cooperatively with the community, if possible through such recognized organizations as the local council or village development committee (as they do in Botswana and Sudan). This builds community support and increases chances of improving family health practices; hours of service, use of drugs and materials, and patient satisfaction can also be monitored. The community organization should have access to the supervisor of the CHW.

At least part of the CHW's salary should be paid by government so that health officials can retain some control. But some local finance or voluntary efforts also make the CHW responsive to local concerns—and in turn can make the community more aware of the services offered. The government of India is providing a stipend of 600 rupees a year (\$76) to "volunteer" health workers. Whether local pressures work in the interests of the poor depends on the

degree to which the local political system reflects these interests. China has succeeded in making the community entirely responsible for compensating the CHW. But overreliance on local finance may mean that the poorest communities get the worst attention.

- Recruitment and training. The CHW should be mature enough to enjoy the respect of the community. Early programs stressed formal education as a qualification for the CHW, and thus recruited young people. Reviews of experience in Sudan clearly indicate that such people are not easily accepted by communities. Ideally the CHW should have children and personal experience with health crises. Programs now recruit highly motivated, older people even if younger applicants are better educated. The CHW also should live in the community; this has been found to reduce turnover as well as ensure familiarity with local culture. In some countries, such as Iran and Yemen, it has been necessary to train both a male and a female CHW because of objections to treatment by members of the opposite sex.

Community health workers must be given enough training, equipment and supplies to ensure that only one patient in four or five is referred to higher levels. High referral rates undermine the community's confidence in the CHW and also increase the probability of patients bypassing him or her. This conclusion has been confirmed by studies in Mexico and Thailand. Moreover, several countries feel that CHWs should have the chance to develop their careers, by competing for entry into higher grades. Sudan, for example, is planning to confine its "medical assistant" training programs to CHWs.

- Supervision and supplies. Frequent supervision of the CHW is essential. The isolated, modestly trained CHW is rarely

confident of his or her skills and often encounters difficulties that instructors did not anticipate. Experience in Tanzania underlines the need for sound, continuous supervision. Supervisors should both provide in-service training and ensure that performance meets minimum standards. Iran, Sudan and Botswana have found that it is better to overestimate the amount of supervision needed than to risk undermining the confidence and credibility of the CHW. Workers should be visited regularly by staff from neighboring dispensaries, health centers and hospitals as well as from the office of the regional medical officer. This compensates for frequent transport difficulties or competing demands on the supervisor's time. In addition, it ensures that a broad range of issues (from clinical care to drug management) are considered, and that visits from the outside are regarded as routine, not part of a crisis.

Providing facilities for telephone or radio contact between CHWs and supervisors has provided backup and helped avoid unnecessary referrals in Honduras, for example. Physicians or highly trained health personnel often give curative work priority over supervision of CHWs—so nontechnical personnel should also play a part in the supervision and monitoring of CHWs.

A standard, simple set of drugs should be provided to CHWs; if budget cuts are necessary, they should not fall on medicines and supplies for the CHW (as has sometimes been the case). Standards are required for the use of drugs and supplies; and the drugs provided to individual CHWs should be monitored to identify misuse or misappropriation. Kenya has developed a model program for managing drug use, based upon carefully devised treatment standards.

primary health care should not detract from the importance—or understate the difficulty—of striking the right balance between community level activities and the back-up system that provides referral services and supervision. Rural health centers, urban clinics or district hospitals should deal with various illnesses that are beyond the scope of a CHW (though even they may not need a full-

time physician). These should come under the umbrella of a referral hospital with laboratory, x-ray facilities, an operating theatre and beds. (China, interestingly, has given much more emphasis to the referral system than is generally recognized.) Depending on population densities, transport, and incomes, the hospital could serve 100,000 to 250,000 people and oversee the activities of three or

more clinics and about 50 CHWs.

The balance struck between the various levels of the health care system will depend on many factors, including financial and political support for the objectives of primary health care, administrative capabilities, the receptivity of those to be served, the extent of urbanization, and national income. Higher-income countries can afford to reduce the ratio of persons covered

per hospital and clinic, and to staff and equip them better. But even in industrialized countries, there is a strong trend toward more emphasis on paramedical workers to improve the spread and effectiveness of basic health care and to help keep costs down.

In many countries it is also desirable to make use of, and provide some training for, traditional health practitioners, such as "ayurveds" in South Asia and the traditional birth attendants found in almost every country. This is partly because they often have the trust of their patients and because patients pay for their services (enabling government funds to be spread farther); but it is primarily because in many countries, including some of those where the world's poor are concentrated, these practitioners provide near-universal coverage of people who, realistically, will not be reached by effective government health programs for some time to come. Training can help them to improve their treatment, dispense some modern medicines and participate in health or family planning education.

In addition, there is still an urgent need for research to develop measures to prevent or treat common disabling diseases—for example, malaria, schistosomiasis and the main causes of diarrhea in children—that are simple and cheap enough to be applied within the framework of a primary health care system.

Nutrition

Systematic efforts at national nutrition planning in developing countries go back barely a decade. During that brief time there has been considerable progress in establishing the extent and causes of malnutrition and what can be done to reduce it.

Ten years ago, malnutrition was

often thought to reflect primarily a shortage of protein (and in some cases, vitamins or minerals). Most nutrition programs concentrated on providing high-protein food to children, usually in schools. The emphasis today is different. There is now a wide measure of agreement on several broad propositions.

- Serious and extensive nutritional deficiencies occur in virtually all developing countries, though they are worst in low-income countries. They are usually caused by undernourishment—a shortage of food—not by an imbalance between calories and protein. There may often be shortages of specific micronutrients and of protein, especially among young children. But given the typical composition of the diets of the poor, to the extent that calorie requirements (as estimated by the FAO and the WHO) are met, it is likely that other nutritional needs will also be satisfied.

- Malnutrition affects old and young, male and female, urban and rural dwellers; particularly prevalent among children under five, it reduces their resistance to diseases and is a major cause of their death. In many societies, girls suffer more than boys.

- Malnutrition is largely a reflection of poverty: people do not have enough income for food. Given the slow income growth that is likely for the poorest people in the foreseeable future, large numbers will remain malnourished for decades to come.

- Poor nutritional practices and the inequitable distribution of food within families also are causes of malnutrition.

- The most effective long-term policies are those that raise the incomes of the poor, and those that raise food production per person. Other relevant policies include food subsidies, nutrition education, adding minerals or

vitamins to salt and other processed foods, and increasing emphasis on producing foods typically consumed by the poor.

These points will be amplified in the following discussion.

Prevalence of malnutrition

Evidence of serious malnutrition in almost all developing countries comes from three main sources: estimates of food consumption, anthropometric and clinical studies, and data on child mortality.

The estimates of food consumption by different income groups normally show that in all but the richest developing countries, consumption by large sections of the population is well below what is needed for a minimally satisfactory diet. Undernutrition is most widespread in Africa (where in many countries food supplies have not even kept up with population growth) and in South Asia. It is also common in Latin America and the Middle East. Estimates of the total number of malnourished people are surrounded by controversy: there is dispute about what calorie and protein requirements are on average "adequate"; individuals may have requirements very different from the average; and within households food often is not distributed in proportion to individual needs. Nevertheless, allowing a wide margin for uncertainties, the evidence is strong enough to conclude that several hundred million people are undernourished.

Anthropometric and clinical studies (based on measures of height, weight for height, arm circumference, skin-fold thickness, blood tests and so on) show, for example, that children from wealthier families, or from families that have migrated to developed countries, tend to grow substantially taller than do children of the poor.

The data on child mortality

reflect the combined effects of sickness and malnutrition. Infections can reduce appetite and food intake in several different ways, including the action of intestinal parasites; and they can reduce the proportion of nutrients that the body absorbs. Undernutrition in turn weakens the body's immunizing mechanisms—and so lowers its defenses against the initial infection, while making it more susceptible to further infections. As previously noted, malnutrition is estimated to be a contributory cause of a third or more of infant and child deaths in developing countries (see page 54).

Kinds of malnutrition

Most malnutrition reflects a shortage of calories, protein, or both. But some diets are inadequate because they lack specific nutrients. Anemia, resulting primarily from blood loss and too little iron, is the most prevalent example of this. A recent estimate is that at least 500 million people are anemic. The consequent fatigue, the apparent lethargy and apathy, and the adverse effects on productivity and school performance can be so common in poorer societies as to appear normal. It is estimated that more than half the victims of anemia are adult women in developing countries. Anemia due to iron and folic acid deficiency is common among pregnant women—and harmful, because it can lead to premature birth and a much lower chance of survival for the newborn child. The more children a woman has, the greater the probability of severe anemia—so adding to the cycle of poverty, high fertility and low rates of child survival.

Goiter is another common disorder (affecting perhaps 200 million people) caused by a micronutrient deficiency—in this case, iodine. Available evidence suggests that iodine deficiency can stunt physical

and mental development, and reduce energy and motivation. In communities that have an exceptionally high incidence of goiter, 4 percent or more of children may be deaf-mutes or cretins.

Vitamin A deficiency is also extensive—affecting, it has been suggested, half the children in many developing countries. In an extreme form it can lead to blindness. But in less serious forms it can still lead to poor eyesight, undermining educational performance and adult earning power. It can also affect growth, skin condition and the severity of other nutritionally related illnesses.

Victims of malnutrition

Young children suffer most from undernourishment, followed by pregnant and nursing mothers. In many countries, there is considerable evidence that girls are less well nourished than boys. This is especially true of South Asia, where newborn girls have significantly smaller chances of surviving to age five; in a number of countries, including some in the Middle East, girls are weaned substantially earlier than boys (see box on page 91).

Most childhood malnutrition does not result in early death. But it means severe hardship beginning at birth, which may prevent children from ever escaping the poverty into which they were born. Malnutrition stunts growth; in severe cases it may retard mental development even after its physical effects have been shaken off. Several studies have shown that children who have recovered from severe clinical malnutrition during their preschool years continue to do significantly worse in intelligence and other tests than their unaffected classmates.

There is also some evidence, less conclusive, of the harmful effects of mild long-term malnutrition; some studies in developing

countries have shown that better-nourished children (as measured by height for age) do better in mental tests. It is not always possible to isolate nutrition from other factors affecting intelligence, but there is some evidence of its independent effects.

Malnutrition also affects earnings. In part, this reflects the consequences of childhood malnutrition on mental development and educational achievement; but there are also links between nutrition and physical productivity. In the long run, adults can only be as energetic as their diets will allow—otherwise they would gradually become emaciated and ill. For example, farmers who are badly malnourished put in fewer hours per hectare than those who are better nourished. Research on the relation between nutrition and productivity has not been extensive, but a few studies have suggested that greater height or weight leads to greater physical productivity.

In contrast to most other indicators of well-being, malnutrition in many countries appears to be at least as serious in urban as in rural areas. Surveys in India, Brazil, Thailand and Indonesia have shown that the proportion of the population with very low calorie consumption is substantially greater in urban areas. This is partly because of the higher cost of food in many urban areas (although not in those with food subsidies) and higher expenditures for such things as house rents and public transport.

But to some extent it is a sign that living and working in cities is less physically demanding than in rural areas, rather than an indicator of greater malnutrition.

In any event, because the poor are primarily rural, malnutrition remains primarily a rural problem. Rural populations are also more likely to suffer seasonal variations in food consumption; they are most affected in the wet season, when twin

peaks in farm work and widespread infection often coincide with the period when food is in shortest supply.

Causes of malnutrition

To what degree is malnutrition, especially among young children and pregnant and nursing mothers, caused by (a) inadequate family incomes, (b) ignorance of good nutritional practices and (c) the inequitable distribution of food within families? There is some evidence that all three factors are important, but that low incomes are the central cause.

The famines in Ethiopia in 1973-74 and Bangladesh in 1974 were not caused by a fall in the average amount of food available per person. Rather, droughts caused local declines in farm incomes, so that people in affected areas could not afford to buy food from the unaffected areas.

At the global level, if income were distributed differently, present output of grain alone could supply every man, woman and child with more than 3,000 calories and 65 grams of protein per day—far more than the highest estimates of requirements. Eliminating malnutrition would require redirecting only about 2 percent of the world's grain output to the mouths that need it.

Major crop failures, which simultaneously reduce rural incomes and national food supplies, can have even more catastrophic effects on nutrition. While improved transport and international movement of food will reduce the impact on prices, events such as the two monsoon failures in India in 1965 and 1966 can have a terrible impact on the poor: supplies of basic food grains fell 12 percent and prices rose sharply. Relative to the prices of manufactured goods, they were 37 percent higher in 1967 than in 1963-65. In addition, the crop failures cut the incomes

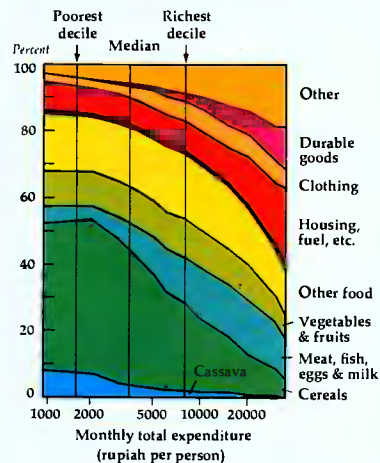
Food and the poor

As people get higher incomes, they eat better—and spend proportionately less on food. The chart shows household spending patterns in Indonesia, but its essence applies to every developing country. The richest households spend a higher proportion of their total budget on housing, fuel, light and water than the poorest do on all nonfood items.

The composition of diets varies, too (a fact whose implications for policy are explored on page 62). The poorest 30 percent of people in Indonesia obtain about 40 percent of their calories from cassava and corn and 46 percent from rice, while the richest 30 percent obtain only about 14 percent of their calories from cassava and corn and 59 percent from rice.

Not only is food the main element in poor people's budgets; but preparing it takes up a lot of their time. Rice must be threshed, winnowed and hand-milled to remove the husk and bran; wheat and maize must be threshed, winnowed and ground to produce flour; cassava must be skinned, boiled, pounded, strained and dried to get rid of its deadly prussic acid; spices must be ground by hand; and so on—all before any actual cooking is done.

Composition of expenditure, by income group, Indonesia, 1976



One study in a Java village found that on average a woman works 11 hours a day. Roughly six hours are spent on income-earning activities (wage work, handicrafts, producing food for sale). The other five hours are spent around the home (collecting firewood, looking after children, sweeping and so on)—and preparing food, which takes three hours a day.

not only of farmers, but also of agricultural laborers, petty traders and workers in food-processing industries.

Poor people spend the bulk of their income on food. In India in 1973-74 the poorest 20 percent were devoting 83 percent of their total spending to food—yet on average ate fewer than 1,500 calories a day each. At these very low levels, the consumption of calories (usually derived from the cheapest kind of food) changes almost proportionately with changes in income. As incomes rise, a little margin enters the budget (see box).

A lack of money is frequently compounded by poor nutritional practices. Several common beliefs about nutrition have harmful effects and must be attributed primarily to ignorance rather than poverty. For children, the weaning

period is particularly critical. While it is desirable to continue breastfeeding for the first year of life, milk should be supplemented by solid food by six months of age; this is often delayed. It is also likely that the poor nutrition of pregnant and nursing mothers may at least partly reflect a lack of knowledge. Several studies have found that better-educated parents have better-nourished children: that this reflects more than the higher incomes of educated parents is suggested by the fact that the mother's education is more important than the father's.

Education—especially girls' education—may also help remedy one of the most serious and intractable nutritional problems: the way food is distributed within the family. A variety of evidence indicates that in most developing countries adult

women receive a lower proportion of their food requirements than adult men; girls are likewise generally less well-fed than boys. As between adults and children, the picture is less clear: in many countries children under five (and particularly up to age three, when they are less able to take food themselves) do much worse than adults; in some countries, though, this is not the case.

These sorts of discrimination sometimes reflect difficult choices made under severe economic duress, including a justifiable concern for the breadwinner. But they also reflect ignorance of nutritional priorities and deep-rooted cultural biases. (Concern for this problem appears to have been one of the reasons for the Chinese experiment with communal feeding during the Great Leap Forward in 1958-59. It encountered massive social resistance and was abandoned.)

Nutrition policies and programs

The causes and consequences of malnutrition suggest various cures. Boosting food production (especially of food that poor people eat and grow) and raising the incomes of the poor are the two central requirements in most countries. They can be reinforced by other efforts—food subsidies of various kinds, fortifying food, and educating people to know what a good diet is.

AGRICULTURAL PRODUCTION. Increased food consumption by the poor is in most countries unlikely to be sustained unless production is raised as well. For nutritional purposes, much can be achieved by producing more of what the poor traditionally eat—such as millet and other coarse grains and root crops. These are, in general, the cheapest source of calories. They have other advantages, too. Some of them require less irriga-

tion and drainage than other crops; and, in the case of root crops, many can be grown throughout the year and some are drought-resistant. In addition, both root crops and coarse grains tend to be produced by small farmers, who would benefit if encouraged to produce more.

Coarse grains can often be grown together with low-cost vegetable sources of protein. Although cassava is very low in protein, studies show that its price is so low that most of the people who meet most of their caloric needs by eating a lot of it are able to buy enough protein-rich food to balance their diets. But there has not been enough emphasis on the production of cheap sources of protein, such as the cheaper varieties of beans and lentils.

Despite long-standing neglect in research, extension services, access to credit and so on, in recent years there has been greater awareness of the importance of foods eaten by the poor. The international agricultural research centers (in particular those in India, Colombia, and Nigeria) have increasingly extended their research to these crops and have given more attention to nutritional issues.

Food marketing and storage programs can also have a major nutritional impact by reducing regional, seasonal and annual variations in food supplies and prices—which contribute significantly to malnutrition. Market stability can also be helped by better transport and roads.

FOOD SUBSIDIES. Few low-income countries have come near to nutritional adequacy without some form of food subsidies. Sri Lanka's ration-and-subsidy program in 1970 provided about 20 percent of the calories and 15 percent of the incomes of the poorest quintile of the population. Largely as a result, severe malnutrition was reduced

to a remarkably low level for such a poor country. Because of this, and Sri Lanka's health and education services, life expectancy has reached 69 years. When subsidized food rations were sharply reduced in 1974, largely because of a steep increase in the price of imported food, Sri Lanka's death rate rose noticeably (even after allowances for other plausible influences); it declined again in 1976 and 1977, when food became more plentiful. Large-scale food subsidies are also common in the Middle East and North Africa; they have played a significant part in improving the nutrition of the poor.

But general food subsidies have a major drawback—they are very expensive. They have cost as much as 10-20 percent of government spending in some countries, including Egypt, South Korea (temporarily in 1974-75) and Sri Lanka. Much of the cost is for imports, which use up scarce foreign exchange or aid. And some of this goes to people who do not really need to be subsidized.

Countries with strong administration can organize income tests—not perfectly, but well enough to cut costs. Sri Lanka, for example, could have done more for the nutrition of the poor in 1974 if it had concentrated the available rations on them. In 1978 it introduced an income test to restrict subsidies to the poorer half of the population. But for many countries this would not be administratively or politically feasible.

Alternative ways of restricting subsidies to poor people include subsidizing cheap foods that other groups tend to neglect. Sorghum, a low-status food, was introduced into ration shops in Bangladesh in 1978—and in some rural areas was bought by nearly 70 percent of low-income households, but only 2 percent of high-income households. Subsidized foods may be

confined to particular places. In Colombia the nutrition program assisted by the World Bank provides nutritionally enriched foods to specific age groups living in the poorest geographical areas, without a specific family income test.

The high cost of subsidies raises another difficulty—keeping the price received by farmers high enough to encourage food production. Governments may attempt to push down domestic food prices to cut the cost of subsidy programs; and farm prices may decline if too much food is imported for the subsidy program—more, that is, than the *net* increase in food consumption. But countries (and food-aid donors) can anticipate and avoid adverse effects on incentives. Well-designed subsidies should be able to reduce food prices for consumers and also (since this increases the effective demand for food) to maintain prices for farmers. And proceeds from food aid sold through subsidy programs can, for example, be used directly or indirectly to support agricultural programs. Introducing subsidies requires care, however, since the political cost of abandoning them is likely to be high.

SUPPLEMENTARY FEEDING PROGRAMS. Some countries have gone further and have tried to target assistance on the nutritionally most vulnerable—young children and pregnant and nursing mothers. In some cases food supplements have been given for home consumption; in others children have been fed directly. In both cases, however, benefits have been shared with the whole family—since if children get food outside the home, parents tend to give them less from the family pot.

Studies of some preschool feeding programs in the mid-1970s showed that schemes providing children directly with 300 calories a day gave them a net increase in consumption of about 100 calories.

And only a small minority were in the most vulnerable group of all—under two years old. Such schemes tend to be relatively expensive: in a number of these projects, annual food costs averaged \$10–17 per child, with administrative costs adding a further \$3–7.

FOOD FORTIFICATION. Adding specific micronutrients to food at the processing stage is common in both developed and developing countries. But there are two general difficulties. First, those who do not need the supplement still get it, so that the cost per person needing assistance may be high, even if the cost per person receiving the supplement is low. Second, the poor may buy little processed food, and even that may be from small, scattered processors—so that fortification is hard or uneconomic to arrange.

The best results have come from adding iodine to salt to prevent goiter; almost all high-income countries and some developing countries have succeeded with this. Annual costs are much less than one cent per person. Such programs are not yet universal (but may not be effective if people get much of their salt from non-commercial sources or very small producers).

Vitamin A has been added to a variety of foods (including tea, sugar, margarine, monosodium glutamate and cereal products) in several developing countries. It is both effective and cheap—for example, three cents a person a year could provide 80 percent of Guatemalans with 75 percent of their daily requirements. Much more could be done.

Since anemia is so widespread, adding iron to food has been tried several times. There have been technical difficulties, but these may now have been overcome. But

anemia is not due solely to iron deficiencies, nor is it easily cured; effective programs that can be universally applied are still some way off.

It may sometimes be more effective to administer extra nutrients directly (orally or by injections). India and Bangladesh have done this with Vitamin A (at six-month intervals). But reaching those at major risk every six months is usually impracticable. Many countries have provided iron plus folic acid pills for pregnant women; others have reduced goiter by injecting people with iodized oil (a single injection provides protection for three to five years).

NUTRITION EDUCATION. There have been few, if any, striking successes, but the potential effect of nutrition education is so vast that the attempt to increase knowledge about nutrition requires continuing strong support. Clearly, education must be realistic: urging poor families to buy milk might be harmful if they can afford it only by eating fewer calories.

Recent research on breastfeeding has confirmed the value of breast milk, not only for nutrition but also for transferring to babies some of their mothers' immunity against infections. In contrast, bottle feeding in unhygienic conditions tends to increase the risk of infection, and is expensive. The role of advertising in promoting infant milk formulas in developing countries at the expense of breastfeeding has been questioned. In 1979, at a meeting sponsored by the WHO and UNICEF, several major multinational food firms agreed to curtail direct advertising of infant formulas in developing countries. An international code of marketing is now under consideration by the WHO.

Nutrition education will be cheaper the more it can be made

part of education in general, combined with information on family planning and health, or tied to community organizations or other credible and influential communications channels. In addition, several countries have experimented with rehabilitation centers for the severely malnourished, which not only save the child but show mothers how to feed their children at home. Others have experimented with mass media; relatively simple messages that do not risk being misinterpreted seem to have made people more

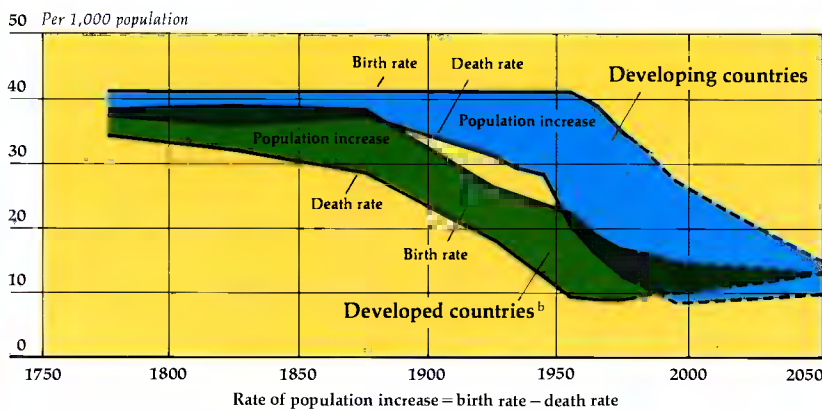
ing to assess relative priorities with the help of national food and nutrition plans. These should ideally be supported by successive sample surveys of nutrition status, food consumption and production patterns by income group and region—which can show, for example, the likely nutritional impact of alternative subsidy or production programs. Such plans, especially if effectively followed up, also offer a way to focus the attention of, say, agricultural ministries on the implications of nutritional priori-

rates has been greatly narrowed if not wholly settled. The evidence overwhelmingly suggests that both social and economic conditions and family planning are important in determining birth rates, and that they are mutually reinforcing.

- Accumulating evidence clearly contradicts the fear that health programs, by lowering death rates, will boost population growth in the long term. Although fertility seemed unresponsive to falling death rates during the 1950s and 1960s, it has since declined in many poor countries—partly in response to lower death rates—and population growth is slowing down.

Figure 5.3 Trends in birth and death rates, 1775–2050

(births and deaths per 1,000 population)^a



a. Crude birth and death rates. The projected increases in death rates after about 1980 reflect the rising proportion of older people in the population.
b. Include industrialized countries, the USSR and Eastern Europe.

Demographic trends and projections

Figure 5.3 compares past and projected trends in birth rates and death rates in developed and developing countries. Two points need to be emphasized. One is the rapid population growth in the developing world, after death rates plummeted in the postwar years, and the continued rapid growth projected for the rest of this century. The second is the drop in birth rates, which began in the 1960s in the developing world, and the resulting gradual slowdown in the population growth rate since then—from a peak of about 2.4 percent in 1965 to 2.2 percent now.

Since 1965, birth rate declines of at least 10 percent have occurred in the world's two most populous countries, China and India, and in a number of other major developing countries—Indonesia, the Philippines, Thailand, Turkey and South Korea. Moreover, the recent rate of decline has been faster in today's developing world than it was in the 19th century in Europe and the United States. England and the Netherlands took about 50 years to reduce their birth rates from 35 to 20 per thousand—or about one point every three years;

aware of good practices, though they have not always been put into effect. The enormous amount of commercial advertising suggests that the value of mass media in promoting social programs has nowhere been adequately exploited.

PRIORITIES AND PLANNING. As in other areas, difficult choices must be made in tackling malnutrition. There are simply not enough financial, political or administrative resources to implement all the policies and programs outlined above. Some countries are attempt-

ties for agricultural research, pricing, extension and other policies.

Fertility

In the past 10 years striking progress has been made in understanding the causes and consequences of high birth rates, and in helping to resolve two controversial and important issues.

- The dispute between those alleging that family planning programs had little effect on birth rates and those alleging that family planning alone could reduce birth

Indonesia, Colombia and Chile have recently cut about one point every year from their crude birth rates—though generally from higher initial starting points.

Thus the comparison of current birth rates between the rich and poor worlds should not obscure the progress some developing countries are now making in lowering fertility. Higher incomes, more widespread education and the growing acceptability of family planning programs have begun to reduce birth rates in most middle-income countries in Latin America and East Asia, and in some countries and regions of South and Southeast Asia. With continued socio-economic progress the fertility decline is projected to spread to the rest of South Asia and, with some delay, to Africa, during the 1980s and 1990s.

Even with these fertility declines, however, world population will continue to grow. By 2000, World Bank projections (which are broadly consistent with other projections, such as those of the United Nations) indicate it will have risen from the current estimate of 4.4 billion to about 6 billion; the population of the developing countries (including China) is projected to increase from 3.3 to 4.9 billion. India will grow from 672 to 974 million people; Brazil from 126 to 201 million; Nigeria from 85 to 153 million. These projections are based on the assumption that current rates of social and economic progress, including the spread of family planning and health and education services, will continue; if they change, so will population growth (see box).

It is instructive to consider the consequences of an acceleration of fertility decline such as to cause the rate of population growth in particular countries to fall to zero 10 years earlier than currently projected. The size of the resulting

Alternative population projections

How sensitive are population projections to changes in fertility and mortality rates?

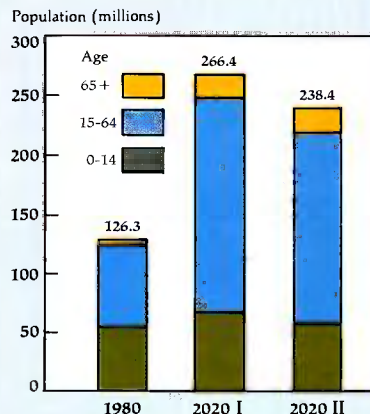
To illustrate, compare two projections for Brazil. The current World Bank projection assumes that the total fertility rate (TFR)—a measure of births per woman, standardized for age distribution—will decline from 4.9 today to replacement level (a TFR of 2.2) by 2015. The Brazilian government has not officially recognized rapid population growth to be a problem, but it does permit family planning for health purposes—and the use of contraceptives (mainly privately bought) is increasing.

What would happen if fertility reached replacement level a decade earlier, in 2005? This is what the Bank projections assume for Colombia, a country with lower average incomes and roughly similar levels of literacy and life expectancy, but which already has a government-supported family planning program and significantly lower fertility (TFR = 3.7). For Brazil to match Colombia would require a sharp but not unprecedented fertility decline. Birth rates would need to fall from 36 per 1,000 people in 1978 to just below 20 in 2000—less than the fall of one point a year achieved in the past two decades by South Korea.

The figure illustrates the differences in the size and composition of the Brazilian population in 2020, under the alternative assumptions of replacement fertility in 2015 (Case I) or in 2005 (Case II). Two things to notice:

- Under either projection, the proportion of children in the population will decline substantially between 1980 and 2020. The current school-age (5–14) group

Alternative population projections, Brazil



of 32 million will increase by 10 million under Case I, only 4 million under Case II—compared with an increase of 14 million in the past 20 years, and 21 million in the past 40. In 2020 under Case II, children under 15 would constitute only 15 percent of the population, compared with 26 today.

- Even in Case II, the working-age population would more than double, from 70 million today to 163 million in 2020. On the other hand, the number of new entrants to the labor force would be considerably smaller. In 2020 Brazil will need to find about 4.5 million new jobs under Case I, but only 3.3 million under Case II.

Reaching replacement fertility in 2005, not 2015, would make a big difference in the eventual size of Brazil's stationary population (reached about 70 years later): it would be 287 million rather than 345 million.

stationary populations would be reduced by, for example, 200 million in India, 50 million in Nigeria and 36 million in Mexico.

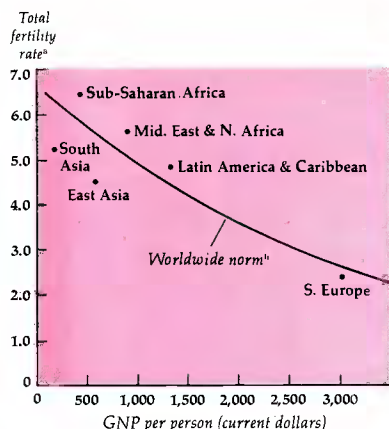
Poverty and high fertility

Poverty and high fertility are mutually reinforcing (see Figures 5.4 and 5.5). As discussed in Chapter 4 (page 39), rapid population growth is not always harmful. Reduction of population growth is not an end in itself; nor does it for every country or for every point in time increase the potential growth of income per person. But in the

circumstances prevailing in most of the developing countries, rapid population growth impedes economic growth by reducing investment per person in physical capital and human skills. For individual families the number of children affects how much parents can invest in each one's health and education—and thus in their future earning power.

Quantitative analysis suggests that social and economic factors (such as incomes, literacy and life expectancy) accounted for as much as 60 percent of the variation in

Figure 5.4 Income and fertility, 1978



a. See technical notes for Table 18 of the World Development Indicators.
 b. Derived from cross-country equation relating total fertility rate to GNP per person.

fertility changes among developing countries from 1960 to 1977. The strength of family planning programs explained an additional 15 percent.

The strength of family planning programs is influenced substantially by socioeconomic factors (which account for about three-quarters of its variation). This helps explain why family planning programs in countries with high fertility, such as Pakistan, often appear weak even after years in operation. This weakness is often written off as simply lack of government effort. What the results

suggest, however, is that programs tend to flourish where their services are in demand. Nonetheless, government efforts are vital.

Socioeconomic determinants of fertility

Fertility is an area of human behavior where individual tastes, religion, culture and social norms all play a major role. Yet evidence from large groups of people suggests that differences in fertility can be largely explained by differences in their social and economic environment. What are the mechanisms by which low education, poor living conditions, high death rates and lack of health and family planning services lead to large families?

Consider the issue from the point of view of parents and potential parents. They receive pleasure from their children but have to spend time and money bringing them up. Children are also a form of investment—short-term if they work during childhood, and long-term if they support parents in disability or old age. Since children are a source of satisfaction, one might expect richer parents to want more of them. Yet the opposite is true, for several reasons.

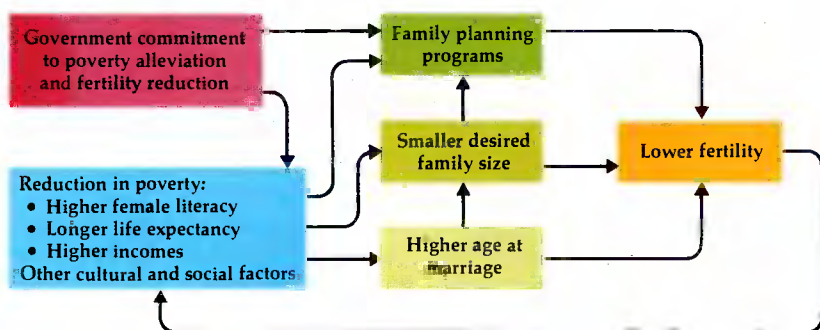
The first is that the alternative uses of time—earning money, developing and using skills, leisure

—become more attractive. This is particularly true for women, who are primarily responsible for bringing up children; as their opportunities for education and employment improve and their horizons expand, they often want a smaller family. Second, with increasing income, parents apparently prefer healthier and better-educated, but fewer children. They are more likely to want more education for their children when they believe that future job opportunities will be governed less by class origin or family background than by education and associated skills. Since this tends to be a consequence of development, it can help to explain falling fertility over time. Third, the children of the poor work at home and outside the home at an early age: for richer parents, children’s work is not so vital to family welfare.

If children help to support their parents in old age, the (low) current costs of raising children are a small price to pay. Where mothers command only low wages, the differences between children’s and mothers’ earnings may be small; work lost by the mother during a child’s infancy may be easily recouped by the child later on. Finally, in poor countries much of women’s traditional work—in agriculture, crafts and petty retailing—can be combined with looking after children.

The link between household poverty and high fertility is further reinforced by high rates of infant and child mortality; in poor families many births and the high probability of infant deaths go hand in hand. In the first place a mother who stops breastfeeding because her baby dies is biologically more likely to conceive another. Parents whose children die often try to replace them; and where high mortality is common, social norms

Figure 5.5 Influences on fertility



(which respond only gradually to changes in mortality) tend to encourage "insurance" against the expected loss of children. On the other hand, high fertility contributes to high infant and child mortality: many births, especially if they are close together, can weaken both mother and children.

FAMILY PLANNING. The link between household poverty and high rates of childbearing is further cemented by the fact that the poor still have very limited access to modern and simple means of contraception. The contraceptives available are often expensive, particularly in relation to the incomes of the poor—and especially if they must be bought from private doctors. For a poor family, limiting the number of children may therefore mean sexual abstinence, illegal abortion, infanticide—or, at best, ineffective and difficult traditional contraception. In some circumstances, the psychological or financial costs of avoiding pregnancy may exceed the costs of having another child.

Family planning programs that are well designed and implemented may legitimize what relatives, friends, the community, the clan or village might otherwise have frowned upon. These social norms are often influential. Recent evidence indicates that declining fertility in 19th century Europe was not associated with economic factors in any consistent way. But it did follow a similar pattern across regions defined by a common language or culture—implying that the idea of limiting family size can affect fertility independently of specific economic change.

The same tendency can be seen today: even taking income and education differences into account, there are national and regional differences in fertility (Figure 5.4) that appear largely the product of

cultural or religious differences. But culture never seems to have been an impenetrable barrier to fertility change. Once a high enough level of development has been reached, fertility has fallen without exception. Where there was a strong religious or cultural resistance to contraception, as in Ireland, fertility fell through delays in the age at marriage and an increase in life-long celibacy, rather than through family planning.

AGE AT MARRIAGE. Recent declines in birth rates partly reflect rising age of marriage among women. This has lowered the rate of population growth by lengthening the interval between generations, by shortening the period during which women are likely to have babies, and perhaps by giving women other interests beyond family and childbearing to take with them into married life.

Like marital fertility, age at marriage is strongly affected by social and economic conditions, including women's education and employment opportunities. The average age at marriage (corrected for the proportion of women who never marry) is 22 in the middle-income countries of Latin America and in Malaysia, Singapore and South Korea; but it is less than 20 (sometimes much less) in many Sub-Saharan African countries and in Nepal, India, Pakistan and Bangladesh.

Later marriage as a mechanism of fertility reduction has been most important in Asia. In the 1960s in South Korea and Peninsular Malaysia, changes in the proportion of women married accounted for about half as much of the decline in the crude birth rate as did changes in marital fertility—and were more important than marital fertility declines in Sri Lanka and the Philippines. China has placed great stress on delaying marriage in its

program to reduce population growth.

In Latin America, later marriage has been a less important ingredient of declining fertility. This has been partly because average age at marriage was already high compared with Asia, partly because much of the fertility decline in such countries as Chile, Colombia and Costa Rica has been among older women, and partly because childbearing outside wedlock is more common. Fertility is generally high and age at marriage low throughout Africa and the Middle East.

Population policy and family planning programs

Lower fertility is not an end in itself, but one among several ways of improving human welfare. Nor are the benefits of family planning simply economic. Relatively few couples, even among the poor, want as many children as their natural fertility would allow—witness the hospitalization rates due to self-induced abortion in Latin America, and scattered evidence that some parents do not always do all they might to avoid infant deaths, particularly of daughters. Poor women are particularly helped by family planning services; so are children, who can benefit from a smaller family.

The case for the public provision of family planning services, and ensuring that the poor have access to them, is gradually becoming less controversial. Some 35 developing countries, with 78 percent of the developing world's people, have an official policy to reduce population growth. An additional 14 percent of the developing world's population lives in countries where family planning is supported for reasons of health and welfare—including the health benefits that come from fewer children.

Some countries have had striking

successes. In Thailand contraceptive use increased from 11 to 35 percent of rural married women between 1968 and 1975, and from 33 to 49 percent of urban married women. In Indonesia the government expanded its service in 1974 from a clinic-based approach, to one based in villages. It currently has 3,500 clinics, 25,000 village depots and 40,000 village family planning groups. The proportion of married women using modern contraceptives increased from 7.4 percent in 1974 to 18 percent in 1977; it was 0.2 percent in 1970.

Nor need a population policy be confined to the support of family planning programs. A few countries—most notably Singapore—have used tax and housing policies to discourage large families. Direct payments for sterilization have been an important part of the Indian program. China, which for several years has emphasized that later marriage and small families are patriotic, recently announced bonuses and preferences for one-child families, and tax and housing penalties for families with more than two children. Raising the legal minimum age at marriage (the median among all countries is still only 15) might also help, although efforts to date have not been particularly successful (with the possible exception of China).

IMPROVING ACCESS TO CONTRACEPTION. Before 1960 family planning services were provided largely by voluntary associations. Most programs were small and offered services through health centers and private clinics, promoting simple barrier methods (foam, condoms and diaphragms) and rhythm. In the 1960s oral contraceptives and the intrauterine device (IUD) became available—and sterilization and legal induced abortions became more common. These required clinical support

and well-trained practitioners, making programs heavily dependent on the health system.

This has caused difficulties for many countries where medical facilities and personnel are too limited to provide adequate family planning coverage. But if they operate within the framework of the health service, middle-level health staff and people specially trained in family planning have proved effective substitutes for medical specialists. In Thailand and South Korea the use of paramedical personnel for screening patients and supplying contraceptive pills led to increased acceptance of these pills. Family planning aides in Pakistan and Bangladesh have learned to insert IUDs, and in India to carry out menstrual regulation (inducing abortion of possible but unconfirmed pregnancies at an early stage). On a trial basis, they have been trained to perform sterilization.

Separate family planning services have not been so successful. The *ad hoc* systems (in Pakistan, for example) have at times involved ambitious programs of regular home visits to persuade people to plan their families, and to supply contraceptives. But without a satisfactory health network, it may be difficult to supervise the staff and provide more specialized advice or assistance to the few people who develop complications.

A promising alternative approach is to use other administrative networks. From time to time, India has had government personnel, such as teachers and tax collectors, recruiting people for sterilization—although this became unpopular through abuse. The successful family planning program in Indonesia (see box on page 80) has taken advantage of strong community organizations and made extensive use of village workers, with clinics to which people can

be referred for further help.

Several countries have greatly increased the number of places where pills and condoms can be bought, often at subsidized rates. But simple and safe barrier methods (condoms, diaphragms and spermicides) are still neglected in many developing countries despite their renewed popularity in developed countries. Their use could sensibly be encouraged; research into ways of making them more practical in developing country settings is needed (see box).

FUTURE PRIORITIES. Progress in reducing fertility will partly depend on increasing the demand for contraception—primarily through social and economic development that successfully reaches the poor, but also through the growing understanding that fertility is a matter of individual choice. It will also depend on providing effective family planning services. Both will be facilitated if contraceptives can be made more convenient and less prone to complications that need medical attention. And the importance of political commitment to a population policy should not be underestimated. Countries with a dual concern for social and economic advance and for family planning will be able to cut fertility rates substantially in the rest of this century, and beyond.

The seamless web

Chapter 4 stressed that education, health, nutrition and fertility significantly affect the incomes of the poor. This chapter has considered separately each of these main areas of human development, with special emphasis on the causes of change and the policies that can bring it about. But it is worth reiterating that the different elements of human development are key determinants of each other.

Contraceptive technology

Of the people who use some form of birth control (about two-thirds of them in developed and one-third in developing nations), roughly one-third are sterilized, about 20 percent use the pill, 15 percent the intrauterine device (IUD) and 13 percent the condom. Most of the remaining 19 percent use rhythm, abstinence, the diaphragm, contraceptive injections (which last one to three months), various types of spermicide and such traditional methods as withdrawal, postcoital douching and deliberate reliance on the anti-fertility action of breastfeeding. Though there is evidence of widespread illegal and self-induced abortion, safe and legal abortion is available in only a few countries, and publicly provided in even fewer.

The amounts spent on research in reproductive sciences and contraception have been small—less than 2 percent of total government spending on medical

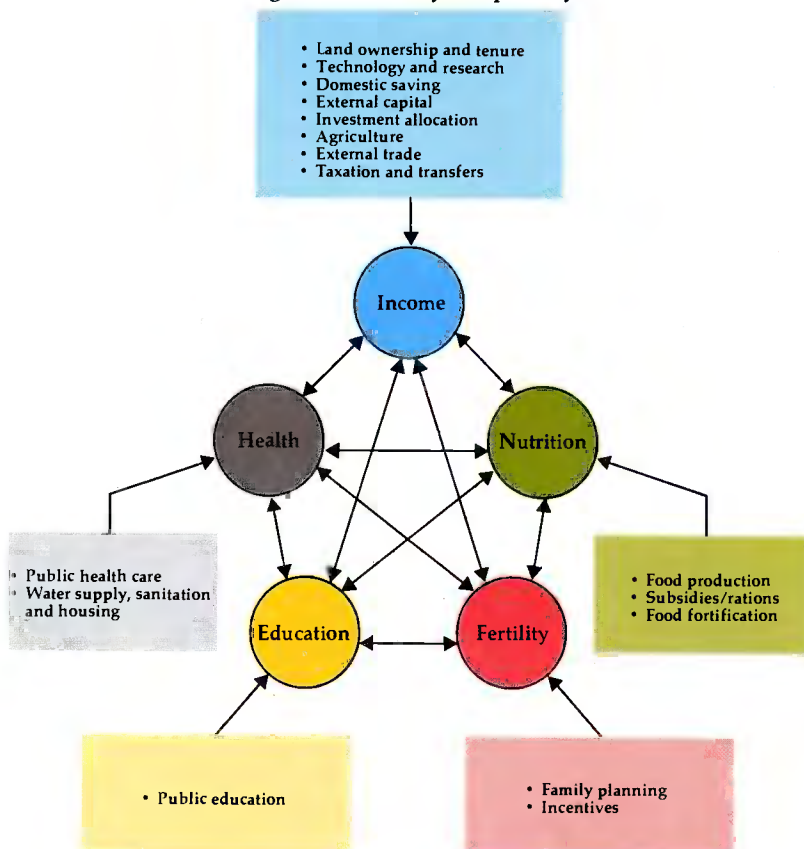
research in the mid-1970s. And public spending on applied contraceptive research has fallen as much as 50 percent since then. The (smaller) amount spent by pharmaceutical firms has probably also fallen, apparently because new methods are not expected to be profitable. Unless more is spent, new technologies—vaccines, menses-inducing drugs, pharmacologic methods for men, and much improved barrier contraceptives—though technically within reach, are unlikely to be developed or tested for many years.

Applied contraceptive research is still largely directed at female contraceptives (about nine times more was spent on female than on male methods in 1978), partly because basic research on the female reproductive system has been more successful. It is also geared almost exclusively to the search for new hormonal, drug-based and surgical procedures: more than \$10 million was spent on these

in both 1977 and 1978. In contrast, spending on the simpler barrier methods was less than \$500,000—despite their potential for improvement (a biodegradable condom or a standardized plastic-based diaphragm, for example).

Present barrier methods are generally viewed as too ineffective and inconvenient for widespread use in developing countries—where sanitary conditions are poor, privacy is less, husband-wife communications are more formal and abortion as a backup is more difficult to obtain. In the United States, however, use of the pill is falling, that of the diaphragm increasing; consumer concern over the side-effects of both the pill and IUD has increased. Whether such concerns are well-founded—and on this there is no consensus—they are bound to spread to developing countries. In the 1980s, the efforts to extend services to more people may have to be complemented by a wider choice of methods.

Figure 5.6 Policy and poverty



The seamless web of interrelations constitutes the core of Figure 5.6; feeding into this core are the various areas in which policy affects poverty. The diagram is illustrative, and the policies shown are not the only determinants of poverty or of human development. As has been stressed, climate, culture, religion and natural resources all shape the environment in which development takes place and influence the choice of policies. So do political realities, administrative constraints and the world economy.

Some of the links are simply common sense: it is not surprising that the incomes of the poor significantly affect their health, education, nutrition and fertility. Poor people cannot afford decent food and health care; they are more likely to need their children's meager earnings (or help in the household and fields) so that the children cannot go to school. And they feel more need to have large families to support them during

old age and disability. Average national income is obviously also significant, especially since it affects the tax base and hence the government's ability to finance human development programs.

Some influences are less familiar. The effects of primary education have been stressed above in numerous contexts. For example, parents with a primary education are more likely to learn about (and be willing to try) improved health, hygiene and nutrition practices, thus reducing the chances that their children will become ill or malnourished. Educated people are more likely to have lower fertility: they more readily see the disadvantages of having too many children to feed and educate; they have more alternative sources of interest and satisfaction that compete with children for time and money; they are generally more willing to accept new ideas, such as the use of modern contraceptives, and to seek family planning advice. Because of the mother's preeminent role in bearing and raising children, it is not surprising that her level of education is more

important than the father's.

Health and nutrition both affect whether children can attend school regularly enough to finish the primary years, and whether they have the mental and physical energy to learn. Malnutrition and disease have been found to be closely connected, each increasing the likelihood and severity of the other—with death often the end result. Better health plays a key role in the demographic transition to lower fertility: when the odds are greater that children will survive to support their parents in old age or disability, parents tend to have fewer children. Although it is possible (though not firmly established) that better nutrition may increase natural fecundity, its effects on the health, education and incomes of the poor all contribute indirectly to reduced fertility.

Lower fertility itself affects the other aspects of poverty. The spread and quality of education increases—because both the state and parents can afford to spend more on each child when there are fewer of them. Large families have higher infant and child death rates and a higher

incidence of malnutrition—there is simply less food, money and time for each child.

It is also important to take a long view. Although a certain amount can be done with crash programs such as vaccination campaigns and adult literacy programs, sustained human development is usually a slow process. In general, a country's level of health, education, nutrition or fertility at any given time largely reflects its level 10, 20 or even 50 years earlier. At any given level of family income, children are more likely to go to primary school if their parents have also done so; and because the home environment encourages learning, particularly in the preschool years, they are likely to do better in school as well.

Human development is thus transmitted from generation to generation in a virtuous circle; but equally, there is a vicious circle that sentences the children of deprived parents to deprivation themselves. Breaking out of the vicious circle into the virtuous one is the essence of human development.

6 Implementing human development programs: some practical lessons

This chapter concentrates on four key questions that invariably affect the way human development programs are organized, and how effective they are.

- **Political support.** This has been critical to the considerable success of human development programs in reaching the poor. Its absence also helps to explain some of the failures.

- **Finance.** Money alone will not produce human development. But a shortage of funds is a common, often binding constraint. So methods that reduce unit costs or raise new revenues have a considerable role to play in expanding services.

- **Administration.** For many programs, administrative and institutional capacities may be even scarcer than finance. Yet project experience shows that their importance is frequently overlooked.

- **Demand.** The way families and individuals respond to services is crucial to improving health, hygiene and nutrition; to whether children from poor families go to school or have to work instead; and to reducing fertility.

These four factors—like education, health, nutrition and fertility—are closely interlinked. For instance, financial and administrative constraints can be eased by political support, which in turn will be stronger if programs can be made less costly or administered more readily, or if there is a heavy demand

for them. The links, though, are not all complementary: for example, paramedical workers have lower salaries than doctors, but they need more supervision.

Human development needs political support

Political support for human development cannot be taken for granted. The poor frequently are politically weak. They are often too sick, uneducated, geographically dispersed and busy to be politically active. Influential elites, particularly large landowners, may oppose human development programs if they feel that their power and status might be undermined. They might feel, for example, that educated children are less likely to settle for working in serf-like conditions on haciendas or plantations.

Even if there is no direct opposition, the extent and form of human development programs will generally be influenced by keen political competition for limited tax revenues. Because policymakers generally live in urban areas, as do the most politically active of the people who benefit from public services, these programs tend to suffer from urban bias (though reductions in urban social expenditures do not necessarily lead to increases in rural expenditures). But the health and education facilities available even to urban elites in poor countries are generally inferior to those

available to the middle class in rich countries. A major political challenge of the 1980s will be to adapt and extend programs to the poor, particularly those in rural areas.

Despite the difficulties, it has usually been easier to obtain political support for health and education programs that benefit the poor—witness the large increases in school enrollment and life expectancy—than for policies of, say, land or tax reform. Why? Largely because, unlike land reform or increased taxation, more knowledge, health and vitality for the poor are not obtained by reducing them for someone else. Of course, such programs must be financed. The rich may have to pay more in taxes than they get in direct benefits. But they are often prepared to support human development, in part because it has a legitimacy that transcends culture, religion, ideology and class. This is particularly true if poor children are involved. The idea that all children should have a fair start—without the handicaps of disease, illiteracy and malnutrition—is widespread.

In some circumstances, moreover, everyone gains. Those who are not poor will benefit if endemic diseases are eradicated—prevention usually being cheaper than cure. Malaria control is an obvious example: the main beneficiaries are the rural poor, who are most likely to be infected. But mosquitoes that bite the infected poor may

fly on to bite the rich as well. In Brazil in 1974, an epidemic of spinal meningitis aroused public concern—in response, 80 million people were vaccinated within 10 months, stopping the epidemic.

Human development programs are also seen almost everywhere as contributing to national unity. Universal primary education in particular can provide all citizens with a common intellectual heritage and help overcome the potentially divisive effects of regionalism, tribalism, race and caste and class distinctions. In addition, governments often see human development as helping to build broad-based political support among potentially antagonistic groups.

The appeal of and political commitment to human development cut across ideological boundaries: China, Cuba and North Korea have placed great emphasis on such programs, but so have South Korea and Costa Rica. Their appeal is reinforced by international and ethical support. The Universal Declaration of Human Rights of 1948 included the rights to food, health and education. The United Nations and its specialized agencies have played an important role in focusing international attention on human development and on population issues. All the major religions also provide strong backing for efforts to improve the health, nutrition and education of the poor.

Easing the financial constraint

Finance ministers everywhere (with the exception of some mineral-rich countries) find that available funds cannot meet the many competing demands placed on them. In the poorer countries, public revenue (taxes, other domestic revenue and foreign assistance) usually is less than 20 percent of GNP, while expenditures other than on social programs (agriculture, infrastruc-

How much would it cost?

Take an illustrative list of human development needs: five years at school; adequate nutrition; primary health care no more than an hour away; family planning services; at least 20 liters a day of pure water within 100 yards of home; and a pit latrine. How much would it cost a government in a developing country to provide this for everyone?

The answer varies from country to country, depending first (and most importantly) on the standard of service; second on such factors as climate, communications and population dispersion; and third on the balance between capital and operating costs (most budgets do not provide enough for the operating costs that an effective service would need). But there are also two general rules that affect cost: one, for any given standard the proportion of GNP required falls as GNP rises, partly because higher-income countries have more educated people—whose wages are therefore relatively lower—to implement the programs, and partly because nonlabor costs rise more slowly than GNP. And two, marginal unit costs usually fall as coverage rises, but only up to a point: the costs of reaching the last 10–20 percent of the population may be several times the average costs for the first 80–90 percent because of physical inaccessibility or inadequate demand.

Some examples from different countries:

- Education. The average gross enrollment ratio for primary school in developing countries in the early 1970s was about 70 percent; central governments were then spending an average of 1.7 percent of GNP on primary education. Few governments have provided universal elementary education for less than 3 percent of GNP. Peninsular Malaysia spent 2.7 percent in the mid-1970s and had a gross enrollment rate of 93 percent.
- Nutrition. In 1979, when subsidized rations were restricted to the poorer half of the population in Sri Lanka, they still

cost 4 percent of GNP. Eliminating food deficits in Brazil—with its much higher income—could cost from 1 to 2 percent of GNP in 1980, depending on the type of food provided.

- Health and family planning. Malaysia's system of public health care covered more than 75 percent of the population in 1974. It relied heavily on low-cost paramedical staff—and its operating costs were nearly 2 percent of GNP. Sri Lanka's government spent about 1.7 percent in the mid-1970s. China's central government spent less than 1 percent on health in 1978, but much of the primary care system was financed locally; Brazil's spent about 2.5 percent of GNP in 1975, but public health insurance was biased toward hospitals and urban areas—covering almost 80 percent of urban dwellers but much less of the 40 percent of people in rural areas.

- Water. A recent World Bank estimate suggests that it would cost the Tanzanian government about 1.8 percent of GNP a year over a 10-year period to supply every village with pure and reliable water, plus 0.8 percent for operating costs once the system is fully established. In Brazil the investment needed to cover the whole population by 2000 has been estimated at less than 0.1 percent a year of a much larger and faster-growing GNP in rural areas (allowing for higher costs to reach the last 10 percent of the rural population) and perhaps 0.1 to 0.2 percent a year in urban areas depending on GNP growth. Coverage of the rural and urban populations was 62 and 14 percent, respectively, in 1976. Operating costs are borne by the users.

- Sanitation. In Brazil, where 37 percent of urban houses had sewers or septic tanks in 1976, extending the sewer network to cover them all by 2000 would require annual investments of about 0.2 to 0.3 percent of GNP. Providing latrines in rural areas would cost only between 0.01 and 0.02 percent of GNP.

ture, debt service, defense and so on) commonly exceed 12 percent of GNP. Yet governments that have assured virtually everyone primary education, health care, family planning services, adequate food, pure water and sanitation have generally spent more than 10 percent

of GNP (and often a good deal more) on doing so.

The costs involved depend on many factors (see box), among the most important of which are the range and standard of services. Thus governments in some poor countries—notably Sri Lanka and

probably China—have managed to provide the essential services (primary education, food supplements and basic health and family planning facilities) to almost everyone for less than 10 percent of GNP. Typically, though, governments are spending from 3 to 10 percent of GNP for human development programs that are far from comprehensive—and whose effectiveness is often reduced by lack of money for operating costs (wages for health workers and teachers, maintenance of water supply systems, gasoline for transportation of doctors in rural areas, textbooks in schools).

How can financial constraints on human development programs be eased? There are four ways: increasing taxes, reallocating revenues, reducing costs and using resources other than those obtained from national taxes and duties.

Increasing tax revenues

Many developing countries have already made impressive progress in improving their tax-gathering (see Table 6.1). Since 1975, however, tax ratios in developing countries have not increased; although some obvious steps can be taken (making taxes more progressive and reducing evasion and arrears), the scope for raising taxation is less now than it was 20 years ago.

This is especially true of the poorer countries—even where foreign trade is a substantial share of output. Their tax administration is generally weaker, there is usually substantial unmarketed output, and their taxable surplus accounts for a smaller share of their GNP. Even a tax-to-GNP ratio of 15 percent in such countries implies a heavy tax burden. Take India as an example: its taxable surplus may be defined as all income beyond the poverty line (defined there as the income of the fortieth percentile

Table 6.1 Taxes as a percentage of GNP

Group of countries	1953-55	1972-76	Percentage increase
7 low-income developing countries	11.2	16.0	43
17 middle-income developing countries	12.1	16.4	36
Total (24 developing countries)	11.8	16.3	38
15 developed countries	26.2	36.2	38

Note: Taxes include social security taxes.

in the distribution of income). On this basis, India's taxable surplus in 1975 was 41 percent of aggregate income; the ratio of taxes to taxable surplus therefore was 34 percent—comparable with the tax-to-GNP ratios of industrialized nations.

Earmarking taxes for programs with strong ethical or political appeal can raise extra money when further general taxation is not feasible. In Colombia a share of the beer tax is reserved for public hospitals. Many Latin American countries finance their health and social security budgets by a payroll tax. (But payroll taxes cover only formal employment, and they tend to reduce growth in jobs by raising the cost of labor relative to capital.) Motor fuel taxes are good for earmarking, for several reasons. They are easy to collect, are progressive, help curb oil consumption, and have high revenue potential—in some cases exceeding 1 percent of GNP. But like all earmarked taxes, they should be used only sparingly, because they increase the rigidity of the way government revenues are spent.

Reallocating existing revenues

Public spending on human development can be increased by reallocating government revenue from less productive uses, including

wasteful showcase projects, subsidizing inefficient enterprises and, so far as security considerations permit, military spending (which on average in East Asia, South Asia and the Middle East exceeds public outlays on education and health combined). And within human development programs there is often room to reallocate budget shares away from high-cost and less-urgent projects (such as urban hospitals and universities largely serving the relatively well-off) and toward more basic programs (such as primary health care and education).

Keeping costs down

By modesty in standards and efficient choice of technology, governments can provide services relatively cheaply—and without precluding future improvement. (For example, public standpipes can supply safe water at some sacrifice in convenience but at less than half the cost of individual house connections.) This general approach will often be opposed by teachers, doctors, architects, engineers and other professionals who insist on high standards—and correspondingly high costs. Not surprisingly, the financial constraint is then said to prevent the extension of services to poor rural areas. Political leaders have sometimes felt that it was better to accept unaffordably expensive standards than to risk the charge that they were backing "second rate" projects. But the World Bank's experience in health, education and urban development projects suggests that many governments now see political as well as economic benefits from being able to reach the poor by accepting lower standards initially.

Chapter 5 discussed a number of specific ways of economizing in health, education and nutrition programs. China's barefoot doctors (see box overleaf) are an excel-

China's barefoot doctors

Best known for its use of "barefoot doctors" at the grass roots, China's rural health care system has several other faces—specialized urban hospitals serving the surrounding areas, well-equipped county hospitals, and health clinics at commune centers. These facilities provide indispensable support for the extensive coverage provided at the "brigade" level—catering to a large village or several small ones. Each brigade sets up a program with financial support from the government; but once established, it must be self-financing (though the government may help in exceptional circumstances). A majority decision of the brigade members is enough to start or end a program; individuals can choose to join—and leave—it.

China's 1.6 million barefoot doctors (roughly one per 600 people) operate at the brigade level in rural areas. Many are women, selected by the brigade members for training, and supported by them during training (which usually takes place in the slack agricultural season). After completing training, the barefoot doctors return to their brigade, continuing to devote part of their time to farm work.

Barefoot doctors are trained to use both modern techniques and traditional Chinese medicine—acupuncture and herbal cures, for example. By combining the two, they increase acceptance of modern treatment and reduce costs—since they prepare herbal medicines from locally grown ingredients.

As a rule, the brigade program is

financed from four sources: an annual premium paid by members; charges for the service; appropriations from the brigade's social welfare fund (collected through a tax on each production team's income); and, sometimes, subsidies from the county government.

The annual premium, 1–2 yuan (\$0.60–1.20) per person or 5–10 yuan (\$3–6) per family, depending on the locality, is a considerable sum for peasants whose incomes average only about 100 yuan (\$60) a year (only a small proportion of which is cash income). The brigade's social welfare fund is a fixed percentage of its total income, so the contribution from the fund to the health program depends on the brigade's income. Members pay for each visit to the brigade health station. In complicated cases, they may have to go to the commune health center or the county hospital. Charges at the commune health center are normally paid out of the brigade's health fund; but patients attending the county or specialized hospitals must pay at least part of the fees themselves.

Like other primary health care systems relying on community health workers, China's has faced problems of credibility and training, and of uneven levels of service. Steps are now being taken to address these problems, including more emphasis on initial and in-service training of barefoot doctors. The intention is to upgrade the services as funding and staff skills permit.

lent example both of keeping costs down and of upgrading services as the economy grows—the Chinese are now providing their primary health workers with additional training and better support. Restricting subsidies to those who cannot afford to pay for services can also help keep costs down (see pages 62–63 for examples of how this can be done in nutrition programs). But overly narrow targeting may sacrifice some political support from middle- and upper-income groups—support that may be critical in establishing a program to reach the poor, too. Various ways of cutting unit costs in higher education—by far the most expensive part

of the educational system—were also discussed earlier (see page 50).

Using resources other than national tax revenue

The state invariably plays a central role in education, health and nutrition programs. But it is by no means the only source of finance for human development. With the proper incentives, individuals, private firms and other nongovernmental organizations can play an important role.

Most food consumption, of course, is privately financed. Moreover, the relatively well-off are often willing to pay for private

education and medical treatment. Where the expansion of private education and health care is not inconsistent with national policy, this would allow scarce government funds to be concentrated on the poor. But if the middle classes invariably send their children to private schools, much of the necessary political support for high-quality public education may be lost.

One way of mobilizing private funds for education is by restricting the number of places in public universities, maintaining high standards there, and then allowing the private sector to cater to those who can afford it but do not succeed in the stiff competition for the places in public universities. Scholarships to public universities can be provided for those who cannot afford tuition fees. This has been done in South Korea, where 72 percent of higher education enrollments are in private institutions, while in primary education (which is virtually universal) 99 percent of the enrollments are in public schools.

In some cases it is even possible to charge the better-off enough to subsidize services for the poor. In many countries, for example, fees for private and semiprivate hospital rooms are set well above costs and the surplus used to subsidize poorer ward patients. There are even better opportunities for this type of cross-subsidy in urban water and sanitation systems, where the subsidy can be virtually automatic. The well-off are generally willing to pay more than the actual cost of the service because the alternative to being connected to the public system is a private well or septic tank, at much higher cost.

Local resources can also reduce the financial burden on the center. In Tanzania in the mid-1970s, self-help labor was equal to about 10

percent of the development budget. The Tanzanian government typically provides construction materials for projects, and the local communities provide the labor. Self-help organizations exist in many developing countries: one example is Sri Lanka's Sarvodaya Shramadana Movement (see box.) Most self-help projects in the

developing world involve building such things as wells, schools and health clinics. But they do not stop there: in many countries local people provide food and housing for primary school teachers. It is more difficult, however, to mobilize sustained support for recurrent costs than for one-time efforts, such as construction projects.

As people become more mobile and the cash economy more widespread, the strength of traditional self-help efforts may wane. But instead of providing resources in kind, local communities can raise money (through local taxes or charges) to support their efforts. Like other forms of self-help, this can be stimulated by matching grants from the central government in support of locally initiated and managed activities. In Kenya, for example, the government assists *harambee* (self-help) projects that meet official guidelines. But sluggish administration in central agencies can suffocate local participation and self-help—enthusiasm and initiative may wane if decisions take too long or promised assistance does not arrive on time.

Self-help is not always the right answer. In education, for example, local financing can lead to such an uneven distribution of qualified teachers, books and equipment as to intensify the inequities the country is trying to reduce. Northeastern Brazil and northern Nigeria provide two cases in point. In both regions, low incomes partly explain why the wages and quality of teachers fall below the national average; they also partly explain the low enrollment rates in these regions. If local economic and social progress lags well behind the national average, financial and technical assistance from the central government will be crucial.

Developing administrative strengths

Institutional constraints are in many cases at least as serious a barrier to human development as shortage of funds or lack of political support. Effective administration usually requires more than the efficient working of official bureaucracies; it depends on such factors as the availability of middle-level

Self-help in Sri Lanka

From small beginnings in 1958, the Sarvodaya Shramadana Movement now employs some 6,000 full-time workers and reaches more than 10 percent of the country's rural population. It has full-scale programs in some 300 villages, but is active in another 2,500. It has organized education, health, nutrition, sanitation and housing; set up agricultural and handicraft programs; and is starting to promote other small-scale rural industries.

The village of Panakura, in the poor hilly district of Kegalle, provides a good example of the Movement's work. Simon Jayawickrama had graduated from Panakura's primary school and was doing well in the secondary school two miles away; then he had to drop out in the tenth grade to help support his family. Through his former teacher and the local Buddhist monk, he made contact with the Movement; with the help of the local Sarvodaya workers in nearby Atulugama, Simon began working amongst Panakura's 81 families. After intermittent visits over a two-week period, a first Shramadana workcamp was organized—to build a road to the village. A second camp began building a community center—both projects chosen by the villagers themselves.

The Sarvodaya Movement provided cement, reinforcing rods and skilled labor. For 15 weekends, 80 percent of the villagers put in 6-8 hours of manual labor a day. With the help of 100 young workers from Sarvodaya groups in other villages, they established a community kitchen where everyone pooled and prepared their food; took part in community meditation, singing, dancing and other cultural activities; and held two daily community meetings (called "family gatherings") where everyone, young and old, had an opportunity to discuss their problems and ways of solving them.

Following the workcamps, Simon and 10 others went to the Sarvodaya regional training institute at Kegalle for a two-

week leadership training course. On their return they began forming what Sarvodaya calls the "social infrastructure"—groups for mothers, farmers and so on. Representatives from each group made up the Village Reawakening Council, which has initiated various productive activities, such as growing bananas and passion fruit as cash and food crops, and set up a cooperative store.

In the community center built during the Shramadana camp, one of the Sarvodaya trainees has helped the mothers organize a community kitchen and day-care center. Here young children are taught about health and hygiene, and are vaccinated by a visiting government health worker (who received part of her training from Sarvodaya). The school-age children's group is responsible for a garden that helps to supply the community kitchen, and for keeping the community center clean. The local Buddhist monk took a four-month course on village development at the special Sarvodaya training school for monks.

As well as extending its coverage, the Movement is improving the follow up to the initial Shramadana workcamp phase, to prevent backsliding. Although the long-term effect of Sarvodaya's work remains to be properly evaluated, most observers have been strongly impressed by the way it has involved people in development. It has attracted widespread international support.

How much has all this cost? The Sarvodaya budget for 1979-80 was \$2.3 million, an average of less than \$1,000 per village assisted. Voluntary labor and other payments in kind contributed many times that amount. Of the cash budget, some 80 percent came from international assistance (both private and official), 10 percent from Sri Lankan donations and 10 percent from the sale of commodities produced in Sarvodaya's training farms and schools.

manpower, the complementary activities of local governments and voluntary agencies, the receptivity of intended beneficiaries to public services, and the persistence of effort.

Unlike many aspects of agricultural, industrial and infrastructural development, human development programs can rarely be put out to contract. Improvements cannot be effected by changes in policy or legislation alone. Funds, equipment and advanced technologies can seldom substitute for trained field personnel or administrators.

Administration is a vital ingredient in primary health care: without adequate training, supervision and supplies, locally recruited paramedical staff cannot be effective. This is one of the important lessons of Brazil's early experience with rural primary health care in its poor northeast region, one confirmed in countries as diverse as China, Jamaica and Botswana.

In education, too, there are obvious administrative difficulties, because of the number and geographic spread of primary schools. But most countries have wide experience of operating an educational system, although major changes in curricula or teaching methods may be administratively demanding. For nutrition, general food subsidies are simpler to organize than targeted programs—but subsidizing food consumed mainly by poor people (see pages 62–63) is a form of targeting that eases administrative problems.

Improving administration at the periphery is far more complex and difficult than administrative reform at the center, a task that has itself often proved intractable. Many of the poor are hard to reach through conventional public programs, and the end-of-the-line workers may not be motivated to break the social, linguistic and physical

barriers that separate them from the poor. Supply lines for textbooks or medicine may be continually breaking down, and the necessary technical support may be lacking. But these and similar difficulties must be overcome to reach the poor; that usually means improving organization at the grass roots.

Strengthening government machinery

No matter how resourceful individuals or local communities may be, sustained progress in human development inevitably requires national governments to mobilize and apply the much greater resources, both domestic and international, at their disposal.

Reviews of World Bank projects reveal a number of common institutional problems—among them, weak planning agencies and an inability (or failure) to relate annual budgets to long-term development priorities. Some of the existing deficiencies are due to inappropriate administrative structures and procedures, which still tend to reflect the metropolitan models on which they were patterned. They place undue emphasis on central control and take inadequate account of prevailing cultural or social attitudes.

Other weaknesses arise because the administration is not properly geared to identifying the people to be served, increasing their access to services, adapting services until they are appropriate, delivering them efficiently and observing (and reacting to) the public's response. This sequence requires people who can learn from the intended beneficiaries and gain their confidence (see box). This is critically important when the poor are cautious (or even hostile)—as they often are in their reactions to preventive

medicine, family planning and nutrition education.

Most developing country governments are well aware of the need to improve administrative performance, and have undertaken some form of public sector reorganization. A common objective is to decentralize; planning units are being created at the state or provincial level in the Philippines and Sudan, for example, as a first step toward greater devolution of power (though premature decentralization, as in Tanzania, can complicate program implementation).

With the help of multilateral and bilateral agencies, many countries are trying to improve the performance and skills of public sector employees through training; through better job classification, which facilitates recruitment, training and evaluation; and through changes in civil service regulations—for example, to specify promotion requirements more clearly and to tighten discipline. Thailand is introducing special procurement procedures to prevent slippage in project implementation. Malaysia is implementing a more systematic approach to the preparation and appraisal of agricultural projects. Several Asian and African countries have begun to streamline cumbersome budgetary practices.

These and other efforts to make government machinery more efficient will take many years to produce discernible results. The continuous expansion of public sector activities in most developing countries has produced its own set of constraints: many bureaucracies have become large, powerful and protective of their own interests. Frequent changes of political leadership have insulated some bureaucracies from pressures for reform; in other countries radical attempts to restructure or purge public services have greatly

Rural poverty unperceived

Poor people are often the most difficult to reach. Many live on the edges of villages, far from main roads. They are illiterate, have no radios and know little about events beyond their neighborhood. They rarely go to public meetings and travel little except in search of work. Those whose legal position is weak (such as refugees or squatters) may even try to hide, to be invisible to the official eye. Out of sight, they hope to be out of mind.

As for the professionals who work in rural development programs, many of them are caught in an urban trap. Young, unmarried officials are sent to remote rural areas; but age, marriage and their careers draw them back to the towns and cities. And those who do live in the countryside often direct their attention toward people they have most in common with—the not-so-poor.

What can be done to correct this bias? Changing career patterns and incentives to reward rural work is fundamental; training can also play a role.

Without the need for complicated research, in-service training can help people to understand more about poverty. For example:

- Family case studies: a day in the life of a landless household, or how a poor family survives the hungry season.

- Getting poor people to talk about significant incidents in their life and work, particularly about those they see as being responsible for their poverty.

- Exploring practices and attitudes that affect, for instance, diets and fertility.

- Seeking out those who do not use services or adopt new practices, and trying to understand the reasons for this.

Relatively simple but systematic surveys can sometimes help those who carry them out. To take one example: in a densely populated part of western Kenya, junior agricultural extension staff and home economics workers were each given a random sample of 100 households to survey, in the area where they worked. After the survey, many at first thought that the sample had been biased heavily against the better educated households. One of the agricultural staff complained that only one of his 100 households had an improved breed of cow: he was surprised to learn that he had, without recognizing it, been concentrating on better-off households; in fact the area average was only one of these cows for more than 200 households. A home economics worker was appalled at the poverty she had found. "These people do not come to my meetings," she said. Perceiving reality is the first step to changing it.

reduced the ability of governments to maintain essential human development programs.

Choosing appropriate administrative strategies

To help make programs fully effective, administrators may need to use a variety of institutions—national bureaucracies, public enterprises, private businesses, voluntary agencies, local governments and organizations of intended beneficiaries—and strike the right balance between them.

In family planning, for example, traditional channels of private marketing, which reach even remote villages, have proved effective in many countries (including India, Indonesia, Jamaica and Sri Lanka). These private distributors supple-

ment rather than supplant the services available through health ministries or other official family planning agencies. The cost to users has been kept low by providing the private distributors with free or highly subsidized contraceptives and controlling the retail price. And in Singapore, contraceptive information was at one time distributed with public utility bills.

Organizations of intended beneficiaries are not conventionally regarded as administrative agencies, but they can play a valuable role. Farmers' organizations, rotating credit associations, women's clubs, religious groups and marketing cooperatives are in principle accountable to, and can reflect the interests of, their members. They can involve their

members, too, as no bureaucratic agency can. When local health centers in northern Senegal were unable to reach the people directly in a child-feeding program, the religious leaders took over part of the food distribution: recent research indicates that this is an effective way of getting food to poor families. Local groups can also provide reliable feedback on project experiments, and can influence bureaucracies to improve services in ways that unorganized, poor individuals could not.

Research in both developed and developing countries shows that when the beneficiaries are involved through their own organizations, they respond more effectively to services. That has happened, for example, in 4,500 village cooperatives organized by the Indian National Dairy Development Board; in 200 local development associations in the Yemen Arab Republic; in more than 9,000 Mothers' Clubs in South Korea, where family planning and other community functions have been assumed by traditional credit associations (called *kaes*); and in special radio listening and discussion groups in which about 2 million rural Tanzanians participated during the "Man is Health" campaign in Tanzania in 1973.

There is of course a danger that poor people's organizations may come to be dominated by local elites, with an associated risk of corruption. One of the main problems of agricultural cooperatives, for instance, has been to resist this type of domination. Unlike subsidized agricultural credit or fertilizer, however, primary education cannot be stolen, hoarded or resold. And though medicines can be, even the richest person would not want a hundred vaccinations. Another problem is infighting between rival local groups. But the suspicions that established

bureaucracies may have about organized beneficiaries or local governments should not blind them to their potential for effective action.

When administrative abilities are weak, it is sensible to concentrate on projects that do not need much organization. Food fortification (see page 63) involves minimal administrative effort. And in Cameroon a state corporation has effectively distributed low-cost pharmaceuticals through commercial channels. But this approach does not work for every kind of service, and it often fails to reach the most deprived people.

Where countries have a relatively strong administrative system but the poor are badly organized (a fairly common combination), governments can provide services that do not require joint action—such as primary education, basic health services, mass vaccination campaigns and subsidized food. Sri Lanka and the Indian state of Kerala, for example, have managed to achieve striking progress without relying much on local development groups. But even there, programs tend to be more active and effective if the intended beneficiaries are involved through local organizations.

Demand: ensuring that services are used

As has been shown, the poor sometimes fail to take advantage of services even if they are available (see page 52). The reasons for this “reluctant demand” vary across countries and sectors; but the more accurately they can be identified in particular cases, the better they can be tackled. Sometimes this can be done by changing the way a service is provided or reducing the costs of using it. Often it means changing the perceptions of intended beneficiaries. This may

be simply a matter of providing information; but it commonly requires changes in long-standing attitudes and habits.

Changing the way services are delivered

A school calendar may compete unnecessarily with the crop cycle, with important exams held at times when students are most needed by their parents in the fields. The staff of a health center may not keep a regular schedule, forcing people who have traveled for several hours to return home without treatment. The local clinic may be short of drugs or so inconveniently located that a patient with a minor complaint may prefer to go straight to an urban hospital—or to the traditional healer, who may live in the village. Often the changes required to make a service more attractive to potential users are self-evident, such as providing them in a language that the beneficiaries understand. This does not mean that they are necessarily easy to implement.

Reducing costs to users

The benefits of services for health, education, nutrition and family planning often may be (or at least appear to people to be) less than their direct and indirect costs (see box). The latter can sometimes be reduced. For example, providing free textbooks (and uniforms, if required) and locating schools within walking distance will reduce the direct costs of school attendance. Providing free transport to health clinics is another possibility.

Providing information

The reason people do not take up a service may simply be that they lack information about it, or they may not know what to do: people may claim to be “aware” that family planning services exist, but

have little idea what their use entails. They may assume that a newly established clinic will charge fees or require membership. Education and organization of beneficiaries can help. So can direct information campaigns, making use not only of mass media like radio or billboards, but also entertainers. Research on the diffusion of new ideas suggests that direct contact between people is the most effective form of communication. It has also been found that mass media are more influential if they are heard (or read) in a group. Radio forums, for example, in which a radio program is followed by a discussion, are a promising way of changing social attitudes and behavior. Since it is difficult to form such groups on an *ad hoc* basis, religious and other social groups may be useful.

Overcoming sociocultural obstacles

Deciding to use a service may require a more fundamental change in attitudes and practices. The idea may be controversial; for example, women may have heard unfavorable rumors about modern medicine or family planning methods. The poor may not appreciate the benefits, say, of different hygiene and sanitation arrangements because they do not understand how diseases are caused. Or the lack of demand may have roots deep in traditional taboos, beliefs or preferences. In many countries, men often refuse to allow women and girls to go to male doctors or community health workers. The same beliefs mean that girls are frequently not sent to school—and hence there are few female medical workers. In Africa and Southeast Asia certain types of food rich in vitamin A (such as dark green, leafy vegetables) are cheap and abundant. Yet many cases of blindness among children are caused by vitamin A deficiency—because eating these

Private costs of using public services

Data on the private costs of using public human development services are scarce. A recent study of Peninsular Malaysia, however, estimated them for education, water and health care.

- Education. Malaysian families had to cover—in addition to examination fees and purchases of texts and supplies—the costs of shoes, uniforms, snacks, transport and special fees. In 1974 these averaged \$47 a year for a student in primary school, \$123 for a student in secondary school.

The table shows that families in the lowest income quintile spent about a fifth of their incomes on out-of-pocket school costs. Even allowing for some bending of the truth by respondents, this is impressive—and it understates the burden. A fifth of the income of a poor family represents a far greater sacrifice than a fifth of the income of a wealthy family. And the cost of forgone earnings—what students could earn by working if they were not in school—is excluded.

- Water. Fewer than a third of the families in the lowest 40 percent of the income

distribution bought piped and treated water (nearly all of which is supplied on a metered basis in Peninsular Malaysia). Of these, 14 percent spent more than 5 percent of their incomes on it. The average burden for the poorest quintile was 4.1 percent. There may again be some bending of the truth involved. But the burden of water charges was high enough to deter at least a third of the poorest 40 percent who had ready access to piped water from purchasing it.

- Health care. The Malaysian study showed a strong relation between household income and expenditure on private health care—but almost no relation between income and consumption of public health care. Most patients paid no fees for public inpatient or outpatient treatment. Nor were expenditures on transport to the place of treatment related to income, although there was a weak inverse association between travel time and frequency of treatment. Thus the need for medical care of the poor and most of the rest of the population was met through the public system at little private cost.

Out-of-pocket costs, Peninsular Malaysia, 1974

Family income quintile	Percentage of households with students	Percentage of their income spent on out-of-pocket school costs	Percentage of households with piped and treated water	Percentage of their income spent on water
Lowest	73	18	20	4.1
Second	67	10	37	2.6
Third	71	10	43	2.0
Fourth	66	8	62	1.5
Highest	50	6	76	0.8

Source: Jacob Meerman, *Public Expenditure in Malaysia* (Oxford, 1979).

foods is regarded as a sign of low social status.

Higher incomes and better education will clearly help to overcome many of these obstacles. Traditional social and cultural structures can sometimes also be adapted to new uses rather than ignored or swept aside. The Indonesian family planning program has been notably successful in this respect, as well as in decentralizing responsibility for implementation (see box overleaf).

The more that programs require people to change their behavior

(the pattern of distributing food within families), threaten established norms (family planning), challenge vested interests (professional associations) or offer few immediately obvious benefits (sanitation), the more patiently they must be introduced. Public education and persuasion are needed, and it will take a long time to reap the economic and political benefits.

Coercion

In attempting to spread human development, many countries have

gone beyond information and persuasion to use various forms of coercion. Laws establishing compulsory primary education are perhaps the most widespread example. Using laws is sometimes regarded as more unfairly coercive than, say, manipulating costs, since it allows no parental choice at all. But because children usually suffer more than their parents, such measures as compulsory schooling should be seen more as protecting the rights of children than as restricting those of parents.

Just how much coercion is considered to be acceptable will vary according to a country's culture and political values. In some places, traditional social structures have been enlisted to exert pressure on their members. This has been a characteristic of the Indonesian family planning program. Among the Hausa in northern Nigeria, a program to eradicate sleeping sickness has been successfully sustained through strong leadership. Every year the villagers clear the undergrowth along the banks of rivers and streams. They do not fully understand the reasons, but they are willing to do what their traditional leaders ask. Nevertheless, programs of education, health, nutrition and family planning have more chance of success if the beneficiaries come to see the programs as serving their interests.

Affecting behavior within the family

Especially in poor households, the interests of parents, children and old people can diverge, causing maldistribution of food, education and medical care within the family (see pages 61–62). Raising family incomes can reduce or eliminate the economic reasons for unfair shares; more education of parents, especially of mothers, can mitigate the cultural reasons (see box on page 50). In addition,

The banjars of Bali

Indonesia's family planning program combines central direction with decentralized implementation. The program has strong political support from the president, to whom its chairman reports directly. Family planning is an integral part of national and provincial development plans—ministers and provincial governors are responsible to the president for their execution. And the program maintains a central data system to monitor performance and ensure that no region or even village runs short of contraceptives. But the task of implementing specific goals rests largely with provincial and local staff, and political and community leaders in the villages.

The program offers strong (but non-monetary) incentives for managers and staff at all levels, because it was designed to give credit for success to local managers. Most of the contact with families is by village volunteers. The program rewards them, too—outer-island midwives can earn trips to Bali for training, while Balinese chiefs whose villages have made the most progress in family planning are taken to see the successful East Java program.

The approach is tailored to specific local needs; it fosters local initiative and experiments with unconventional projects. People at provincial and village levels

submit ideas for new campaigns, and funds are quickly provided for the ones approved. The program has also made use of the private sector—traditional traveling herb vendors (called *tukan jamus*) have been enlisted to supply contraceptives to remote villages as well as urban areas.

In the province of Bali, the traditional community council (called *banjar*) has been harnessed to promote family planning. For centuries banjars have been the hub of village life. There are more than 3,700 of them today; adult men in Bali belong to their village banjar and attend monthly meetings. In 1974 the government in Bali started to work through banjar leaders to create an awareness of family planning, to identify people who might be keen on planning their families, and to help them do so. Typically, the monthly banjar meeting now begins with a roll call; each man responds by saying whether he and his wife are using contraceptives. Replies are plotted on a village map—prominently displayed.

The results have been striking. An estimated 49 percent of eligible couples have adopted family planning in Bali, compared with 29 percent for the country as a whole. The World Fertility Survey showed that the average number of children a Balinese woman could expect to have had fallen from 5.8 in mid-1969 to 3.8 in 1976.

improved earning opportunities for educated women, lower infant mortality rates and a rising age at marriage will help parents to provide more for all their children and to have fewer of them.

Without these sorts of change, it is difficult to affect the way food, education and medical care are shared within families. But it is not impossible. Door-to-door inoculation campaigns can reach all children. This has been done recently in Mozambique and Sierra Leone. And the way work is organized will also affect inequalities within families. For example, the Anand Dairy Cooperative in India increased the income received directly by Indian women—since they have traditionally been responsible for looking after cows

and goats, selling the milk and controlling the proceeds themselves. By selling cooperatively, the members get higher profits than they otherwise would. Families are fed better. More of the children are now attending school. And as the younger educated women are seen to be taking a greater part in running the cooperative, education for girls is becoming more highly valued. In dairy development projects in three other Indian states—all based on this model—similar results are being obtained.

International assistance

International aid for human development programs has been provided for decades and has contributed to several notable

successes. It has played a major role, for instance, in helping to spread education; in eradicating smallpox and sharply reducing several major diseases (including yaws, malaria, leprosy and African sleeping sickness); and, perhaps most significantly, in increasing the production of basic foods.

On the other hand, some aid programs have failed—or have succeeded while indirectly contributing to inappropriate policies. Until the early 1970s, there was an emphasis on showcase universities, large urban hospitals and large-scale agriculture—consistent with development thinking at that time. Not surprisingly, such international assistance involved transferring some technologies or institutions from developed countries without adequate recognition of how the circumstances of developing countries differed.

Since the benefits of human development are received partly by today's children but even more by their children and grandchildren, governments that are hard pressed financially may find it difficult to justify spending as much on human development as is desirable for long-run economic growth, let alone for alleviating poverty. This dilemma—which will be acute during the next few years of financial stringency—is one for which external assistance can be particularly helpful. Many other measures—from small-farmer programs to power generation and industrialization—are also needed to reduce poverty and raise average incomes; these merit strong international support as well.

If donors providing assistance to a country are unwilling to finance human development programs, these programs in most cases will be smaller than they otherwise would have been. Similarly, if donors are willing to finance only "bricks and mortar"

but not teachers or health workers, the net effect will be excessive capital intensity—showing up in overly expensive and underused buildings and insufficient staff. Yet in developing countries a high proportion of spending on primary education and health care, for example, is—and should be—for operating (recurrent) costs. In many countries, such as Tanzania and Upper Volta, money for operating costs is already very short—with the result that schools without books or even paper, health posts without medicines or supervision (due to inadequate travel budgets or gasoline shortages) are increasingly common. These shortages will get worse as growth slows and countries struggle to keep up their physical investment rates.

Most aid agencies have preferred to limit their funding to physical investment, being reluctant to finance operating costs partly because of concern that projects in which a developing country lacked a substantial financial stake might not develop enduring roots, but also from fear of encouraging consumption at the expense of investment. As this *Report* stresses, however, human development increases productivity, reduces fertility and thus promotes long-term growth in average incomes. A significant part of spending—operating as well as capital—on human development therefore *is* investment. This is most evident in primary education, which in many countries has economic returns well above average: the salaries of teachers should no more be regarded as consumption than the wages of workers on irrigation projects. There is a large element of investment in family planning programs as well (indeed the estimated returns often are even higher) and to a lesser extent in health and nutrition programs.

With increasing recognition of the importance of antipoverty programs, and of the investment component of many of these programs, practices have begun to change. Several donors, including the World Bank, have been financing the salaries of agricultural extension workers, and in some cases the operating costs required to carry out education and training projects—teachers' salaries and teaching materials, for example. In May 1979 the OECD's Development Assistance Committee adopted new guidelines on the financing of local and recurrent costs, which recognized that basic human development programs were particularly suitable for these kinds of financing.

Donors should of course be concerned to avoid waste in operating costs, just as in construction costs. And they need to ensure that programs develop adequate financial support for operating costs from national and local governments—lest they wither away when international aid is withdrawn. Thus the share of operating costs covered by external assistance should be reduced gradually, which will encourage steady increases rather than quantum jumps in the amounts to be financed from local funds.

Donors should also consider providing sectoral or subsectoral, as well as project, financing. This enables governments to focus on the institutional, planning and policy issues that have a strong influence on the success of individual projects; it also provides a useful framework for striking the appropriate balance between capital and operating costs. In practice, subsectoral financing—limited by activity or region—is often preferable to sectorwide financing. Through subsectoral financing, donors can assist a continuing series of activities, while ensuring that no one project

or program relies for long periods on outside aid and that implementation difficulties in one project or region do not interfere with continued financing for others.

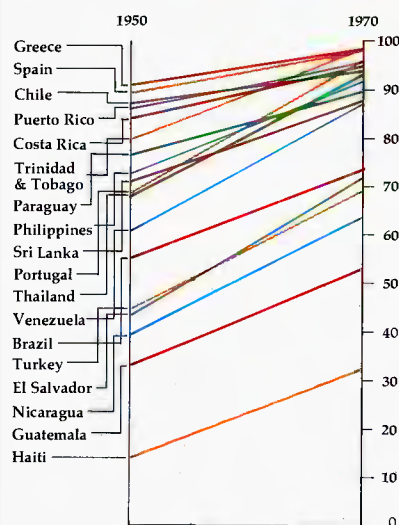
The importance of persistence

Programs that cost the least often require the most organization. Moreover, whether in state bureaucracies at one extreme or among the intended poor beneficiaries at the other, an organization's strength generally depends on the education and resourcefulness of its members. That cannot be developed overnight.

One key lesson from 30 years of development experience is that it takes a long time to build up effective institutions. Neither governments nor donors should expect quick results, or give up too easily. For example, evaluation of family planning programs shows a close relation between their effectiveness and the number of years they have been in existence.

As Chapter 5 explained, and as Figure 6.1 confirms with respect

Figure 6.1 Literacy rates, selected developing countries, 1950 & 1970^a
(percent)



a. The rates are for the 20-24 age group and determined by data availability. Dates are close to 1950 and 1970.

to education, the level of human development at one time is strongly influenced by its level decades earlier. Thus, human development is not something that can be deferred: what is done now—or not done—will have an influence for a long time to come. When austerity

programs are necessary (as will be the case for a number of countries over the next few years), attention should be given to the need for investment in the human development of the next generation. When economic difficulties originating in the workings of the

world economy or economic mismanagement cause cutbacks in human development programs, children pay heavily—in loss of future income or health, and in some cases with their lives.

7 Priorities and progress in regional perspective

The past three chapters have examined the potential role of human development in attacking absolute poverty, and some of the problems and policies in the main human development areas. This chapter addresses some broader human development planning issues—including the tradeoffs between growth and poverty reduction, and the allocation of resources between human development and other activities. After a general review, these and other issues are examined in the context of a regional typology of developing countries. Since the needs and the difficulties are greatest in the two poorest regions—Sub-Saharan Africa and South Asia—they receive most attention. The other three regions—the Middle East and North Africa, Latin America, and East Asia—are discussed collectively in a single section.

Issues for planners

Much absolute poverty, and some of the ways to attack it, are obvious. Yet lack of information about the numbers and characteristics of the poor, and the causes of their poverty, handicaps the design and implementation of effective antipoverty policies. Even in countries where much work has been done—Brazil, India, Indonesia—controversy persists about such basic facts as trends in the incomes of the poor. This is partly for lack of relevant data

from household surveys—though informal study and patching together evidence from other sources can help. It is also a matter of analysis—experience has shown how important it is to distinguish household income from income per household member, to find the relevant price index to calculate changes in the real incomes of the poor and to take account of seasonal variations. For example, since the poor spend the bulk of their incomes on the cheapest foods, a price index based on national average consumption patterns may seriously distort what has been happening to absolute poverty.

To be effective, policies must also distinguish the causes of poverty—which vary widely within as well as between countries. There are common elements and important linkages. But different measures will be needed to benefit, say, subsistence farmers on poor soils, landless laborers in fertile but crowded areas, and female-headed households in large cities. Poverty programs have sometimes focused almost exclusively on small farmers even when the majority in absolute poverty were in fact landless laborers.

As important as differentiating the causes of poverty is differentiating its characteristics. Absolute poverty is a bundle of things—low income, malnutrition, ill health, lack of education. Different groups of poor people may initially suffer

from some more than others; policies should correspondingly vary in their focus.

Tradeoffs between different objectives

In the past the severity of the tradeoff between poverty reduction and growth has sometimes been exaggerated—especially from a narrowly economic point of view. As the past two *World Development Reports* have emphasized, more support for agriculture, land reform, expansion of industrial employment, and a more even distribution of public services can all help to reduce absolute poverty and accelerate growth. This *Report* similarly stresses not only what greater national income can do for the education, health and nutrition of the poor, but also how human development policies for the poor can contribute to raising national income.

It would be wrong, however, to suggest that there are no tradeoffs. Although it is highly desirable, for example, to help the aged and the incurably sick—among the poorest of the poor in most societies—this will contribute little or nothing to growth. Similarly, in expanding rural primary education, countries will have to choose between the places that are poorest, and those (the rapidly modernizing ones) where more education would have the largest effect on farm output. The severity of tradeoffs, moreover, is (as Chapter 6 has shown)

in most cases amplified by political, fiscal, administrative and even cultural considerations. If, for political reasons, more services for the poor must be matched by more services for the rich, the cost of providing for the poor is multiplied.

But economic factors underlie many tradeoffs, especially since money can sometimes ease even political and administrative problems. A country that is already comparatively wealthy, or whose growth prospects are excellent, generally has more latitude than one that is poor, or whose growth prospects are grim. The severity of tradeoffs is thus also affected by the international environment. Higher oil prices absorb resources that could have been used either for growth or for reducing poverty. So do cuts in aid, obstacles to commercial borrowing, and sluggish exports (and hence imports and production) caused by slow world growth. Agricultural and industrial protection in developed countries undermine the efforts of developing countries to foster agriculture and labor-intensive industrialization. In the next few years, especially, the harshness of the choices that poor countries will have to make can hardly be exaggerated. Nor can the degree to which these could be eased by enlightened policies on the part of other countries.

Balance between human development and other policies

The returns to human development programs can be high in economic terms—both directly (especially for education) and indirectly (especially through reduced population growth). Their impact on the education, health, nutrition and fertility of the poor is also valuable in itself. But human development programs alone cannot reduce poverty and promote growth. A whole range of other policies—for infrastructural

investment, agriculture, foreign trade, land reform, credit and research—must do most of the job, even though many of them complement human development in important ways.

Even at the margin, the key question is not whether the returns to human development are high, but whether they are *higher* than returns to alternative uses of the resources concerned. Much will depend on the circumstances of the country concerned, including its past balance between human development and other policies. Some countries have devoted too little of their development budgets to human resources, and too much to physical investment; for them, a switch at the margin toward human development would be the best use of scarce resources. Others, by contrast, may have overinvested in some aspects of human development—as suggested, for example, by the low rates of return to higher education in certain countries. In other cases, human development programs have had low returns simply because they were hard to implement (see Chapters 5 and 6).

Overinvestment and underinvestment, of course, cannot be defined without reference to the objectives of governments—how much weight they attach to growth, redistribution and human development, or to short- versus long-term goals. Much of the payoff from better education and lower fertility, for example, would accrue to this generation's children and grandchildren. But people—especially poor people—legitimately want improvements during their own lifetimes. This and other sources of economic or political pressure to concentrate on the short or medium term are bound to reduce the attractiveness of some—though by no means all—human development programs.

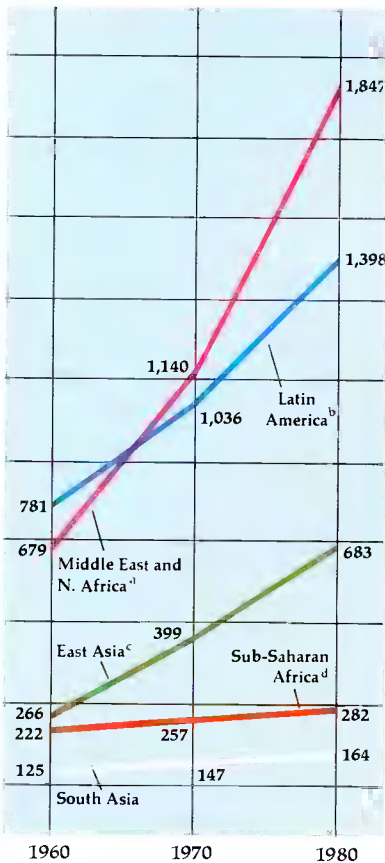
Balance between different human development policies

As the analysis in Chapter 5 bears out, there are also difficult choices to be made within the general area of human development. The difficulty is partly a technical one—more research is needed to quantify the returns to different sorts of programs in varying circumstances. But it is again partly a matter of objectives—the relative weights attached to nutrition and education, for example. And it is aggravated by economic constraints: even with identical preferences, a poor country might make a different choice from a richer one when confronted with the option of providing rural primary health care or expanding some form of urban secondary education with a higher economic rate of return. Choices are also affected by the availability of finance (foreign and local, as well as national) for different programs.

The difficulty of the choice is eased somewhat by the fact that the various aspects of human development are causally interrelated (see Chapter 5): an attack on any one front is likely to produce results also on others. These spillovers appear greatest in basic education—which usually also has the biggest payoff in terms of increased income. There is thus a strong case for considering increasing (or in times of stringency, maintaining) expenditure on primary schooling. This should not mean neglecting secondary and higher education, nutrition, health and family planning programs—which in all circumstances are important, and in many may have a better claim on marginal funds than primary education. Nor should governments overlook the practical difficulties of translating higher enrollment targets into adequate education and reduced dropout rates, or the length of

Figure 7.1 GNP per person, 1960, 1970 and 1980

(1977 dollars)



- a. Excludes Afghanistan, Israel and Turkey.
- b. Excludes Cuba.
- c. Excludes centrally planned economies (China, Laos, Cambodia, North Korea and Vietnam).
- d. Excludes South Africa and Nigeria.

time that must elapse before the full benefits of even good primary schooling are felt.

Country circumstances

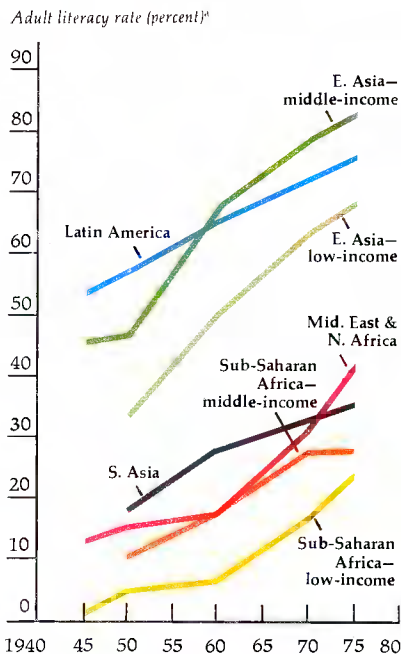
Appropriate policies in the field of poverty and human development will vary widely according to the circumstances of the country concerned. The rest of the chapter illustrates this point by comparing the different regions of the developing world. Regions, of course, are not decisionmaking units. Nor are they homogeneous. But there are important differences between them (Figures 7.1, 7.2 and 7.3 contrast their progress on incomes,

literacy and life expectancy); and regional analysis provides a more general, if less concrete, perspective than would a set of country case studies.

Sub-Saharan Africa

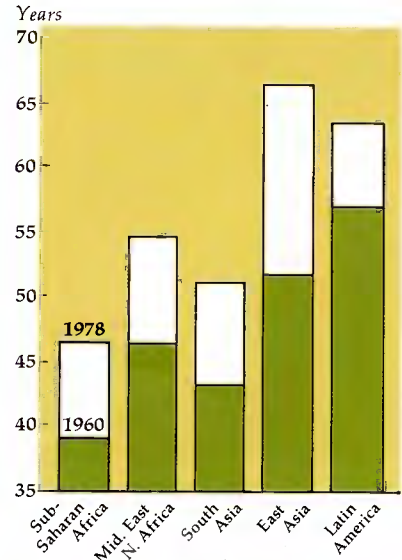
Most of the countries in the region became independent in the 1960s. They inherited acute deficiencies in skills, institutions and general education; overcoming these has been a major concern of most of their governments. Progress has been considerable, yet severe shortcomings remain. The region's experience illustrates that human and institutional development are long, slow processes—their neglect today is not easily overcome tomorrow. And while they are costly, so is their neglect: as the analysis of Chapters 4 and 5 would predict, educational and institutional deficiencies coexist with low life expectancy, high fertility, in-

Figure 7.2 Literacy, by region, 1945–75



a. Trends before 1960 are approximate.

Figure 7.3 Life expectancy, 1960 and 1978^a



a. Weighted by population. Excludes S. Africa, Cambodia and Israel.

efficient investment and slow agricultural progress.

Growth

The growth of incomes has been disappointing, both in the middle-income and in the low-income countries (see Table 7.1). The two groups are distinguished mainly by differences in natural resources rather than in economic structure, institutional development or human skills. GNP per person (which, in the absence of reliable information on the large subsistence sector, can be measured only approximately) either fell or grew

Table 7.1 Sub-Saharan Africa: GNP per person

Countries	Average annual percentage growth			Level, 1980 ^a (dollars)
	1960–70	1970–80	1960–80	
Low-income	1.6	0.2	0.9	186
Middle-income	1.7	2.1 ^b	1.9	493

Note: Excludes South Africa.

a. 1977 prices.

b. If oil-exporting Nigeria is excluded, this figure falls to 1.5 percent.

less than 1 percent a year in 11 countries during 1960–78; it rose more than 3 percent a year in four countries. (Some of these meager gains have been wiped out by deteriorating terms of trade.) Agriculture has been almost uniformly sluggish; food output per person appears to have declined in 25 countries (mainly in the Sahel) between 1969–71 and 1976–78.

The constraints that hampered growth in the past have not eased much. The discouraging prospects for growth in both low- and middle-income African countries—and the resulting likelihood of an increase in the proportion of people in absolute poverty—were described in Chapter 2 (page 11).

How the international economy affects African countries will depend on aid levels and on primary commodity prices, but importantly on their own actions as well. The potential gains from processing primary products for export remain largely untapped. Primary products typically account for 80–100 percent of merchandise exports (though not all are suitable for processing; see page 23). In some countries exports have stagnated because of poor domestic agricultural performance; many more have had to increase their food imports. Grain imports into Sub-Saharan Africa rose from about 1.6 to 2.6 million tonnes between 1965 and 1975 (and the US Department of Agriculture projects a rise to 4.5 million tonnes by 1985).

The importance of agriculture goes far beyond its effect on trade. As the region most dependent on agriculture—the main activity of more than 70 percent of its 360 million people—accelerating growth and reducing poverty and malnutrition in Africa depend more than anywhere else on improved agricultural performance. Evidence that farmer literacy affects the adoption

of new farming methods (see page 48) has obvious implications for that improvement. But the problem is clearly much wider. Modern agricultural “packages” (of seeds, fertilizers and cultivation techniques) have yet to be developed for many African localities and subsistence crops. Agricultural programs generally have not reflected the considerable role that African women play in agriculture. And there are basic deficiencies in credit, infrastructure, agricultural incentives, extension services and market integration (the *World Development Report, 1978* considered in more detail the requirements for faster growth in Africa).

In large measure these deficiencies reflect institutional weaknesses and the related scarcity of experienced, trained people. Nor are their effects confined to agriculture. In several countries a significant industrial sector is already emerging, but the scarcity and high cost of suitably skilled labor and management remain major impediments to African industrialization.

While administrative weaknesses will take time to overcome, the effectiveness of many programs is also hampered by difficulties in financing operating costs, especially for materials and supplies. Progress could be more rapid if aid donors were to relax their traditional preference for funding capital rather than operating costs.

In addition, there is a serious danger that economic stringency in the next few years will lead to cutbacks in human development programs, despite the importance of their contribution—often exceeding that of additional physical investment—to Africa’s long-term development potential. It is essential that aid donors, especially in the first half of the 1980s, should substantially increase their efforts to help African governments

avoid such false economies (while maintaining the already very low consumption levels of most of their people).

Poverty

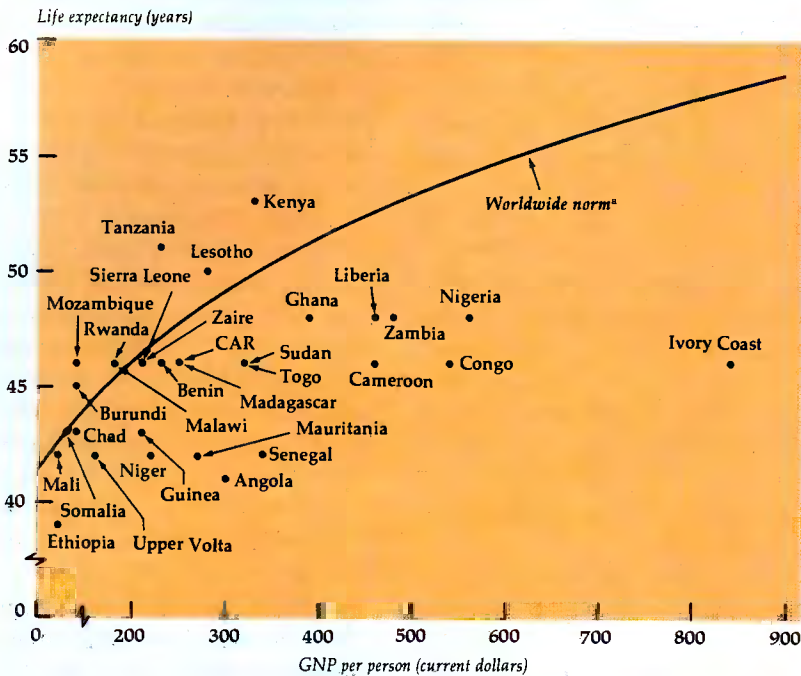
Given the trend in average incomes (particularly in agriculture), the proportion of the population living in absolute poverty has probably increased in many countries since the early 1960s; in 1975 an estimated half of the people in the region were absolutely poor. Most are subsistence and small-scale farmers, but in some countries (such as Somalia) a sizable proportion are nomads. As compared with the low-income countries of Asia, poor agricultural conditions and farming methods are a more important cause of low agricultural incomes than unfavorable land-man ratios.

Human development issues

Despite substantial gains since 1960, life expectancy remains below 50 and adult literacy rates below 25 percent in most countries. Both are generally below expected values for countries at their income levels. For example, the norm for life expectancy (Figure 7.4) is about 50 years for countries with average incomes of about \$350; but Senegal, with that income level, has a life expectancy of only 42 years. Africa is the only region where fertility still shows no sign of decline—women surviving to the end of their child-bearing years average 6 to 8 children. And it is the only region where nutrition has steadily worsened.

FERTILITY. The contribution that slower population growth can make to raising incomes is particularly marked in Africa. The region’s high infant mortality and low adult literacy are major reasons that population growth remains high.

Figure 7.4 Sub-Saharan Africa: life expectancy in relation to income per person, 1978



a. Derived from cross-country equation relating life expectancy to GNP per person.

Studies in Nigeria and Tanzania found that education among wives reduced fertility and infant mortality—though some studies in Africa have suggested that the initial impact of schooling (by increasing health and fecundity sooner than it reduces desired family size) may be to increase fertility. The contrast between Kenya and Lesotho is also suggestive: among African countries, they both have better-than-average records of literacy, life expectancy and child death rates—yet Kenya has the highest fertility rate in Africa and Lesotho the lowest. Data from the early 1960s show that in Kenya many more men than women were literate, while in Lesotho it was the other way round.

That is unlikely to be the whole explanation, of course; other possible reasons include the migration of men from Lesotho to South Africa, and differences in cultural values—which are strongly pronatal

in many parts of Africa, so that (in contrast to other regions) desired family size often exceeds its actual size.

Partly for this reason, and partly because of the virtual absence in most countries of a primary health care network onto which family planning programs could be grafted, such programs in Africa have been few and feeble. Extending and strengthening family planning efforts, however, would cause an earlier and faster decline in fertility.

HEALTH. Primary health care can be provided inexpensively (about \$2-3 a person) in some of the low-income countries (and could be financed to some degree by a reallocation of government expenditure away from urban hospitals); but since it is administratively demanding, progress is likely to be slow.

A few countries such as Mali, Kenya and Tanzania have begun

to establish the necessary administrative structure. Village health workers can be trained cheaply, as has been demonstrated in Niger; but a study of Mali's health system noted that "at the village level, the most serious manpower constraint is the near total lack of literate people who can be trained as village health workers."

EDUCATION. Typically, education accounts for 15-25 percent of the budget and 3-6 percent of GNP; less than half the total is for primary education. Recent growth in school enrollment has been impressive, particularly in Benin, Congo, Ivory Coast, Kenya, Lesotho, Somalia and Zambia. These countries spend more than 5 percent of their GNP on education and are in the top 25 percent of all developing countries on this count. For them, the key issue is not increasing education's share of the budget but (as in other African countries) using funds more effectively, improving educational quality and tackling serious problems of dropout and wastage.

Costs are a major obstacle to raising enrollment and school quality in Africa: costs per pupil as a percentage of GNP per person are the highest of all regions. Compared with Asia, this ratio in West Africa is more than twice as high for primary, five times for secondary and seven times for tertiary education. The high cost largely reflects the fact that teacher salaries (which typically account for 75 percent of educational costs) are high in relation to average incomes. In Upper Volta (which has the lowest literacy rate in Africa—5 percent) teachers' salaries are 24 times larger than GNP per person, compared with less than four times in Liberia. High salaries for all educated people are partly a colonial legacy; but the main cause has been a shortage of qualified

teachers, which is now starting to ease. Salaries have fallen in real terms in several countries, including Benin, Tanzania and Sierra Leone.

There are various other ways of making education less expensive without making it worse, as discussed in Chapters 5 and 6. In some countries, such as Nigeria and Sierra Leone, average class sizes are small enough (about 30 pupils) to be raised without much adverse effect on quality (see box on page 52). In Togo local communities pay part of teachers' salaries; in Somalia and Tanzania they contribute to construction costs.

While school enrollments have risen markedly, few countries have tried to deal with the large backlog of illiterate adults. Literacy campaigns that relied on students, volunteers and government servants were mounted in Somalia and Tanzania, with spectacular success: literacy rates are estimated to have risen from 2 percent and 10 percent to 60 percent and 66 percent, respectively, between 1960 and 1975. Such programs, however, lack the socializing effects of school attendance. There is also a risk that literacy skills may decay if they are acquired in circumstances that do not require their frequent use. This argues for programs that are not too brief and have an emphasis on such practical subjects as numeracy, hygiene, nutrition, family planning and agriculture.

There are politically difficult choices to be made in higher education. Governments often give stipends as well as free education to university (and sometimes even secondary) students. Many governments have also felt obliged to guarantee jobs to all university graduates—in activities whose productivity does not always match their salaries. Secondary and higher

education is thus a doubly serious drain on budgets; and its social returns have been pushed well below the private returns to individuals—and below what they might be with better economic policies, since Sub-Saharan Africa badly needs more people with professional, scientific and administrative skills. Their shortage has been one of the biggest brakes on development projects—as reviews of World Bank project experience amply testify. But African countries also need to train them more economically (see page 50) in order both to increase their supply and to release resources for primary schooling and other human development programs.

Despite the conspicuous scarcities, there is concern about incipient unemployment among secondary-school graduates in some countries. This reflects the fact that job requirements and expectations tend to change more slowly than the supply of qualified people (see box on page 51). But as graduates find it harder to get jobs, they will be likelier to respond to the needs of the economy for more people to work in rural areas as extension agents, teachers and administrators.

South Asia

South Asia has much in common with Sub-Saharan Africa—in particular, pervasive poverty and low average incomes. But it has relatively many more highly trained people (there are almost as many university students in India as in the European Community) and greater administrative capacity.

Growth

Economic growth has been generally slow: South Asia's GNP per person grew at an annual rate of 1.6 percent in 1960–70 and 1.1 percent in 1970–80—stagnating in the early 1970s and then accelerating after

1974. South Asia has substantially better growth prospects than Sub-Saharan Africa; but it too will face difficult choices in the adjustment period. Growth will depend heavily on domestic economic management, particularly in agriculture; but exports, migrants' remittances and aid are important international influences (no country borrows much commercial capital). Remittances, mainly from the Middle East, have grown dramatically in recent years; in 1979 they amounted to about \$1.4 billion in Pakistan (almost three-quarters the value of its merchandise exports) and roughly \$1 billion in India. They are also substantial in Bangladesh.

The region has also had some success in increasing exports to the Middle East—particularly India, which has won major contracts for turnkey plants, construction and consultancy services. Nonetheless, no country has fully exploited its potential for manufactured exports. The large industrial sectors of India and Pakistan can respond strongly to incentives for exports, as Pakistan's did in the 1960s and India's has done more recently. Sri Lanka is launching a major drive for export-led industrialization, which should be helped by its highly educated labor force.

Recent agricultural performance in India augurs well for the 1980s (and is the main reason faster GNP growth is projected). When an identifiable package involving water, fertilizer, high-yielding varieties and credit is readily available, as it is in much of South Asia, the economic returns to more rapid and successful adoption—facilitated by the spread of education—can be high. Given the pressure of population on land, future agricultural expansion will have to rely almost exclusively on increasing cropping-intensity and the spread of high-yielding varieties of crops.

Poverty

About half of the region's people live in absolute poverty, accounting for half of the world's poor. Landlessness is a much more important cause of poverty than in Africa. The landless and those with less than 0.5 hectares make up about 53 percent of the rural households in Bangladesh, 40 percent in India and 37 percent in Pakistan. And those with 0.5 to 1 hectare are still very poor, and must earn much of their income as wage-laborers. Although only about 20 percent of the population lives in cities, South Asia contains much of the world's worst urban poverty.

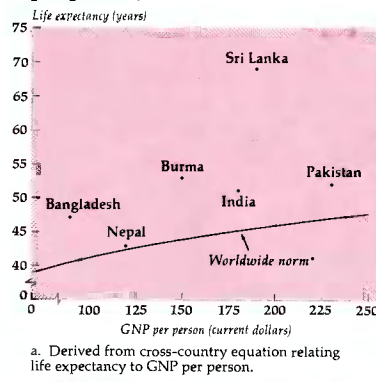
Life expectancy in South Asia is above the norm for countries with similar average incomes (Figure 7.5); but for literacy the picture is more mixed, with Nepal and Pakistan below the norm. More generally, progress in human development varies widely, both between and within countries. Sri Lanka and the Indian state of Kerala have achieved literacy and life expectancy that are usually reached at incomes per person near the top of the middle-income range. (In 1971 the literacy rate in Kerala was 69 percent; Tamil Nadu and Maharashtra were next in India with 45 percent and Rajasthan was last with 21 percent.) At the other extreme, Nepal's human development indicators are more like those of the typical African country.

Human development issues

The successes of Sri Lanka and Kerala demonstrate the potential as well as the difficulties of human development and poverty reduction in South Asia. They also confirm the potency of an early start: Sri Lanka's literacy rate in 1900 exceeded that of Pakistan and Bangladesh in 1975.

In relation to its income, Sri Lanka has extraordinarily high life expectancy and literacy (although

Figure 7.5 South Asia: life expectancy in relation to income per person, 1978



estate laborers remain an underprivileged group), and extraordinarily low population growth. It achieved this primarily through subsidies to food and education, which accounted respectively for 4.5 percent and 3 percent of GNP in the early 1970s (17 percent and 12 percent of the central budget). These were combined with fairly broad-based access to health care and a moderately effective family planning program. Relatively low defense spending—in 1977 Sri Lanka devoted just 0.7 percent of its GNP to defense, compared with the South Asian average of 3.4 percent—made it easier to finance these programs. Good literacy and nutrition contributed to high life expectancy and low infant mortality, fertility and population growth. (The essential ingredients and results were similar in Kerala.) But Sri Lanka's experience also highlights the importance of concentrating spending on those who need it most. The provision of coverage to all income groups and educational levels resulted in a fiscal burden which could not be sustained (page 62). More generally, Sri Lanka's economic performance has not yet matched its progress on human development (see box overleaf).

FERTILITY AND WOMEN. While population growth in South Asia

is lower than in Africa, the density of population makes it at least as urgent an issue. The three most populous countries of the region all share the nexus of low female literacy and high child mortality and fertility (female literacy rates are a third to a half of male rates), with Pakistan and Bangladesh the worst affected. In India higher literacy, lower sex differences in education and a stronger family planning program have been associated with a decline in fertility. As a result, by 2000, the primary-school age group is projected to have increased by about 40 percent in Bangladesh, 60 percent in Pakistan and a more manageable 20 percent in India.

Outside Sri Lanka and Burma, the status of women is a major bar to human development. Malnutrition is considerably higher among females, and newborn girls have a significantly smaller chance of surviving to the age of five (see box on page 91). The school enrollment rate among boys is nearly twice as high as among girls; the gap has closed significantly, however, even in the Muslim countries where the cultural reasons for low female enrollment are strongest. The eventual impact this could have on population growth is considerable. A study in Bangladesh found that, as in other countries, schooling reduced fertility even in the absence of a strong family planning program. But without a strong program, a large and early decline in fertility is unlikely.

NUTRITION. Food production has roughly kept pace with population growth, but malnutrition remains widespread. It is due more to people not being able to afford food than to any overall shortage: bumper harvests in India in 1976–78 resulted in a large increase in food stocks, but malnutrition (while reduced) remained widespread.

Tradeoffs in Sri Lanka

Sri Lanka's record on life expectancy, literacy and fertility (in relation to its low income level) is one of the best in the world. But to achieve this the government has spent on average over the past two decades nearly 10 percent of GNP on education, health and nutrition programs. To what extent, then, were these achievements in human development at the expense of economic growth?

Growth of GDP in the 1960s was 0.7 percentage points above the low-income average, in part reflecting one of the highest growth rates of rice production in the world. In the 1970s, though, slower growth in agriculture and especially manufacturing caused Sri Lanka's GDP growth rate to be somewhat below the low-income average. But because Sri Lanka's population growth rate was well below the low-income average (it fell to 1.7 percent a year in the 1970s), the growth of GNP per person over the period 1960-77, at 2.0 percent, was above the low-income average of 1.4 percent.

Sri Lanka has thus done no worse in terms of growth than other countries at its income level, while greatly out-performing them in human development. But it could have done even better—realizing more of the economic potential of its human resources—had better economic policies been pursued.

In the 1960s Sri Lanka's economic management was better than in the 1970s.

But pricing policies discouraged new investment in tea and other export crops. And there was too much emphasis on industrial import substitution and too little on export promotion—in part because of an increasingly overvalued exchange rate. After 1970 the economy was hit by bad weather, which affected agricultural production, and by a steeper fall in the world price of its exports relative to its imports. These problems were aggravated until 1977 by poor economic management—including an unresolved conflict with the private sector (which depressed its investment and expansion), excessive use of public investment for highly inefficient industrial projects, and expansion of the public payroll in an expensive and unsuccessful attempt to curb unemployment.

The tradeoff between expenditures on human development and growth in Sri Lanka has thus not been so sharp as is sometimes suggested. In the 1960s fairly rapid growth permitted expansion of social expenditures. In the 1970s growth deteriorated for reasons generally independent of the human development spending—and indeed caused a decline in real expenditures per person on health and education, as well as in food distribution per person. The election of 1977 led to a change of government and to substantial alterations in policies. From 1977 to 1980 annual GDP growth is estimated to have spurted to 6.5 percent, or about 5 percent per person.

Calorie consumption per person in Sri Lanka has not been higher than in the rest of South Asia, but there has been much less malnutrition simply because food has been relatively evenly distributed. India, Pakistan and Bangladesh respectively spent 0.6 percent, 1.9 percent and 0.1 percent of their GNPs on limited food subsidies in the early 1970s—but with relatively little nutritional effect (outside Kerala), since rural areas and urban squatters were largely bypassed. Greater attention to nutritional considerations in food production and subsidy programs could have a major impact; but sustained nutritional improvement will depend

ultimately on raising the incomes of the poor.

EDUCATION AND HEALTH. Spending on education has been relatively low—about 1.5 percent of GNP in Bangladesh, 2.5 to 3 percent in Burma, India and Sri Lanka—mainly because educational costs are the lowest in the world, which in turn reflects the large supply of educated people. Except in Burma and Sri Lanka, however, policies have tended to favor higher education: most poor children still fail to complete primary school.

In health, future gains will depend more on improvements in nutrition, health care and educa-

tion than on individual disease control programs. While the region's ratio of physicians to population is high by the standards of low-income countries, they tend to be clustered in urban areas.

The relative abundance of highly educated people in South Asia (especially India), and the improved outlook for economic growth, should allow the larger countries in the region to tackle the challenging tasks of (a) increasing the share of spending on primary education and expanding enrollment, especially among girls and the poor; (b) improving the efficiency of the educational system—better quality, fewer dropouts and repeaters; and (c) expanding the network of primary health centers (India is already devoting renewed attention to this).

Primarily middle-income regions

With some injustice to their considerable diversity, the three primarily middle-income regions can be characterized as follows.

- **Middle East and North Africa:** income growth has been extremely rapid in recent years, reflecting the direct and indirect effects of oil revenues; but human development still lags behind.

- **Latin America and the Caribbean:** the most urbanized and industrialized region, with high average levels of human development; economic and social progress has been rapid, despite fast population growth; yet one in seven people still live in absolute poverty.

- **East Asia and Pacific:** best performance on growth of incomes and human development in relation to income; rapid growth has been based on efficient use of labor, capital and technology rather than on natural resources.

Growth

The countries of the Middle East

and North Africa cover the spectrum of average incomes—from Kuwait, among the richest countries in the world, to Afghanistan, one of the poorest. Growth has been rapid even in the non-oil countries, which benefited from the oil boom through migrants' remittances and inflows of official and private capital. (About 10 percent of the people in the region are directly dependent on remittances, which are often large—an average of \$4,000 a year per Moroccan migrant, for example.) In the 1970s GNP per person in the region rose 4.9 percent a year; higher real oil prices meant that growth in purchasing power was higher still (see box on page 4). The same factors that spurred

growth during the 1970s should ensure fairly rapid expansion in the 1980s.

Growth in East Asia and Latin America has in general been excellent. Strong economic management meant that these were the only regions in which oil importers grew faster in the 1970s than in the 1960s. The adjustment period will see a slowdown in their growth, but by the mid-1980s their prospects look quite good—so long as good management and political stability are maintained, and so long as growth in world trade and capital flows to developing countries also pick up by then.

Growth in both Latin America and East Asia depends heavily on commercial finance. The two

regions account for the bulk of commercial borrowing by developing countries, with Mexico, Argentina, Brazil, South Korea and Venezuela alone accounting for 44 percent of the total in 1979. Another crucial international influence on their growth prospects, both directly and through its effect on credit-worthiness, is world demand for their manufactured exports.

The major East Asian exporters alone accounted for more than 40 percent of developing-country manufactured exports in 1977; despite some protectionism in industrial countries, they have sustained rapid export growth by diversifying their product lines. This flexibility allowed them to maintain growth in the 1970s despite slower growth in the world as a whole. It also means they have more freedom than other non-oil developing countries to choose whether to respond to higher oil prices by greater borrowing or by increasing their exports (and intensifying import substitution).

Human development: regional issues

Some countries in East Asia and Latin America have achieved levels of literacy and life expectancy comparable to those in the industrialized countries. In all the three regions absolute poverty has been reduced significantly but remains substantial.

MIDDLE EAST AND NORTH AFRICA. The rapid economic growth of recent years has probably cut considerably the proportion of absolutely poor people in the region. Nonetheless, there is still serious poverty in the countries not rich in oil, and to a lesser degree also in Iran, Iraq and Algeria.

As in Sub-Saharan Africa, income differences between countries are related more to their natural resources than to institu-

Sex, length of life and development

In developed countries, women live longer than men—on average by more than six years. This is not so in all developing countries, especially the poorest ones (see table). In most of South Asia, women on average die two to three years sooner than men. In low-income Indonesia, though, women live longer than men.

In most middle-income countries, apart from those in the Middle East and North Africa (where incomes have risen considerably since the time of some of these estimates), women live substantially longer than men. In East Asia and Latin America, moreover, this has been so for as long as statistics are available. But the female advantage has increased—for example, in Argentina from around one year in 1900 to more than six years in the 1970s.

In some countries there has been a reversal. In Sri Lanka, for instance, women on average in 1953 lived one year less than men; by 1962 they had pulled level; by the early 1970s they were ahead by a margin of about three years. A similar switch occurred in Turkey between the 1930s and the 1970s.

Economic development thus tends to raise women's life expectancy more than men's. But regional differences in the size and evolution of the gap, and the exceptional cases of Sri Lanka and Turkey (see next page), suggest an association

with the extent of education, especially for women.

Excess of female over male life expectancy, selected countries, 1970s

<i>Region and country</i>	<i>Difference in years</i>
<i>South Asia</i>	
Bangladesh	-2.0
India	-2.5
Sri Lanka	3.0
<i>East Asia</i>	
Indonesia	2.0
Peninsular Malaysia	4.5
South Korea	6.0
Thailand	6.0
<i>Latin America</i>	
Argentina	6.0
Brazil	3.0
Costa Rica	4.0
Mexico	4.0
<i>Middle East and North Africa</i>	
Algeria ^a	1.0
Iraq	0.5
Iran	-0.5
Tunisia ^a	0.0
<i>Industrialized countries</i>	
Italy	6.0
Norway	6.0
United States	8.0

a. Late 1960s.

tions, human skills or economic structure. In most countries life expectancy is well below what would be expected at their income levels (see Figure 7.6); the same is true of literacy. Birth rates remain very high; of the 11 countries with the highest fertility rates in the world, eight are in the Middle East and North Africa. Death rates have come down very sharply in the recent past, but infant mortality rates remain high—one in four in Afghanistan, for example.

Part of the reason is that the gap between male and female education is larger in this region than in any of the others. But it is closing rapidly: the primary-school enrollment rate for girls rose from 40 percent around 1960 to 60 percent in the mid-1970s; progress was particularly impressive in some countries—up from 58 percent to 90 percent in Turkey, for example, and from 43 percent to 81 percent in Tunisia. It is significant that these two countries have the lowest fertility rates in the region.

The challenge for many countries is to use the rapid increases in income from nonrenewable resources for productive investments and better health, education and nutrition. But this cannot happen

Figure 7.6 Middle East and North Africa: life expectancy in relation to income per person, 1978

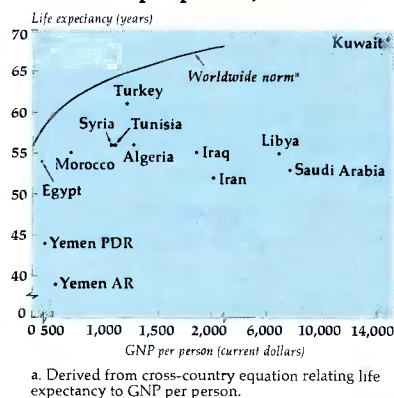
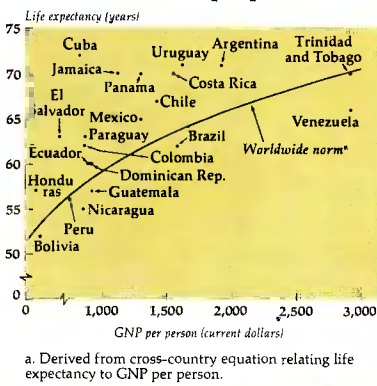


Figure 7.7 Latin America and the Caribbean: life expectancy in relation to income per person, 1978



overnight. Tremendous amounts of money are indeed being channeled into physical investments and improving social conditions in the oil-producing countries. In most cases, though, the manpower needed to complement this effort is not available domestically; and it takes time and organization to make effective use even of trained people from abroad.

Similarly, even when virtually all school-age children are enrolled at school (as they are in some of these countries), it will take more than three decades—without adult literacy campaigns—to raise the overall literacy rate above 90 percent. It may take even longer before life expectancy approaches the levels of the industrialized countries.

For the richer countries in the region, then, money is not the main obstacle. But for the others, the financial constraint on human development programs is likely to remain serious, especially in Morocco, Afghanistan, the two Yemens and to a lesser extent in Egypt, Syria, Turkey and Tunisia. Fairly rapid growth in most of these countries, however, should permit the increases in human development expenditures that are needed to bring social indicators gradually into a more normal

relation with income. There is also scope for reallocation of human development expenditures. For example, some of the heavy subsidies on urban food and university education that are common in the region could be diverted to neglected rural areas and other uses.

LATIN AMERICA AND THE CARIBBEAN. The countries of the “southern cone”—Argentina, Chile and Uruguay—as well as Cuba, Panama, Jamaica, Costa Rica and Trinidad and Tobago, have achieved life expectancy (see Figure 7.7) and educational levels approaching those in the developed countries. The southern part of Brazil resembles these countries; but the northeastern part lags behind and accounts for the largest concentration of absolute poverty in the region. The other countries fall into two groups. The first consists of the smaller, poorer countries of Central America and the Caribbean plus Bolivia, Ecuador and Paraguay; more than half their people live in rural areas where health and education services are usually sparse. The second group—Peru, Mexico, Colombia and Venezuela—are larger and more than 65 percent urbanized.

Throughout the region, there is no significant difference in primary-school attendance between boys and girls, but there is between urban and rural areas. Primary enrollment rates tend to be high; but only a small proportion (often less than 10 percent) of children in rural areas complete primary school. In many Latin American countries, higher education has expanded very fast, accounting for the bulk of education budget increases. Spending on primary education could be increased dramatically if higher education were financed to a much larger extent from tuition fees, with assistance for those not able to pay.

The high level of urbanization in the region means that water supply and sanitation systems would do more to improve health than in other regions—water pollution and poor sanitation are more serious in congested cities than in villages. Experience in Brazil, Colombia and Mexico has shown that there is considerable potential for rich users to subsidize the poor in urban water and sewerage systems. But there must be complementary efforts to provide primary health care in both rural areas and urban slums. Some countries, including Mexico, Jamaica and Panama, have begun to include family planning services in primary health care systems; for other countries to do so would be a major advance.

Though average food consumption is adequate in most countries, many poor people are malnourished. In the longer term, measures to increase employment and the incomes of the poor will help overcome this, as will measures to stimulate food production. But recent direct nutrition programs, including subsidies and nutrition education for the poorest groups, appear to have been effective in Chile and Colombia.

Reaching some of the more isolated and ethnically distinct rural poor is more expensive and administratively more demanding than serving urban dwellers. More fundamentally, mustering the financial and administrative resources needed to reduce absolute poverty faster will require a public commitment—thus far lacking in many countries—to the goal of making basic human development services available to all.

EAST ASIA AND PACIFIC. In most countries of the region, literacy and life expectancy (Figure 7.8) are well above the norm for their income level. With skilled and

well-educated populations, relatively equal income distributions and rapid income growth, South Korea and the city states of Hong Kong and Singapore have made tremendous strides in human development and reducing poverty. They have combined extensive human development programs with excellent economic policies. Rapid economic growth has in turn allowed further human development. To a lesser extent this has also been the case in Malaysia, Thailand and the Philippines; but their records on income distribution and poverty are more mixed.

Though lack of information lends a certain haziness to what is known about China and North Korea, it seems that with a very different development strategy they too have enjoyed considerable success (though there is some controversy over what their growth would be at international prices). North Korea seems to have expanded output rapidly, made extensive improvements in health and education, and as a result lowered fertility. China has probably done even better on human development in relation to its income level—the gross primary-school enrollment rate has risen from about 25 percent in 1949 to well over 100 percent today (re-

flecting substantial numbers of underage and overage pupils, as well as near-universal enrollment of children in the primary school-age group).

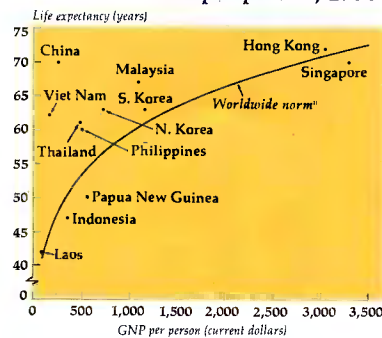
The most serious poverty is in Cambodia. Indonesia is a special case; in many respects it is similar to a South Asian country—Java is one of the most densely populated regions of the world, and has serious malnutrition and poverty. At the same time, oil and the (relatively untapped) agricultural resources of the outer islands distinguish it from any of the South Asian economies. Recent economic growth has been rapid, but there has been controversy over the extent to which it has led to less poverty.

One notable feature of East Asia's success has been the willingness of most governments to set initially low standards in order to achieve comprehensive coverage. Another has been the variety of approaches adopted, despite the active involvement of all governments in promoting economic and human development.

- **Education.** Fee-paying schools have traditionally played a major role in this region, and still do in higher education—for example, in the Philippines and South Korea (page 74). At the primary level, the emphasis has been on achieving universal enrollment. To do so, South Korea has accepted class sizes that are large by international standards (averaging about 60 but rising to more than 80 in many metropolitan schools).

- **Health.** The world's best examples of universal primary health care at low cost are in China (see box on page 74) and the northern provinces of Viet Nam. Other countries have also emphasized primary health care—though there are important exceptions to the rule. For example, medical care in South Korea has depended mainly

Figure 7.8 East Asia and Pacific: life expectancy in relation to income per person, 1978



a. Derived from cross-country equation relating life expectancy to GNP per person.

on doctors in private practice. Partly as a result, maternal and child health care is often inadequate, and life expectancy is not as high, relative to income, as literacy.

- **Nutrition.** Substantial increases in the incomes of the poor have allowed them to buy more food; good agricultural performance has ensured that supplies are adequate. In the centrally planned economies, there has been greater resort to rationing and subsidies. While average nutrition levels in the region are satisfactory, serious malnutrition still exists in lower-income groups in Indonesia, Malaysia and the Philippines as well as in Cambodia.

Lessons for planning

One familiar conclusion from this review of regional issues is that there are no simple lessons, no easy prescriptions. There are always enough desirable uses of money to

exhaust the national income twice over. There are always acute choices between the well-being of the current generation and of its heirs; and between the well-being of the poor and of the less poor. It is very hard to forecast the consequences of particular policies, or to choose the best mix of policies to achieve particular objectives. The nature of the best strategy also varies between (and within) countries, not simply because of broad differences in their economic and social structures and prospects, but also because of differences in the feasibility and likely outcome of specific policies and programs.

It would be a serious mistake, though, to suppose that there are no lessons at all. Effective planning is largely a matter of identifying the important issues and linkages, and of bringing the light of evidence and experience to bear on them. This regional review and the chapters that preceded it have thus focused on a particular set of ques-

tions of interest to planners, and on the principles and information needed to answer them.

- From the point of view of accelerating growth and reducing absolute poverty (in both its income and its nonincome aspects), is the right balance being struck between physical investment and human development?

- In human development, is the right balance being struck between education, health, nutrition and family planning?

- Within each of these areas, is the right balance being struck between basic and more advanced programs? Would different programs be more effective or more economical?

In addressing all these questions, it is necessary to remember that there are no laws, only circumstances—but also that applying general principles to specific circumstances is the springboard of successful action.

Chapter 8 Summary and conclusions

Impaled on the trident of inflation and recession in the developed countries and much more expensive oil, world growth prospects have deteriorated in the past year. Higher oil prices have improved the outlook for the fifth of the developing world's population that lives in oil-exporting countries; their average GNP per person could grow at around 3.0 to 3.5 percent a year in the first half of the 1980s. But for the four-fifths that live in oil-importing countries, the first half of the decade will involve slower growth. For developing countries as a whole, growth will be substantially below that forecast in last year's *Report*.

Governments of oil-importing developing countries must take steps to reduce current account deficits and adapt to more expensive energy—and at a time when demand for their exports from industrialized countries has slowed, not just because of the rise in energy prices, but because of cyclical and structural problems as well. The GNP growth of oil-importing developing countries could thus fall to about 1.8 percent per person a year (the Low case). Prospects for the low-income oil importers would be particularly bleak in this scenario: income per person in low-income Sub-Saharan Africa would decline; and the number of people in absolute poverty in the developing world as a whole would increase.

This Low case (or an even worse outcome) could come about—but

it need not. In the High case the oil-importing developing countries would grow at about 2.4 percent per person a year in 1980–85, and by 1990 there would be 80 million fewer people in absolute poverty than in the Low case. This would require that developing countries adjust successfully—cutting their external deficits by raising exports rather than lowering imports, while increasing both investment and efficiency in resource use. What the industrialized countries and capital-surplus oil exporters do is also vital—in stimulating demand for developing-country exports, in recycling oil surpluses and in providing aid. But even in the High case, the growth of income per person in the developing countries will not match that in the industrialized countries. Taking the steps needed not just to attain, but to exceed, the High case is thus the major development challenge of the next five years.

The success of the adjustment by developing and other countries to the economic circumstances of the early 1980s will not only largely determine their growth during that period but will also affect the chances of an acceleration of growth in the second half of the decade. With recovery in the industrialized countries and in world trade and with continued sound domestic economic policies, the oil-importing countries could grow almost as rapidly (3.2 percent) as the oil exporters (3.4 per-

cent) and faster than in the 1970s. Without it, the growth of the oil exporters would be almost half a percentage point lower, and that of the oil-importing countries a full percentage point lower. Much of the first part of this *Report* has been about the policy decisions that will determine the actual outcomes, in both the near term and the longer term.

External factors

- Trade. The ability of developing countries to afford the imports they need for growth depends crucially on their exports to the industrialized countries, which currently constitute two-thirds of their market. The industrialized countries, even those determined to combat inflation by restraining growth, must minimize the effects their deceleration will have on the developing world. This means expanding the volume of imports, maintaining the relatively free trading opportunities that now exist for most products, and starting to lower the barriers against other goods of particular importance to developing countries, such as textiles, clothing, leather goods, electronics, steel and some agricultural commodities. To do so would increase the localized pains of structural change in the developed countries. But there are internal remedies for these pains, and liberalization of trade will pay off in faster productivity growth and lower inflation. The oil-

exporting nations can also help by rapidly expanding their imports from developing countries.

- **Energy.** The developing countries that import oil have been hard hit by the price explosion of the past 12 months and can expect their energy costs to rise further in real terms. At the same time, modernization of their economies will spur demand for energy; so they face a continuing need to adapt to the rising cost of imported oil. They will find this easier if oil-exporting countries can avoid supply disruptions and sharp price changes. More generally, the world economy will perform better if oil prices follow a smooth path; violent fluctuations play havoc with internal resource allocation and the external payments system. Reliable supplies and smooth price changes will be more likely if developed countries improve their energy conservation and develop alternative sources.

- **Capital flows.** Current account imbalances will be large in the next few years, again requiring special efforts to recycle finance to oil-importing countries, especially in the developing world. There is a serious risk that reluctance or inability to finance large external deficits will lead to levels of trade, investment and economic efficiency—hence, of growth—lower than anyone would wish. Even in the later years of the 1980s, when the severity of payments imbalances is expected to diminish, the growth of developing countries will continue to depend on inflows of foreign capital.

For the low-income countries, which can borrow little commercially, this means more aid. There is a real danger that the modest aid increases projected in this *Report* will not be achieved. In their own long-term interests, as well as those of the developing countries, both OECD and OPEC

donors should make every effort to expand their aid relative to GNP, even in periods of domestic stringency. And they should concentrate their aid even more on low-income countries.

Commercial capital, mainly from banks but also from the bond market, private direct investment and official sources, will be available to help the middle-income countries. But not all countries will be well placed to borrow much more from private commercial sources; without additional financial assistance from other sources, their growth will slow down. In particular, there is not enough long-term program (non-project) finance to support the structural changes required in many countries. Some will benefit from the structural adjustment lending of the World Bank and assistance from the IMF; enlarged official flows of this sort, particularly from multilateral agencies, could and should play a larger role.

Internal factors

While powerfully influenced by the international environment, the progress of developing countries depends even more on their own policies and initiatives.

- **Trade, energy and capital flows.** In trade, the developing countries can use pricing and other policies to stimulate production of internationally traded goods—both exports and import substitutes; but they should avoid bias toward import substitution, since this reduces efficiency and discourages exports. With regard to energy, they, like the industrialized countries, can minimize the loss of real income caused by higher oil prices through conservation and greater domestic energy production. As to capital flows, they can take full advantage of their opportunities for prudent

borrowing from commercial and bilateral lenders and multilateral institutions.

- **Investment and production efficiency.** In attracting (especially commercial) finance, and in speeding development more generally, trade and energy strategies play an important role. So do other policies that increase investment, improve administration, raise agricultural productivity and make better use of capital, labor, natural resources and imports.

- **Human development.** The internal factor on which this *Report* has focused is the human one: the role not only of education and training, but also of health and nutrition. In addition to the important direct benefits that programs in these areas confer, the *Report* stresses another aspect, long-standing but often neglected—the role of human development as investment, contributing to growth. The importance of technical, professional and managerial skills is well known. Less well known but firmly established by research is the importance of primary education, which affects the knowledge and attitudes of farmers and other workers.

Investment in human resources, like other kinds of investment, can be ineffectual unless complemented by other productive inputs and by policies to ensure that resources are efficiently used. Human development programs must also be carefully chosen and efficiently carried out. Despite these qualifications, there is strong evidence to support the common-sense proposition that human development can make a valuable contribution to growth.

Studies at the firm, farm and project level have shown that better education, health and nutrition can raise incomes and productivity, and that the economic rate of return to investment in schooling

is high, frequently well above that of physical investment. For primary schooling, the rates of return in a large group of countries average more than 20 percent. At the aggregate level, cross-country comparisons show that developing nations with higher literacy rates have grown faster, even when allowances are made for other influences on growth and for reverse causation—the effect of growth on literacy. This finding is reinforced by case studies and historical evidence.

- **Population.** One important way in which human development contributes to raising average incomes, as well as to other social goals, is by reducing population growth. Reducing fertility is not an end in itself; but lower population growth in most developing countries tends to result in greater investment per person in physical capital and human skills—and thus in faster growth. Better nutrition and health, by lowering infant mortality, are essential ingredients of fertility decline. So is education, especially of women, since it delays marriage, alters attitudes about family size and makes modern contraception more acceptable. Increases in income themselves are a cause, as well as a consequence, of reduced fertility: people who are less poor have good reasons for wanting fewer children (including less need for their labor and for support in old age). And research has confirmed that family planning programs also are important in bringing about slower population growth.

Human development and poverty

Human development can thus assist growth. But the *Report* has stressed even more its potential contribution to reducing absolute poverty.

- **Growth and poverty reduc-**

tion. Growth is vital to reducing all aspects of absolute poverty—malnutrition, ill health and illiteracy, as well as low income—especially in the poorest countries. But growth unaccompanied by other measures may neither boost the incomes of the poor much, nor lead to much progress on nonincome aspects of poverty. On both counts, human development programs have a part to play.

- **Raising the incomes of the poor.** The *Report* has discussed a wide range of policies, many of which positively reinforce growth, that can help raise the incomes of the poor. Support of agriculture, land and tenure reform, policies to raise the demand for labor and various kinds of research are four important areas considered. Human development is an essential complement. It accelerates the spread of new techniques to small farms and increases the opportunities of the poor for employment in the modern sector. And because fertility and family size are reduced, the earnings of adults do not have to be spread so thinly among children and other dependents.

- **Nonincome aspects of poverty.** The worst aspects of absolute poverty include not only low income, but also malnutrition, frequent child death, disease and ignorance. All can be helped by human development programs. Less obviously, there is a complex interdependence between the different facets of human development—as there is between human development and increases in income. Health, nutrition, education and fertility all affect each other. Most striking, partly because least expected, are the powerful effects that education, especially female education, has on fertility, child health and nutrition. As this suggests, human development is a circular process, one that can be vicious or virtuous,

according to circumstances and policies. And it has its own momentum: what is done (or not done) today powerfully influences what can be done a decade or more ahead.

- **Practical aspects of human development.** Human development is easier said than done. But much has been learned about the comparative efficacy of different policies and programs. In nutrition, for example, there is growing agreement that the central issue is not improving the balance between calories and protein but increasing the amount of staple foods the poor can afford; this involves raising their incomes, stimulating production of these foods and, in some cases, targeted subsidies. In health the vital role of primary care, together with education and control of mass diseases, is now generally acknowledged. In fertility there is better understanding both of how to implement family planning programs and of how such programs interact with socioeconomic and cultural conditions. In education more importance is now attached to its behavioral effects; and in raising educational standards, the significance of class size has been shown to be much less, and that of teaching materials much more, than was formerly believed.

Hard experience has also shown the difficulties of implementing human development and how to tackle them. Political obstacles such as urban bias, competition for resources, and the weak position of the poor often have to be overcome; but efforts to improve basic education, nutrition and health have a universal political appeal. The financial constraint on programs often appears binding; but frequently there are unexploited ways of cutting costs and harnessing additional resources. Human development programs can also

encounter serious administrative constraints; here it is important not only to improve administration but also to choose the most manageable mix of programs and to encourage local participation. More paradoxical, but equally vexing, is the gap between need and demand that can sometimes lead to underused schools and clinics or the underrepresentation of girls and women in human development programs. Experience suggests ways in which this gap can be narrowed, and in some cases bridged.

- Tradeoffs and choices. Planners have to choose at the margin between human development and other activities, and between different human development activities. The choices are not easy, nor should they be the same in all countries.

The economic payoff to human development eases the tradeoffs between growth and poverty reduction. But it does not eliminate them, which means that policy decisions will be affected by the relative emphasis attached to increasing growth, raising the incomes of the poor and attacking the nonincome aspects of poverty. And whatever the balance of objectives, the difficulty of quantifying costs and benefits often compounds the problems of deciding how large the human development budget should be, and how it should be divided among education, health, nutrition and family planning, as well as within each of these areas.

The way in which these dilemmas are resolved must vary according to the circumstances of each country. Political and social prior-

ities are important. So are income levels and growth prospects, and past progress in human development. In considering human development and other steps to reduce poverty, the low-income countries of Africa and Asia, for example, must perforce put strong emphasis on economic returns.

Nothing can make widespread absolute poverty melt away overnight. And human development at best can do only part of the job. Without effective policies on other fronts, and without active and enlightened support from the rest of the world, progress will be agonizingly slow. But these other policies will not be sufficient. The most valuable resource any country has is its people, the means and the end of economic advance.

Statistical appendix to Part I

Table SA.1 Growth of population, GNP and GNP per person, 1960-90
(average annual percentage growth rates)

Country group	Population				GNP ^a				GNP per person ^a			
	1960-70	1970-80	1980-85	1985-90	1960-70	1970-80	1980-85	1985-90	1960-70	1970-80	1980-85	1985-90
Low-income countries	2.4	2.3	2.3	2.2	4.2	4.0	4.5	4.7	1.8	1.7	2.1	2.5
Sub-Saharan Africa	2.5	2.8	3.0	2.7	4.2	3.0	3.1	3.8	1.7	0.2	0.1	1.1
Asia	2.4	2.2	2.2	2.1	4.2	4.2	4.7	4.9	1.8	2.0	2.4	2.7
Middle-income countries	2.5	2.5	2.5	2.3	6.0	5.6	5.2	5.8	3.5	3.1	2.7	3.4
East Asia and Pacific	2.8	2.3	2.1	2.0	7.7	8.0	7.0	7.3	4.9	5.7	4.8	5.2
Latin America and Caribbean	2.8	2.6	2.6	2.4	5.7	5.8	5.5	6.3	2.9	3.2	2.9	3.8
Middle East and North Africa	2.5	2.6	2.7	2.5	3.6	6.4	5.1	5.3	1.1	3.8	2.4	2.7
Sub-Saharan Africa	2.5	2.9	3.2	2.8	4.8	4.5	4.9	4.3	2.3	1.6	1.7	1.4
Southern Europe	1.4	1.4	1.3	1.2	7.0	4.6	3.8	3.7	5.6	3.2	2.5	3.4
Oil-importing developing countries	2.4	2.3	2.3	2.2	5.6	5.1	4.7	5.5	3.1	2.7	2.4	3.2
Low-income countries	2.5	2.4	2.4	2.2	4.1	3.3	4.1	4.6	1.6	0.9	1.7	2.4
Sub-Saharan Africa	2.5	2.8	3.0	2.7	4.2	3.0	3.1	3.8	1.6	0.2	0.1	1.1
Asia	2.4	2.3	2.3	2.1	4.1	3.4	4.3	4.8	1.6	1.1	2.0	2.6
Middle-income countries	2.4	2.3	2.3	2.1	6.1	5.5	4.9	5.7	3.6	3.1	2.6	3.5
East Asia and Pacific	2.8	2.3	2.1	2.0	7.8	8.0	6.9	7.3	4.9	5.6	4.7	5.2
Latin America and Caribbean	2.6	2.5	2.4	2.3	5.4	6.0	5.0	6.2	2.7	3.5	2.6	3.8
Middle East and North Africa	2.4	2.6	3.1	3.1	2.3	3.0	3.7	3.9	-0.2	0.4	0.6	0.8
Sub-Saharan Africa	2.5	2.9	3.0	2.7	4.9	3.9	4.6	4.2	2.4	0.9	1.6	1.4
Southern Europe	1.5	1.3	1.3	1.2	7.0	4.6	3.8	4.7	5.4	3.2	2.5	3.4
Oil-exporting developing countries ^b	2.6	2.5	2.7	2.5	5.5	6.1	6.3	5.9	2.8	3.5	3.5	3.4
All developing countries	2.5	2.4	2.4	2.2	5.6	5.3	5.1	5.6	3.1	2.8	2.6	3.3
Industrialized countries	1.0	0.7	0.5	0.4	5.0	3.1	3.3	4.0	3.9	2.4	2.9	3.5
Capital-surplus oil exporters	3.0	3.1	2.8	3.0	10.5	8.4	5.3	5.8	7.3	5.0	2.8	2.8
Centrally planned economies	1.7	1.3	1.2	1.1	..	5.2	4.6	4.5	..	3.8	3.4	3.3

Sources: World Bank estimates; High-case projections of *World Development Report, 1980*.

a. 1977 prices.

b. Estimates for oil-exporting developing countries are based on analysis of 11 major oil exporters.

Table SA.2 Commercial primary energy production and consumption, by country group, 1977-90

(million barrels of oil equivalent per day)

Country group	1977		1980		1985		1990	
	Production	Consumption	Production	Consumption	Production	Consumption	Production	Consumption
Industrialized countries	47.5	70.6	50.1	70.1	60.0	80.7	72.5	92.5
Centrally planned economies	42.6	40.3	44.8	42.5	54.0	51.8	65.0	64.3
Capital-surplus oil exporters	25.2	1.6	21.4	1.9	23.2	2.7	26.1	3.9
Developing countries	18.9	17.1	21.5	18.7	28.8	25.0	37.9	34.3
Net oil exporters	11.9	3.9	13.0	4.6	16.1	6.0	19.4	8.3
Net oil importers	7.0	13.2	8.5	14.1	12.7	19.0	18.5	26.0
Bunkers and other	n.a.	4.6	n.a.	4.6	n.a.	5.8	n.a.	6.5
Total	134.2	134.2	137.8	137.8	166.0	166.0	201.5	201.5

Sources: UN, *World Energy Supplies 1973-78* (Series J, no. 22); World Bank estimates; High-case projections of *World Development Report, 1980*.

a. Includes nonenergy uses.

Table SA.3 Composition of world commercial primary energy supply, 1970-2020

(percent)

Energy source	1970	1980	1990	2000	2020
Petroleum	47.6	45.8	38	30	17
(OPEC)	(23.0)	(20.4)	(16)	(12)	(6)
Coal	32.3	30.0	31	31	32
Nuclear	0.1	1.0	2	7	16
Hydro	2.0	2.7	4	5	5
Gas and other	18.0	20.5	25	27	30
Total	100.0	100.0	100	100	100
Memo item					
Total world primary commercial energy supply ^a	100.9	137.8	201.5	270	390

Sources: UN, *World Energy Supplies 1973-78* (Series J, no. 22); World Bank projections.

a. Million barrels per day of oil equivalent.

Table SA.4 Growth of merchandise exports, by product category and country group, 1960-77 and 1977-90

(average annual percentage growth rates, 1977 prices)

Product category	1960-77			1977-90 ^a		
	World	Industrialized countries	Developing countries	World	Industrialized countries	Developing countries
Fuels and energy	6.4	4.4	6.6	1.8	3.3	3.0
Other primary products	4.5	5.6	3.3	3.8	4.0	3.6
Food and beverages	4.6	6.3	2.8	4.1	4.3	3.9
Nonfood agricultural products	4.7	6.0	3.2	2.8	2.9	2.2
Minerals and nonferrous metals	4.1	3.6	5.2	4.1	4.0	3.8
Manufactures	8.9	8.8	12.3	6.8	6.5	9.7
Machinery and transport equipment	9.6	9.6	16.8	7.2	6.8	14.2
Other manufactures	8.3	8.0	11.3	6.5	6.2	7.7
Total merchandise ^b	7.2	7.7	6.0	5.4	5.9	6.0

Sources: World Bank; UN, *Yearbook of International Trade Statistics*, various issues; UNCTAD, *Handbook of International Trade and Development Statistics*, various issues.

a. High-case projections.

b. Excludes gold.

Table SA.5 Direction of merchandise trade, 1970 and 1977

Origin	Oil-exporting developing countries	Destination							World (millions of current dollars)		
		Total	Oil-importing developing countries	All developing countries	Industrialized countries	Capital-surplus oil exporters	Centrally planned economies	Unallocated			
Percentage composition, 1970^a											
Oil-exporting developing countries	3.9	21.8	1.0	20.8	25.7	66.6	0.5	6.1	1.1	100.0	12,961
Oil-importing developing countries	3.5	17.4	2.5	14.9	20.9	69.0	1.5	7.5	1.1	100.0	39,122
Low-income	4.6	21.7	8.2	13.5	26.3	53.7	4.3	14.6	1.1	100.0	5,779
Middle-income	3.4	16.6	1.5	15.1	20.0	71.7	1.0	6.2	1.1	100.0	33,343
All developing countries	3.6	18.5	2.1	16.3	22.1	68.4	1.2	7.1	1.1	100.0	52,083
Industrialized countries	4.7	18.2	2.1	16.1	22.9	71.0	1.5	3.5	1.1	100.0	215,896
Capital-surplus oil exporters	1.7	20.2	2.9	17.4	21.9	74.4	0.8	1.5	1.5	100.0	11,151
Centrally planned economies	1.7	14.5	1.7	12.9	16.2	21.3	1.0	60.4	1.1	100.0	32,940
World	4.1	18.0	2.1	15.8	22.0	65.4	1.3	10.1	1.1	100.0	312,070
World (millions of current dollars)	12,710	56,019	6,604	49,415	68,729	204,160	4,211	31,400	3,570	312,070	312,070
Percentage composition, 1977^a											
Oil-exporting developing countries	2.2	21.5	1.1	20.4	23.7	72.6	0.8	2.8	0.1	100.0	58,391
Oil-importing developing countries	8.4	20.5	2.5	18.1	28.9	61.8	3.1	6.1	0.1	100.0	149,854
Low-income	5.4	21.9	9.4	12.4	27.3	53.6	7.7	11.5	(.)	100.0	13,495
Middle-income	8.7	20.4	1.8	18.6	29.1	62.6	2.7	5.6	0.1	100.0	136,359
All developing countries	6.6	20.8	2.1	18.7	27.4	64.8	2.5	5.2	0.1	100.0	208,245
Industrialized countries	6.7	16.4	1.4	15.0	23.1	65.7	5.6	5.2	0.5	100.0	697,568
Capital-surplus oil exporters	4.3	20.6	1.5	19.1	24.9	69.6	1.2	2.9	1.5	100.0	110,289
Centrally planned economies	2.9	8.8	1.0	7.8	11.7	27.2	3.2	54.5	3.4	100.0	107,523
World	6.1	16.9	1.5	15.4	23.0	62.2	4.3	9.7	0.8	100.0	1,123,625
World (millions of current dollars)	68,149	189,918	16,578	173,340	258,067	699,036	48,665	108,930	8,927	1,123,625	1,123,625

Sources: UN, *International Statistical Yearbook*, various issues; UNCTAD, *Handbook of International Trade and Development Statistics*, 1979; GATT, trade system data file; World Bank.

a. Totals may not reconcile because of rounding.

Table SA.6 Capital flows and debt of the developing countries: oil importers and oil exporters, 1975-90
(billions of current dollars)

Item	Oil importers					Oil exporters				
	1975	1977	1980	1985	1990	1975	1977	1980	1985	1990
Current account deficit before interest payments ^a	32.9	16.8	42.7	43.4	42.2	6.8	7.8	-11.1	4.0	30.2
Interest payments	6.7	8.1	18.3	35.0	62.0	2.0	4.1	8.8	11.8	17.5
Changes in reserves and short-term debt	-9.1	9.9	-4.4	6.8	23.5	6.2	5.8	20.2	8.4	2.6
Total to be financed	30.6	34.8	56.6	85.2	127.7	15.0	17.7	18.0	24.2	50.2
<i>Financed by medium- and long-term capital</i>										
From public sources	12.5	13.2	21.7	41.1	66.6	5.4	6.0	7.3	11.2	16.6
From private sources	18.1	21.7	34.9	44.0	61.2	9.6	11.7	10.7	13.0	33.6
Private direct investment	4.2	3.9	6.5	9.6	16.4	2.7	2.1	3.5	5.8	8.2
Private loans	13.9	17.7	28.4	34.4	44.7	6.9	9.6	7.2	7.2	25.4
<i>Total net capital flows</i>										
Current dollars	30.6	34.8	56.6	85.2	127.7	15.0	17.7	18.0	24.2	50.2
Constant 1977 dollars	34.2	34.8	40.0	42.1	47.2	16.8	17.7	12.7	12.0	18.5
<i>Outstanding medium- and long-term debt</i>										
Public sources	57.7	77.5	100.4	212.9	397.1	16.2	24.3	48.8	79.6	130.0
Private sources	72.6	108.9	187.1	343.4	558.5	24.7	43.9	66.5	97.5	175.4
<i>Total debt</i>										
Current dollars	130.3	186.4	287.5	556.3	955.6	40.9	68.2	115.3	177.1	305.4
Constant 1977 dollars	146.4	186.4	203.5	275.0	352.9	46.0	68.2	81.6	87.5	112.8
<i>Debt service</i>										
Interest payments	6.7	8.1	18.3	35.0	62.0	2.0	4.1	8.8	11.8	17.5
Debt amortization	12.7	18.9	28.6	65.0	114.2	3.6	6.5	12.2	23.6	40.1
Interest payments as percentage of GNP	0.9	0.8	1.2	1.2	1.3	1.0	1.6	2.7	1.3	1.1
Price deflator	89.3	100.0	141.3	202.3	270.8	89.3	100.0	141.3	202.3	270.8

Source: High-case projections of *World Development Report*.

a. Excludes official transfers.

Table SA.7 Capital flows and debt of the oil-importing developing countries: low-income and middle-income, 1975-90
(billions of current dollars)

Item	Low-income					Middle-income				
	1975	1977	1980	1985	1990	1975	1977	1980	1985	1990
Current account deficit before interest payments ^a	4.8	1.4	8.8	16.0	26.8	28.1	15.3	33.9	27.4	25.5
Interest payments	0.6	0.7	1.2	2.6	5.3	6.1	7.4	17.1	32.3	56.7
Changes in reserves and short-term debt	0.4	3.0	-0.9	0.7	1.0	-9.5	7.0	-3.5	6.1	22.5
Total to be financed	5.9	5.1	9.1	19.4	33.0	24.7	29.7	47.4	65.8	94.7
<i>Financed by medium- and long-term capital</i>										
From public sources	5.4	4.7	8.3	18.5	31.4	7.1	8.5	13.4	22.6	35.2
From private sources	0.5	0.4	0.8	0.9	1.7	17.6	21.2	34.0	43.2	59.5
Private direct investment	0.2	0.2	0.3	0.6	1.0	4.0	3.7	6.2	9.0	15.4
Private loans	0.3	0.3	0.5	0.2	0.7	13.6	17.5	27.9	34.2	44.1
<i>Total net capital flows</i>										
Current dollars	5.9	5.1	9.1	19.4	33.0	24.7	29.7	47.4	65.8	94.7
Constant 1977 dollars	6.6	5.1	6.5	9.6	12.2	27.7	29.7	33.6	32.5	35.0
<i>Outstanding medium- and long-term debt</i>										
Public sources	24.4	32.0	44.8	89.4	172.2	33.3	45.5	55.6	123.5	224.9
Private sources	3.1	3.3	0.8	3.6	9.3	69.5	105.6	186.3	339.8	549.2
<i>Total debt</i>										
Current dollars	27.5	35.3	45.6	93.0	181.5	102.8	151.1	241.9	463.3	774.1
Constant 1977 dollars	30.9	35.3	32.3	46.0	67.0	115.5	151.1	171.2	229.0	285.9
<i>Debt service</i>										
Interest payments	0.6	0.7	1.2	2.6	5.3	6.1	7.4	17.1	32.3	56.7
Debt amortization	1.2	1.3	2.2	3.7	6.0	11.5	17.6	26.4	61.3	108.3
Interest payments as percentage of GNP	0.4	0.4	0.4	0.5	0.6	1.0	0.9	1.3	1.3	1.4
Price deflator	89.3	100.0	141.3	202.3	270.8	89.3	100.0	141.3	202.3	270.8

Source: High-case projections of *World Development Report*, 1980.

a. Excludes official transfers.

Bibliographical note

This *Report* has drawn on a wide range of World Bank work, as well as on external research. Selected sources used in each chapter are briefly annotated below, and then listed alphabetically. The World Bank sources include sector policy papers, ongoing economic analysis and research, and project, sector and economic work on individual countries. In addition, a set of background papers is commissioned for each *Report*; their primary purpose is to synthesize the relevant literature and Bank work. (Thus the sources cited in these papers are not listed separately.) Many of the background papers are issued as World Bank Staff Working Papers, which are available at no charge from the Bank's Publications Unit. The views they express are not, however, necessarily those of the World Bank or of this *Report*.

Selected sources, by chapter

Chapters 2 and 3. The global model used in the projections is described in Cheetham, Gupta and Schwartz. The data base for the global model and for country projections is continually updated, by drawing on published sources and other data collected by the World Bank; some of these data are presented in the World Development Indicators (and in the *World Bank Atlas*, published annually, as well as the *World Tables*, published occasionally). Energy prospects of developing countries are reviewed in Hughart,

and their energy policy issues are reviewed in Fallen-Bailey and Byer. In the area of international trade, Keesing considers a wide range of trade issues for developing countries; Balassa analyzes trends in trade in manufactured goods; Morawetz provides a country case study of the effects of developing-country policies on growth in manufactured exports; Wolf analyzes the adjustment by industrialized countries to imports from developing countries; Sapir and Lutz survey trends and issues relating to trade in nonfactor services; Kemper assesses the likely impact of the "Tokyo Round"; and Frank analyzes the "graduation" issues in trade policy. On export credit finance, see Cizauskas. The method for deriving estimates of the number of people in absolute poverty is presented in Ahluwalia, Carter and Chenery.

Chapter 4. On absolute poverty and policies to overcome it, see Chenery and others, Sen, and Ahluwalia, Carter and Chenery. On urban poverty and rural-urban migration, see Nelson. The literature on the contribution of human resources to growth is surveyed in Bowman, and its main conclusions are summarized in Schultz. The recent cross-country analyses referred to in the box on human resources and growth (page 38) are presented in Wheeler and in Hicks. Parts of this chapter (and Chapter 5) also draw on the World Bank's work on basic needs, which is summarized in Haq and Burki.

Chapter 5. The evidence on education and farmer productivity is surveyed in Lockheed, Jamison and Lau; that on the rates of return to schooling in Psacharopoulos. (Psacharopoulos, along with Berry and with Bowman, also discusses the debate on methodological issues in applying rate-of-return analysis.) The connections between education, poverty and income distribution are further analyzed in Berry and in Fields. On practical issues of educational reform, see Haddad and others; on cross-country comparisons of educational quality, see Inkeles. The evidence on the effects of education on health and nutrition is surveyed in Cochrane, O'Hara and Leslie. Health problems and policies in developing countries are reviewed in Golladay and Liese and in Golladay; nutrition issues in Berg and in Reutlinger; fertility and other population issues in Birdsall. For a quantitative analysis of the determinants of fertility and its effects on income growth, see Wheeler. The connection between education and fertility is discussed in Cochrane, O'Hara and Leslie. Kanagaratnam and Pierce examine trends in population policy and in the implementation of family planning programs.

Chapter 6. Factors affecting political support for and obstacles to human development programs are discussed in Uphoff. Sources of financing and means of reducing costs for these programs are discussed in Meerman. Esman and

Montgomery survey administrative aspects of implementing the programs. A range of factors that result in misperception of the problems of poverty is considered in Chambers. Social and cultural aspects of human development are surveyed in Rogers, Coletta and Mbindyo. And the role of the family, including the particular problems faced by women and young children, is considered in Safilios-Rothschild and in the World Bank's

publication, *Recognizing the "Invisible" Woman in Development*.

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An asterisk (*) after a citation indicates papers prepared as part of the background work for this report.

Annex

World Development Indicators

Contents

Key	108
Introduction	109
Table 1. Basic Indicators	110
Population □ Area □ GNP per capita □ Inflation □ Adult literacy □ Life expectancy □ Food production per capita	
Table 2. Growth of Production	112
GDP □ Agriculture □ Industry □ Manufacturing □ Services	
Table 3. Structure of Production	114
Agriculture □ Industry □ Manufacturing □ Services	
Table 4. Growth of Consumption and Investment	116
Public consumption □ Private consumption □ Gross domestic investment	
Table 5. Structure of Demand	118
Public consumption □ Private consumption □ Gross domestic investment □ Gross domestic saving □ Exports of goods and nonfactor services □ Resource balance	
Table 6. Industrialization	120
Share of value added in food and agriculture □ in textiles and clothing □ in machinery and transport equipment □ in chemicals □ in other manufacturing □ Value added in manufacturing □ Gross manufacturing output per capita	
Table 7. Energy	122
Growth of energy production □ Growth of energy consumption □ Energy consumption per capita □ Energy consumption per dollar of GDP □ Energy imports as percentage of merchandise exports	
Table 8. Growth of Merchandise Trade	124
Export values □ Import values □ Growth of exports □ Growth of imports □ Terms of trade	
Table 9. Structure of Merchandise Exports	126
Fuels, minerals and metals □ Other primary commodities □ Textiles and clothing □ Machinery and transport equipment □ Other manufactures	
Table 10. Structure of Merchandise Imports	128
Food □ Fuels □ Other primary commodities □ Machinery and transport equipment □ Other manufactures	
Table 11. Destination of Merchandise Exports	130
Industrialized countries □ Developing countries □ Centrally planned economies □ Capital-surplus oil exporters	
Table 12. Trade in Manufactured Goods	132
To industrialized countries □ To developing countries □ To centrally planned economies □ To capital-surplus oil exporters □ Value of manufactured exports	

Table 13. Balance of Payments and Debt Service Ratios	134
Current account balance before interest payments on external public debt <input type="checkbox"/> Interest payments on external public debt <input type="checkbox"/> Debt service as percentage of GNP <input type="checkbox"/> as percentage of exports of goods and services	
Table 14. Flow of External Capital	136
Gross inflow of public and publicly guaranteed medium- and long-term loans <input type="checkbox"/> Repayment of principal <input type="checkbox"/> Net inflow of public and publicly guaranteed medium- and long-term loans <input type="checkbox"/> Net direct private investment	
Table 15. External Public Debt and International Reserves	138
External public debt outstanding and disbursed <input type="checkbox"/> as percentage of GNP <input type="checkbox"/> Gross international reserves <input type="checkbox"/> in months of import coverage	
Table 16. Official Development Assistance from OECD and OPEC Members	140
Amount in dollars <input type="checkbox"/> as percentage of donor GNP <input type="checkbox"/> in national currencies <input type="checkbox"/> Net bilateral flow to low-income countries	
Table 17. Population Growth, Past and Projected, and Hypothetical Stationary Population	142
Past growth of population <input type="checkbox"/> Projected population <input type="checkbox"/> Hypothetical size of stationary population <input type="checkbox"/> Assumed year of reaching net reproduction rate of 1 <input type="checkbox"/> Year of reaching stationary population	
Table 18. Demographic and Fertility-related Indicators	144
Crude birth rate <input type="checkbox"/> Crude death rate <input type="checkbox"/> Total fertility rate <input type="checkbox"/> Percentage of women in reproductive age group <input type="checkbox"/> Percentage of married women using contraceptives	
Table 19. Labor Force	146
Population of working age <input type="checkbox"/> Labor force in agriculture <input type="checkbox"/> in industry <input type="checkbox"/> in services <input type="checkbox"/> Growth of labor force, past and projected	
Table 20. Urbanization	148
Urban population as percentage of total population <input type="checkbox"/> Growth of urban population <input type="checkbox"/> Percentage in largest city <input type="checkbox"/> in cities of over 500,000 persons <input type="checkbox"/> Number of cities of over 500,000 persons	
Table 21. Indicators Related to Life Expectancy	150
Life expectancy <input type="checkbox"/> Infant mortality rate <input type="checkbox"/> Child death rate	
Table 22. Health-related Indicators	152
Population per physician <input type="checkbox"/> per nursing person <input type="checkbox"/> Percentage of population with access to safe water <input type="checkbox"/> Daily calorie supply per capita	
Table 23. Education	154
Number enrolled in primary school as percentage of age group <input type="checkbox"/> in secondary school <input type="checkbox"/> in higher education <input type="checkbox"/> Adult literacy	
Table 24. Income Distribution	156
Percentage share of household income, by percentile groups of households	
Technical Notes	158
Bibliography of Data Sources	166

Key

In each table, countries are listed in their group in ascending order of income per capita. The reference numbers indicating that order are shown in the alphabetical list of countries below.		Figures in the colored bands are summary measures for groups of countries. The letter <i>w</i> after a summary measure indicates that it is a weighted average; the letter <i>m</i> , that it is a median value; the letter <i>t</i> , that it is a total.		. . . Not available. (.) Less than half the unit shown. All growth rates are in real terms. Figures in italics are for years or periods other than those specified.	
Afghanistan	26	Hong Kong	86	Peru	56
Albania	116	Hungary	121	Philippines	49
Algeria	72	India	15	Poland	122
Angola	33	Indonesia	38	Portugal	82
Argentina	81	Iran	110	Romania	119
Australia	98	Iraq	109	Rwanda	17
Austria	96	Ireland	91	Saudi Arabia	112
Bangladesh	2	Israel	90	Senegal	37
Belgium	101	Italy	92	Sierra Leone	20
Benin	23	Ivory Coast	57	Singapore	88
Bhutan	4	Jamaica	68	Somalia	8
Bolivia	48	Japan	97	South Africa	77
Brazil	79	Jordan	66	Spain	89
Bulgaria	120	Kampuchea, Democratic	1	Sri Lanka	18
Burma	12	Kenya	36	Sudan	34
Burundi	9	Korea, Republic of	70	Sweden	107
Cameroon	42	Korea, Democratic Republic of	115	Switzerland	108
Canada	102	Kuwait	113	Syrian Arab Republic	64
Central African Republic	27	Lao People's Democratic Republic	3	Taiwan ¹	75
Chad	10	Lebanon	69	Tanzania	25
Chile	76	Lesotho	31	Thailand	47
China	114	Liberia	43	Togo	35
Colombia	59	Libya	111	Trinidad and Tobago	84
Congo, People's Republic of	51	Madagascar	28	Tunisia	65
Costa Rica	78	Malawi	16	Turkey	71
Cuba	117	Malaysia	67	Uganda	32
Czechoslovakia	124	Mali	6	United Kingdom	94
Denmark	106	Mauritania	30	United States	105
Dominican Republic	62	Mexico	73	Upper Volta	13
Ecuador	61	Mongolia	118	Uruguay	80
Egypt, Arab Republic of	39	Morocco	55	Union of Soviet Socialist Republics	123
El Salvador	54	Mozambique	11	Venezuela	85
Ethiopia	5	Nepal	7	Viet Nam, Socialist Republic of	14
Finland	95	Netherlands	100	Yemen Arab Republic	50
France	99	New Zealand	93	Yemen, People's Democratic Republic of	41
German Democratic Republic	125	Nicaragua	58	Yugoslavia	83
Germany, Federal Republic of	104	Niger	22	Zaire	21
Ghana	40	Nigeria	52	Zambia	45
Greece	87	Norway	103	Zimbabwe	46
Guatemala	63	Pakistan	24		
Guinea	19	Panama	74		
Haiti	29	Papua New Guinea	53		
Honduras	44	Paraguay	60		

1. The references to Taiwan in these tables should not be interpreted as having any significance as to its legal status.

Introduction

The World Development Indicators are designed to provide information about the main features of social and economic development. The format this year generally follows that of previous years. The indicators in Table 1 give a summary profile of countries. The data in other tables fall into the following broad areas: national accounts, industrialization, energy, external accounts, aid flows, demography, labor force, urbanization, social indicators and income distribution. Most of the information was drawn from the data files and publications of the World Bank, the International Monetary Fund and the United Nations and the specialized agencies.

For ease of reference, ratios and rates of growth are shown; absolute values are reported only in a few instances. Most growth rates were calculated for two periods: 1960–70 and 1970–78, or 1970–77 if data for 1978 were not available. All growth rates are in real terms and were computed, unless noted otherwise, by using the least-squares method. Because this method takes all observations within a period into account, the resulting growth rates reflect general trends that are not unduly influenced by exceptional values for a particular year. Table entries in italics indicate that they are for years or periods other than those specified. All dollar figures are US dollars.

Some of the differences between figures shown this year and last year reflect revisions to historical series by the reporting countries.

They also reflect revisions to the estimates of population on the basis of new information from surveys and censuses.

The country groups used in the tables are: 38 low-income developing countries with a per capita income of \$360 or less in 1978; 52 middle-income developing countries with a per capita income of more than \$360; 18 industrialized countries; 5 capital-surplus oil-exporting countries; and 12 centrally planned economies. As in previous years, Democratic Kampuchea, Lao People's Democratic Republic, Socialist Republic of Viet Nam, and Yugoslavia are grouped with developing countries. Iran and Iraq are now grouped with capital-surplus oil-exporting countries.

Within each group, countries are listed in ascending order of income per capita, and that order is used in all tables. The alphabetical list on the opposite page shows the reference number of each country. Countries with populations of less than a million are not reported in the tables, largely for lack of comprehensive data. The technical notes for Table 1 show some basic indicators for 29 small countries that are members of the United Nations, the World Bank, or both.

Summary measures—weighted averages, median values, or totals—were calculated for the country groups only if data were adequate and meaningful statistics could be obtained. The weights used in computing the measures are described in the technical notes relating to

an indicator. The letter *w* after a summary measure indicates that it is a weighted average; the letter *m*, that it is a median value; the letter *t*, that it is a total. The median is the middle value of a set arranged in order of magnitude. Because the coverage of countries is not uniform for all indicators and because the variation around central tendencies can be large, readers should exercise caution in comparing the summary measures for different indicators, country groups and years or periods.

Readers should also exercise caution in comparing indicators across countries. Although the statistics presented are drawn from sources generally considered the most authoritative and reliable, some of them, particularly those describing social features and income distribution, are subject to considerable margins of error. In addition, variations in national practices mean that the data in certain instances are not strictly comparable. The data should thus be construed only as indicating trends and characterizing major differences between countries.

The technical notes should be referred to in any use of the data. These notes outline the concepts, definitions, methods and data sources. The bibliography gives details of the data sources, which contain comprehensive definitions and descriptions of concepts used.

The World Development Indicators are prepared under the direction of Ramesh Chander.

Table 1. Basic Indicators

	Popula- tion (millions) Mid-1978 ^a	Area (thousands of square kilo- meters)	GNP per capita				Average annual growth (per- cent) 1960-78 ^b	Average annual rate of inflation (percent)		Adult literacy rate (percent) 1975 ^e	Life ex- pectancy at birth (years) 1978	Average index of food production per capita (1969-71 = 100) 1976-78
			Dollars 1978 ^a									
			200 <i>w</i>	1.6 <i>w</i>	3.0 <i>m</i>	10.6 <i>m</i>		38 <i>w</i>	50 <i>w</i>				97 w
Low-income countries	1,293.9 <i>t</i>	26,313 <i>t</i>	200 <i>w</i>	1.6 <i>w</i>	3.0 <i>m</i>	10.6 <i>m</i>	38 <i>w</i>	50 <i>w</i>	97 <i>w</i>			
1 Kampuchea, Dem.	8.4	181	3.8	57		
2 Bangladesh	84.7	144	90	-0.4	3.7	17.9	26	47	90			
3 Lao PDR	3.3	237	90	..	..	..	..	42	96
4 Bhutan	1.2	47	100	-0.3	..	..	..	41	100
5 Ethiopia	31.0	1,222	120	1.5	2.1	4.0	10	39	84			
6 Mali	6.3	1,240	120	1.0	5.0	7.8	10	42	90			
7 Nepal	13.6	141	120	0.8	7.7	9.1	19	43	92			
8 Somalia	3.7	638	130	-0.5	4.5	10.7	60	43	87			
9 Burundi	4.5	28	140	2.2	2.8	10.1	25	45	107			
10 Chad	4.3	1,284	140	-1.0	4.6	7.4	15	43	89			
11 Mozambique	9.9	783	140	0.4	2.8	10.9	..	46	81			
12 Burma	32.2	677	150	1.0	2.7	13.7	67	53	96			
13 Upper Volta	5.6	274	160	1.3	1.3	9.6	5	42	95			
14 Viet Nam	51.7	330	170	..	..	..	87	62	102
15 India	643.9	3,288	180	1.4	7.1	8.2	36	51	100			
16 Malawi	5.7	118	180	2.9	2.4	9.1	25	46	99			
17 Rwanda	4.5	26	180	1.4	13.1	14.7	23	46	103			
18 Sri Lanka	14.3	66	190	2.0	1.8	11.8	78	69	114			
19 Guinea	5.1	246	210	0.6	1.7	6.4	..	43	86			
20 Sierra Leone	3.3	72	210	0.5	2.9	10.8	15	46	93			
21 Zaire	26.8	2,345	210	1.1	29.9	26.2	15	46	94			
22 Niger	5.0	1,267	220	-1.4	2.1	10.7	8	42	87			
23 Benin	3.3	113	230	0.4	1.9	7.4	11	46	92			
24 Pakistan	77.3	804	230	2.8	3.3	14.6	21	52	101			
25 Tanzania	16.9	945	230	2.7	1.8	12.3	66	51	93			
26 Afghanistan	14.6	647	240	0.4	11.9	4.4	12	42	100			
27 Central African Rep.	1.9	623	250	0.7	4.1	9.0	..	46	102			
28 Madagascar	8.3	587	250	-0.3	3.2	9.6	50	46	95			
29 Haiti	4.8	28	260	0.2	4.1	12.2	23	51	91			
30 Mauritania	1.5	1,031	270	3.6	1.6	10.4	17	42	71			
31 Lesotho	1.3	30	280	5.9	2.5	11.2	55	50	90			
32 Uganda	12.4	236	280	0.7	3.0	27.3	..	53	90			
33 Angola	6.7	1,247	300	1.2	3.3	22.0	..	41	88			
34 Sudan	17.4	2,506	320	0.1	3.7	7.4	20	46	108			
35 Togo	2.4	56	320	5.0	1.7	7.4	18	46	80			
36 Kenya	14.7	583	330	2.2	1.5	12.0	40	53	91			
37 Senegal	5.4	196	340	-0.4	1.7	8.0	10	42	96			
38 Indonesia	136.0	2,027	360	4.1	..	20.0	62	47	100			
Middle-income countries	872.8 <i>t</i>	32,998 <i>t</i>	1,250 <i>w</i>	3.7 <i>w</i>	3.1 <i>m</i>	13.1 <i>m</i>	71 <i>w</i>	61 <i>w</i>	106 <i>w</i>			
39 Egypt	39.9	1,001	390	3.3	2.7	7.0	44	54	93			
40 Ghana	11.0	239	390	-0.5	7.6	35.9	30	48	79			
41 Yemen, PDR	1.8	333	420	..	..	..	27	44	108
42 Cameroon	8.1	475	460	2.9	3.7	9.8	..	46	112			
43 Liberia	1.7	111	460	2.0	1.9	9.7	30	48	96			
44 Honduras	3.4	112	480	1.1	3.0	8.0	57	57	84			
45 Zambia	5.3	753	480	1.2	7.6	5.7	39	48	109			
46 Zimbabwe	6.9	391	480	1.2	1.3	7.6	..	54	102			
47 Thailand	44.5	514	490	4.6	1.9	9.1	84	61	122			
48 Bolivia	5.3	1,099	510	2.2	3.5	22.7	63	52	111			
49 Philippines	45.6	300	510	2.6	5.8	13.4	87	60	115			
50 Yemen Arab Rep.	5.6	195	520	..	..	..	13	39	98
51 Congo, People's Rep.	1.5	342	540	1.0	5.4	10.6	50	46	82			
52 Nigeria	80.6	924	560	3.6	2.6	18.2	..	48	89			
53 Papua New Guinea	2.9	462	560	3.6	3.6	8.8	32	50	106			
54 El Salvador	4.3	21	660	1.8	0.5	10.3	62	63	111			
55 Morocco	18.9	447	670	2.5	2.0	7.1	28	55	80			
56 Peru	16.8	1,285	740	2.0	9.9	22.2	72	56	90			
57 Ivory Coast	7.8	322	840	2.5	2.8	13.9	20	46	104			
58 Nicaragua	2.5	130	840	2.3	1.9	11.0	57	55	102			
59 Colombia	25.6	1,139	850	3.0	11.9	21.7	81	62	114			
60 Paraguay	2.9	407	850	2.6	3.0	12.3	81	63	103			
61 Ecuador	7.8	284	880	4.3	..	14.8	74	60	103			
62 Dominican Rep.	5.1	49	910	3.5	2.1	8.6	67	60	93			
63 Guatemala	6.6	109	910	2.9	0.1	10.8	47	57	108			
64 Syrian Arab Rep.	8.1	185	930	3.8	1.9	12.7	53	57	150			
65 Tunisia	6.0	164	950	4.8	3.7	7.1	55	57	128			
66 Jordan	3.0	98	1,050	..	..	..	70	56	77

	Popula- tion (millions) Mid-1978 ^a	Area (thousands of square kilo- meters)	GNP per capita				Adult literacy rate (percent) 1975 ^e	Life ex- pectancy at birth (years) 1978	Average index of food production per capita (1969-71 = 100) 1976-78
			Dollars	Average annual growth (per- cent)	Average annual rate of inflation (percent)				
			1978 ^a	1960-78 ^b	1960-70 ^c	1970-78 ^d			
67 Malaysia	13.3	330	1,090	3.9	-0.3	7.2	60	67	110
68 Jamaica	2.1	11	1,110	2.0	3.8	16.9	86	70	98
69 Lebanon	3.0	10	..	..	1.4	..	..	65	85
70 Korea, Rep. of	36.6	99	1,160	6.9	17.5	19.3	93	63	116
71 Turkey	43.1	781	1,200	4.0	5.6	21.5	60	61	110
72 Algeria	17.6	2,382	1,260	2.3	2.3	13.4	37	56	82
73 Mexico	65.4	1,973	1,290	2.7	3.5	17.5	76	65	99
74 Panama	1.8	76	1,290	2.9	1.6	7.5	78	70	103
75 Taiwan	17.1	36	1,400	6.6	4.1	10.3	82	72	105
76 Chile	10.7	757	1,410	1.0	32.9	242.6	88	67	94
77 South Africa	27.7	1,221	1,480	2.5	3.0	11.7	..	60	100
78 Costa Rica	2.1	51	1,540	3.3	1.9	15.7	90	70	114
79 Brazil	119.5	8,512	1,570	4.9	46.1	30.3	76	62	117
80 Uruguay	2.9	176	1,610	0.7	51.1	65.6	94	71	105
81 Argentina	26.4	2,767	1,910	2.6	21.8	120.4	94	71	114
82 Portugal	9.8	92	1,990	5.9	3.0	15.2	70	69	82
83 Yugoslavia	22.0	256	2,380	5.4	12.6	17.3	85	69	117
84 Trinidad and Tobago	1.1	5	2,910	2.2	3.2	21.3	95	70	94
85 Venezuela	14.0	912	2,910	2.7	1.3	11.1	82	66	97
86 Hong Kong	4.6	1	3,040	6.5	2.3	7.7	90	72	30
87 Greece	9.4	132	3,250	6.0	3.2	13.8	..	73	120
88 Singapore	2.3	1	3,290	7.4	1.1	6.1	75	70	112
89 Spain	37.1	505	3,470	5.0	6.3	15.0	..	73	122
90 Israel	3.7	21	3,500	4.2	6.2	31.0	88	72	113
Industrialized countries	667.8 t	30,429 t	8,070 w	3.7 w	4.2 m	9.4 m	99 w	74 w	108 w
91 Ireland	3.2	70	3,470	3.3	5.2	14.7	98	73	128
92 Italy	56.7	301	3,850	3.6	4.4	14.0	98	73	100
93 New Zealand	3.2	269	4,790	1.7	3.3	11.0	99	73	107
94 United Kingdom	55.8	244	5,030	2.1	4.1	14.1	99	73	111
95 Finland	4.8	337	6,820	4.1	5.6	13.2	100	72	107
96 Austria	7.5	84	7,030	4.2	3.6	7.6	99	72	109
97 Japan	114.9	372	7,280	7.6	4.8	9.6	99	76	97
98 Australia	14.2	7,687	7,990	2.9	3.1	12.8	100	73	121
99 France	53.3	547	8,260	4.0	4.1	9.3	99	73	106
100 Netherlands	13.9	41	8,410	3.4	5.3	8.8	99	74	118
101 Belgium	9.8	31	9,090	4.1	3.6	8.6	99	72	105
102 Canada	23.5	9,976	9,180	3.5	3.1	9.4	98	74	112
103 Norway	4.1	324	9,510	4.0	4.2	8.6	99	75	108
104 Germany, Fed. Rep.	61.3	249	9,580	3.3	3.2	5.9	99	72	104
105 United States	221.9	9,363	9,590	2.4	2.8	6.8	99	73	114
106 Denmark	5.1	43	9,920	3.2	6.0	9.8	99	74	102
107 Sweden	8.3	450	10,210	2.5	4.3	9.3	99	75	113
108 Switzerland	6.3	41	12,100	2.2	4.6	6.6	99	74	113
Capital-surplus oil exporters	60.1 t	6,011 t	3,340 w	7.1 w	1.2 m	22.2 m	50 w	53 w	111 w
109 Iraq	12.2	435	1,860	4.1	1.7	..	..	55	84
110 Iran	35.8	1,648	2,160	7.9	-0.5	23.7	50	52	113
111 Libya	2.7	1,760	6,910	6.2	5.2	20.7	50	55	123
112 Saudi Arabia	8.2	2,150	7,690	9.7	..	28.4	..	53	135
113 Kuwait	1.2	18	14,890	-2.3	0.6	19.8	60	69	..
Centrally planned economies	1,352.4 t	34,826 t	1,190 w	4.0 w	..	..	..	70 w	112 w
114 China	952.2	9,597	230 ^f	3.7	..	..	..	70	111
115 Korea, Dem. Rep.	17.1	121	730	4.5	..	..	..	63	130
116 Albania	2.6	29	740	4.1	..	..	..	69	107
117 Cuba	9.7	115	810	-1.2	..	..	96	72	96
118 Mongolia	1.6	1,565	940	1.5	..	..	..	63	94
119 Romania	21.9	238	1,750	8.6	..	..	98	70	148
120 Bulgaria	8.8	111	3,230	5.7	..	..	..	72	113
121 Hungary	10.7	93	3,450	5.0	..	..	98	70	122
122 Poland	35.0	313	3,670	5.9	..	..	98	71	104
123 USSR	261.0	22,402	3,700	4.3	..	..	99	70	111
124 Czechoslovakia	15.1	128	4,720	4.3	..	..	..	70	118
125 German Dem. Rep.	16.7	108	5,710	4.8	..	..	..	72	127

a. Figures in italics are for 1977, not 1978.

b. Figures in italics are for 1960-77, not 1960-78.

c. Figures in italics are for 1961-70, not 1960-70.

d. Figures in italics are for 1970-77, not 1970-78.

e. Figures in italics are for years other than 1975. See the technical notes.

f. Preliminary estimate based on partial official information. See the technical notes.

Table 2. Growth of Production

	Average annual growth rate (percent)									
	GDP		Agriculture		Industry		Manufacturing		Services	
	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b
Low-income countries	3.9 <i>w</i>	3.6 <i>w</i>	2.5 <i>m</i>	2.0 <i>m</i>	6.1 <i>m</i>	4.5 <i>m</i>	6.6 <i>m</i>	4.2 <i>m</i>	4.4 <i>m</i>	4.3 <i>m</i>
1 Kampuchea, Dem.	3.1	..	..	..	..	..	..	..	..	..
2 Bangladesh	3.6	2.9	2.7	1.6	7.9	5.9	6.6	5.3	3.8	4.7
3 Lao PDR	..	..	..	..	..	..	..	..	..	..
4 Bhutan	..	..	..	..	..	..	..	..	..	..
5 Ethiopia	4.4	1.8	2.2	0.5	7.4	0.4	8.0	1.3	7.8	4.5
6 Mali	3.3	4.6	..	2.0	..	9.2	..	..	..	5.2
7 Nepal	2.5	2.7	..	..	..	..	..	..	..	..
8 Somalia	1.0	3.1	-1.5	2.7	3.3	-2.6	14.3	..	2.5	6.8
9 Burundi	4.4	2.9	..	1.7	..	7.6	..	5.3	..	4.0
10 Chad	0.5	1.7	..	-0.1	..	8.5	..	5.7	..	2.6
11 Mozambique	4.6	-3.2	2.1	-1.8	9.5	-5.1	6.6	-6.1	6.4	-3.7
12 Burma	2.6	4.0	4.1	3.6	2.8	4.5	3.3	4.2	1.5	4.2
13 Upper Volta	3.0	-0.2	..	-3.6	..	1.4	..	1.6	..	2.7
14 Viet Nam	..	..	..	..	..	..	..	..	..	..
15 India	3.6	3.7	1.9	2.6	5.5	4.5	4.8	4.6	5.2	4.6
16 Malawi	4.9	6.5	..	4.2	..	6.8	..	6.7	..	9.6
17 Rwanda	2.7	4.8	..	..	..	..	..	..	..	..
18 Sri Lanka	4.6	3.4	3.0	2.3	6.6	3.0	6.3	1.2	4.6	4.3
19 Guinea	3.2	5.4	2.1	3.0	2.3	14.1	..	9.4	7.2	0.7
20 Sierra Leone	4.2	1.3	..	2.8	..	-3.5	..	4.6	..	3.6
21 Zaire	3.6	1.3	..	1.9	..	0.7	..	-0.6	..	1.6
22 Niger	2.9	2.4	3.3	-0.2	13.9	8.6	..	..	(.)	4.2
23 Benin	2.6	3.8	..	..	..	..	..	..	..	..
24 Pakistan	6.7	4.4	4.9	1.9	10.0	4.8	9.4	3.5	7.0	6.2
25 Tanzania	6.0	5.0	..	4.5	..	2.3	..	4.5	..	6.4
26 Afghanistan	2.0	4.6	..	3.5	..	5.3	..	4.0	..	6.1
27 Central African Rep.	1.9	3.2	0.8	2.3	5.4	5.2	..	..	1.8	3.1
28 Madagascar	2.9	-0.7	..	-0.3	..	(.)	..	-0.4	..	-1.4
29 Haiti	0.1	3.9	-0.6	2.6	0.4	8.0	-0.1	6.6	0.9	3.3
30 Mauritania	8.1	2.3	2.4	-2.3	12.8	2.1	18.0	2.9	17.0	7.6
31 Lesotho	4.6	6.5	..	0.3	..	3.8	..	8.7	..	15.7
32 Uganda	5.9	-0.2	..	1.1	..	-7.8	..	-5.0	..	0.2
33 Angola	4.8	-10.0	4.0	-11.0	11.0	-4.1	7.2	-12.8	4.2	-11.8
34 Sudan	1.3	2.7	..	..	..	..	..	..	..	..
35 Togo	8.5	4.2	..	1.7	..	7.4	..	..	..	4.6
36 Kenya	6.0	6.7	..	5.5	..	10.4	..	11.7	..	6.0
37 Senegal	2.5	2.2	2.9	3.3	4.4	3.9	6.2	4.1	1.7	1.0
38 Indonesia	3.5	7.8	2.5	4.0	5.0	11.2	3.3	12.4	8.0	8.7
Middle-income countries	6.0 <i>w</i>	5.7 <i>w</i>	3.4 <i>m</i>	3.1 <i>m</i>	7.8 <i>m</i>	7.1 <i>m</i>	7.6 <i>m</i>	6.8 <i>m</i>	5.7 <i>m</i>	5.8 <i>m</i>
39 Egypt	4.5	7.8	2.9	3.1	5.4	7.2	4.7	7.6	5.1	12.0
40 Ghana	2.1	0.4	..	-1.2	..	-2.3	..	-6.0	..	3.5
41 Yemen, PDR	..	..	..	..	..	..	..	..	..	..
42 Cameroon	4.7	5.1	..	3.3	..	6.2	..	5.2	..	6.0
43 Liberia	5.1	1.5	..	5.3	..	-1.2	..	8.7	..	1.5
44 Honduras	5.1	3.3	5.7	0.8	5.2	5.9	4.0	5.8	4.5	3.9
45 Zambia	5.0	2.3	..	3.1	..	4.3	..	0.6	..	1.4
46 Zimbabwe	4.2	3.4	..	..	..	..	..	..	..	..
47 Thailand	8.2	7.6	5.5	5.6	11.6	10.2	11.0	11.5	9.0	7.4
48 Bolivia	5.2	5.6	3.0	3.6	6.2	5.1	5.4	6.8	5.5	6.5
49 Philippines	5.1	6.3	4.3	4.9	6.0	8.6	6.7	6.8	5.2	5.4
50 Yemen Arab Rep.	..	7.9	..	5.1	..	11.7	..	12.2	..	9.8
51 Congo, People's Rep.	2.7	3.5	1.0	(.)	7.0	11.4	6.8	2.3	2.1	0.7
52 Nigeria	3.1	6.2	-0.4	-1.5	16.0	10.3	9.3	13.4	0.2	8.6
53 Papua New Guinea	6.5	2.6	..	..	..	..	..	..	..	..
54 El Salvador	5.9	5.2	3.0	2.7	8.5	7.0	8.8	6.1	6.5	5.5
55 Morocco	4.2	6.4	4.7	0.1	4.0	7.9	3.8	6.6	4.0	7.6
56 Peru	5.4	3.1	1.9	0.7	5.5	4.3	7.2	4.3	6.8	3.2
57 Ivory Coast	8.0	6.8	4.2	3.9	11.5	10.0	11.6	7.5	9.7	7.2
58 Nicaragua	7.2	5.8	6.7	5.4	11.0	7.3	11.1	6.3	5.7	5.0
59 Colombia	5.1	6.0	3.5	4.9	6.0	5.1	5.7	6.7	5.7	7.0
60 Paraguay	4.3	7.5	..	6.2	..	9.5	..	6.8	..	7.4
61 Ecuador	..	9.1	..	4.6	..	14.4	..	10.0	..	7.8
62 Dominican Rep.	4.5	7.4	2.1	3.3	6.0	10.1	5.0	7.4	5.0	7.5
63 Guatemala	5.6	6.0	4.3	5.3	7.8	7.6	8.2	6.1	5.5	5.8
64 Syrian Arab Rep.	5.7	9.6	4.4	7.2	6.3	11.6	5.6	13.6	6.2	9.5
65 Tunisia	4.6	7.9	2.0	5.6	8.7	8.1	7.6	11.0	4.2	8.7
66 Jordan	..	7.0	..	..	..	..	..	..	..	..

Average annual growth rate (percent)

	GDP		Agriculture		Industry		Manufacturing		Services	
	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b
67 Malaysia	6.5	7.8	..	5.0	..	9.6	..	12.3	..	8.4
68 Jamaica	4.6	-0.8	1.5	1.4	5.6	-2.7	5.6	-0.9	4.3	0.3
69 Lebanon	4.9	..	6.3	..	4.5	..	5.0	..	4.8	..
70 Korea, Rep. of	8.5	9.7	4.5	4.0	17.2	16.5	17.2	18.3	8.4	8.7
71 Turkey	6.0	7.1	2.5	3.9	9.6	8.8	10.9	8.7	6.9	7.9
72 Algeria	4.6	5.3	0.4	0.2	12.9	5.9	7.7	6.9	-3.0	5.5
73 Mexico	7.2	5.0	3.8	2.1	9.1	6.2	9.4	6.2	7.0	4.8
74 Panama	7.8	3.4	5.7	2.4	10.1	0.7	10.5	-0.5	7.6	4.8
75 Taiwan	9.2	8.0	3.4	1.6	16.4	12.9	17.3	13.2	7.8	4.1
76 Chile	4.5	0.8	2.6	2.7	5.0	-0.8	5.5	-2.4	4.5	1.7
77 South Africa	6.4	3.6	..	..	..	..	..	..	..	..
78 Costa Rica	6.5	6.0	5.7	2.5	9.4	9.7	10.6	8.8	5.7	5.7
79 Brazil	5.3	9.2	..	5.3	..	10.1	..	9.5	..	9.2
80 Uruguay	1.2	1.9	1.9	0.1	1.1	3.5	1.5	3.2	1.0	1.5
81 Argentina	4.2	2.3	2.3	2.3	6.0	2.2	5.7	2.0	3.3	2.5
82 Portugal	6.2	4.8	1.3	-1.9	8.8	4.6	8.9	4.6	5.9	7.1
83 Yugoslavia	5.8	5.6	3.3	3.3	6.3	8.0	5.7	9.3	6.9	4.0
84 Trinidad and Tobago	3.9	3.4	..	-0.1	..	2.8	..	-1.1	..	4.0
85 Venezuela	5.9	5.6	5.7	3.5	4.5	2.7	6.2	6.4	7.2	7.9
86 Hong Kong	10.0	8.2	..	-0.2	..	6.2	..	5.6	..	10.1
87 Greece	6.9	5.0	3.5	1.9	9.4	5.3	10.2	6.6	7.1	5.7
88 Singapore	8.8	8.5	5.0	1.5	12.5	8.5	13.0	9.2	7.7	8.6
89 Spain	7.3	4.4	2.5	1.9	9.4	4.9	9.7	7.8	7.2	4.6
90 Israel	8.1	4.5	..	6.6	..	5.3	..	6.1	..	5.4
Industrialized countries	<i>5.1 w</i>	<i>3.2 w</i>	<i>1.2 m</i>	<i>1.0 m</i>	<i>6.1 m</i>	<i>3.4 m</i>	<i>6.2 m</i>	<i>3.3 m</i>	<i>4.8 m</i>	<i>3.7 m</i>
91 Ireland	4.2	3.4	0.9	..	6.1	..	..	..	4.3	..
92 Italy	5.3	2.8	2.8	0.5	6.2	2.7	7.2	3.3	5.1	3.3
93 New Zealand	3.9	2.2	..	..	..	..	..	..	..	..
94 United Kingdom	2.9	2.1	2.3	0.8	3.1	1.3	3.4	0.6	2.7	2.4
95 Finland	4.6	2.8	0.6	-1.9	6.3	3.2	6.2	2.8	5.3	3.9
96 Austria	4.5	3.8	1.2	2.1	4.9	3.4	4.8	3.6	4.5	4.3
97 Japan	10.5	5.0	4.0	1.1	10.9	6.0	11.0	6.2	11.7	5.1
98 Australia	4.1	3.8	2.7	1.7	4.6	3.9	5.6	3.9	4.0	3.9
99 France	5.7	3.7	1.8	-0.4	6.4	3.5	6.6	3.9	5.7	4.3
100 Netherlands	5.5	3.2	2.9	3.6	6.8	3.3	6.6	3.6	5.1	3.3
101 Belgium	4.8	3.3	-0.5	-1.1	6.0	3.4	6.2	3.3	4.6	3.3
102 Canada	5.6	4.4	2.5	2.7	6.8	3.7	6.7	3.8	5.5	4.8
103 Norway	4.9	4.7	0.1	2.3	5.5	5.2	5.3	1.9	5.0	4.7
104 Germany, Fed. Rep.	4.4	2.4	1.5	1.6	5.2	2.1	5.4	2.0	4.2	1.7
105 United States	4.3	3.0	0.3	0.9	5.2	2.7	5.3	2.9	4.3	3.4
106 Denmark	4.7	2.7	0.2	..	5.5	..	5.4	..	4.9	..
107 Sweden	4.4	1.6	0.6	-1.6	6.2	1.0	6.2	0.8	3.9	2.3
108 Switzerland	4.3	0.1	..	..	..	..	..	..	..	..
Capital-surplus oil exporters	<i>13.0 w</i>	<i>6.0 w</i>	<i>..</i>	<i>5.2 m</i>	<i>..</i>	<i>4.0 m</i>	<i>..</i>	<i>16.1 m</i>	<i>..</i>	<i>16.1 m</i>
109 Iraq	6.2	..	5.7	..	4.7	..	5.9	..	8.3	..
110 Iran	11.3	7.4	4.4	5.2	13.4	4.0	12.0	16.7	10.0	16.7
111 Libya	24.4	0.9	..	12.7	..	-2.7	..	18.4	..	16.7
112 Saudi Arabia	..	11.5	..	4.0	..	12.0	..	5.4	..	11.6
113 Kuwait	5.7	0.7	..	..	..	..	..	..	..	..
Centrally planned economies	<i>4.9 w</i>	<i>5.6 w</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>
114 China	5.0	6.0	..	..	..	..	..	..	..	..
115 Korea, Dem. Rep.	7.8	7.2	..	..	..	..	..	..	..	..
116 Albania	7.3	6.7	..	..	..	..	..	..	..	..
117 Cuba	1.1	0.4	..	..	..	..	..	..	..	..
118 Mongolia	2.8	4.5	..	..	..	..	..	..	..	..
119 Romania	9.0	10.6	..	..	..	..	..	..	..	..
120 Bulgaria	5.9	6.3	..	..	..	..	..	..	..	..
121 Hungary	3.8	5.4	..	..	..	..	..	..	..	..
122 Poland	4.3	7.0	..	..	..	..	..	..	..	..
123 USSR	5.2	5.3	..	..	..	..	..	..	..	..
124 Czechoslovakia	3.1	4.9	..	..	..	..	..	..	..	..
125 German Dem. Rep.	3.1	4.7	..	..	..	..	..	..	..	..

a. Figures in italics are for 1961-70, not 1960-70.

b. Figures in italics are for 1970-77, not 1970-78.

Table 3. Structure of Production

	Distribution of gross domestic product (percent)							
	Agriculture		Industry		(Manufacturing ^a)		Services	
	1960 ^b	1978 ^c	1960 ^b	1978 ^c	(1960 ^b)	(1978 ^c)	1960 ^b	1978 ^c
Low-income countries	50 <i>w</i>	38 <i>w</i>	17 <i>w</i>	24 <i>w</i>	11 <i>w</i>	13 <i>w</i>	33 <i>w</i>	38 <i>w</i>
1 Kampuchea, Dem.	..	..	..	..	..	..	..	..
2 Bangladesh	61	57	8	13	6	8	31	30
3 Lao PDR	..	60	..	14	..	4	..	26
4 Bhutan	..	..	..	..	..	..	..	..
5 Ethiopia	65	54	12	13	6	9	23	33
6 Mali	55	37	10	18	5	12	35	45
7 Nepal	..	62	..	12	..	10	..	26
8 Somalia	67	60	13	11	3	7	20	29
9 Burundi	..	56	..	15	..	9	..	29
10 Chad	55	52	12	13	5	8	33	35
11 Mozambique	55	45	9	16	8	9	36	39
12 Burma	33	46	12	13	8	10	55	41
13 Upper Volta	62	38	14	20	8	13	24	42
14 Viet Nam	..	..	..	..	..	..	..	..
15 India	50	40	20	26	14	17	30	34
16 Malawi	58	43	11	19	6	12	31	38
17 Rwanda	81	46	7	22	1	15	12	32
18 Sri Lanka	34	35	22	31	17	23	44	34
19 Guinea	56	32	36	41	..	4	8	27
20 Sierra Leone	..	39	..	22	..	6	..	39
21 Zaire	30	27	27	20	13	7	43	53
22 Niger	69	43	9	27	4	10	22	30
23 Benin	55	31	8	13	3	9	37	56
24 Pakistan	46	32	16	24	12	16	38	44
25 Tanzania	57	51	11	13	5	9	32	36
26 Afghanistan	..	..	..	..	..	..	..	..
27 Central African Rep.	51	36	10	18	4	9	39	46
28 Madagascar	37	38	10	19	4	14	53	43
29 Haiti	..	..	..	..	..	..	..	..
30 Mauritania	59	26	24	37	3	11	17	37
31 Lesotho	..	36	..	15	..	2	..	49
32 Uganda	52	57	13	7	9	6	35	36
33 Angola	50	50	8	21	4	3	42	29
34 Sudan	58	43	15	12	5	6	27	45
35 Togo	55	26	16	20	8	9	29	54
36 Kenya	38	41	18	19	9	12	44	40
37 Senegal	24	26	17	25	12	19	59	49
38 Indonesia	54	31	14	33	8	9	32	36
Middle-income countries	22 <i>w</i>	16 <i>w</i>	31 <i>w</i>	34 <i>w</i>	22 <i>w</i>	25 <i>w</i>	47 <i>w</i>	50 <i>w</i>
39 Egypt	30	29	24	30	20	25	46	41
40 Ghana	41	38	19	18	10	9	40	44
41 Yemen, PDR	..	..	..	..	..	..	..	..
42 Cameroon	..	32	..	16	..	9	..	52
43 Liberia	40	35	37	28	..	6	23	37
44 Honduras	37	32	19	26	13	17	44	42
45 Zambia	11	17	63	39	4	17	26	44
46 Zimbabwe	18	20	35	35	17	20	47	45
47 Thailand	40	27	19	27	13	18	41	46
48 Bolivia	26	17	25	28	15	13	49	55
49 Philippines	26	27	28	35	20	25	46	38
50 Yemen Arab Rep.	..	35	..	14	..	6	..	51
51 Congo, People's Rep.	23	13	17	33	10	16	60	54
52 Nigeria	63	34	11	43	5	9	26	23
53 Papua New Guinea	49	33	13	26	3	8	38	41
54 El Salvador	32	29	19	21	15	15	49	50
55 Morocco	23	18	27	32	16	17	50	50
56 Peru	26	14	29	36	17	..	45	50
57 Ivory Coast	43	21	14	23	7	13	43	56
58 Nicaragua	24	23	21	26	16	20	55	51
59 Colombia	34	31	26	27	17	20	40	42
60 Paraguay	36	32	20	24	17	17	44	44
61 Ecuador	33	21	19	35	14	17	48	44
62 Dominican Rep.	27	21	23	29	17	19	50	50
63 Guatemala	..	..	..	..	..	..	..	..
64 Syrian Arab Rep.	..	20	..	28	..	21	..	52
65 Tunisia	24	18	18	30	8	12	58	52
66 Jordan	..	11	..	29	..	16	..	60

Distribution of gross domestic product (percent)

	Agriculture		Industry		(Manufacturing ^a)		Services	
	1960 ^b	1978 ^c	1960 ^b	1978 ^c	(1960 ^b	1978 ^c)	1960 ^b	1978 ^c
67 Malaysia	37	25	18	32	9	17	45	43
68 Jamaica	10	9	36	39	15	17	54	52
69 Lebanon	12	..	20	..	13	..	68	..
70 Korea, Rep. of	40	24	19	36	12	24	41	40
71 Turkey	41	27	21	28	13	18	38	45
72 Algeria	21	8	33	56	10	12	46	36
73 Mexico	16	11	29	37	23	28	55	52
74 Panama	23	..	21	..	13	..	56	..
75 Taiwan	28	10	29	48	22	38	43	42
76 Chile	11	10	38	29	23	20	51	61
77 South Africa	12	8	40	45	21	22	48	47
78 Costa Rica	26	22	20	27	14	20	54	51
79 Brazil	16	11	35	37	26	28	49	52
80 Uruguay	19	14	28	32	21	26	53	54
81 Argentina	17	13	38	45	31	37	45	42
82 Portugal	25	13	36	46	29	36	39	41
83 Yugoslavia	24	16	45	45	36	..	31	39
84 Trinidad and Tobago	8	3	46	62	24	14	46	35
85 Venezuela	6	6	22	46	..	16	72	48
86 Hong Kong	4	2	34	31	25	25	62	67
87 Greece	23	17	26	31	16	19	51	52
88 Singapore	4	2	18	35	12	26	78	63
89 Spain	21	9	39	38	27	30	40	53
90 Israel	11	7	32	37	23	26	57	56
Industrialized countries	<i>6 w</i>	<i>4 w</i>	<i>40 w</i>	<i>37 w</i>	<i>30 w</i>	<i>27 w</i>	<i>54 w</i>	<i>59 w</i>
91 Ireland	22	..	26	..	..	..	52	..
92 Italy	13	7	41	42	31	..	46	51
93 New Zealand	..	10	..	31	..	21	..	59
94 United Kingdom	4	2	43	36	32	25	53	62
95 Finland	18	8	35	35	24	25	47	57
96 Austria	11	5	49	42	38	29	40	53
97 Japan	13	5	45	40	34	29	42	55
98 Australia	12	5	37	32	26	19	51	63
99 France	10	5	38	37	29	27	52	58
100 Netherlands	9	4	46	34	34	..	45	62
101 Belgium	6	2	41	37	30	26	53	61
102 Canada	6	4	34	31	23	19	60	65
103 Norway	9	5	33	36	21	17	58	59
104 Germany, Fed. Rep.	6	3	53	48	40	38	41	49
105 United States	4	3	38	34	29	24	58	63
106 Denmark	11	..	32	..	22	..	57	..
107 Sweden	7	4	40	33	27	24	53	63
108 Switzerland	..	..	..	..	..	..	..	..
Capital-surplus oil exporters	..	<i>5 w</i>	..	<i>65 w</i>	..	<i>8 w</i>	..	<i>30 w</i>
109 Iraq	17	..	52	..	10	..	31	..
110 Iran	29	9	33	54	11	12	38	37
111 Libya	..	2	..	71	..	3	..	27
112 Saudi Arabia	..	1	..	76	..	5	..	23
113 Kuwait	..	(.)	..	72	..	7	..	28
Centrally planned economies	..	..	..	..	..	..	..	..
114 China	..	..	..	..	..	..	..	..
115 Korea, Dem. Rep.	..	..	..	..	..	..	..	..
116 Albania	..	..	..	..	..	..	..	..
117 Cuba	..	..	..	..	..	..	..	..
118 Mongolia	..	..	..	..	..	..	..	..
119 Romania	..	..	..	..	..	..	..	..
120 Bulgaria	32	18	53	64	46	..	15	18
121 Hungary	24	15	69	59	59	..	7	26
122 Poland	26	16	57	64	47	..	17	20
123 USSR	21	17	62	62	52	..	17	21
124 Czechoslovakia	16	9	73	72	63	..	11	19
125 German Dem. Rep.	..	10	..	69	..	..	..	21

a. Manufacturing is a part of the industrial sector, but its share in GDP is shown separately because it typically is the most dynamic part of the industrial sector.

b. Figures in italics are for 1961, not 1960.
c. Figures in italics are for 1977, not 1978.

Table 4. Growth of Consumption and Investment

	Average annual growth rate (percent)					
	Public consumption		Private consumption		Gross domestic investment	
	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b
Low-income countries	4.5 m	3.7 m	3.9 m	3.1 m	4.6 m	3.6 m
1 Kampuchea, Dem.	2.6	.. ^c	3.2	..	0.3	..
2 Bangladesh	.. ^c	.. ^c	3.4	3.1	11.1	-1.4
3 Lao PDR	..	..	..	..	..	..
4 Bhutan	..	..	..	..	..	..
5 Ethiopia	4.7	3.7	4.7	3.7	5.7	-1.6
6 Mali	6.2	3.6	2.8	6.0	3.5	1.8
7 Nepal	..	..	..	..	..	..
8 Somalia	3.7	11.7	-0.5	2.7	4.3	8.5
9 Burundi	19.2	5.1	3.2	3.1	4.3	16.9
10 Chad	4.4	0.1	-0.7	1.8	2.3	3.7
11 Mozambique	6.8	-4.6	4.4	-2.7	8.3	-9.6
12 Burma	.. ^c	.. ^c	2.8	3.7	3.6	4.2
13 Upper Volta	..	3.8	..	0.8	..	1.8
14 Viet Nam	..	..	..	..	..	..
15 India	-1.7	4.2	4.2	3.0	5.6	6.1
16 Malawi	4.6	1.5	4.1	6.4	15.4	1.1
17 Rwanda	1.1	2.8	4.2	3.9	3.5	17.1
18 Sri Lanka	.. ^c	.. ^c	1.9	2.5	6.6	3.6
19 Guinea	..	1.7	..	2.9	..	2.0
20 Sierra Leone	..	13.4	..	0.5	..	5.6
21 Zaire	8.5	-0.2	3.9	-0.7	9.6	0.6
22 Niger	2.0	4.2	3.9	1.6	3.0	5.2
23 Benin	1.7	0.6	4.9	3.9	4.2	8.4
24 Pakistan	7.3	3.9	7.1	3.8	6.9	4.8
25 Tanzania	.. ^c	.. ^c	5.2	5.8	9.8	1.9
26 Afghanistan	.. ^c	9.8	2.5	3.8	-1.0	12.4
27 Central African Rep.	2.2	0.7	3.0	4.3	1.3	0.7
28 Madagascar	..	-1.4	..	-2.2	..	-2.5
29 Haiti	.. ^c	-0.1	1.0	4.5	1.7	11.9
30 Mauritania	1.0	17.7	17.2	4.4	-2.1	5.1
31 Lesotho	0.3	13.9	6.0	12.7	18.5	29.3
32 Uganda	5.9	1.6	5.6	1.6	9.8	-13.8
33 Angola	9.1	2.9	4.0	-8.8	9.7	-10.9
34 Sudan	12.1	.. ^c	-1.2	4.3	-1.3	9.8
35 Togo	6.7	14.6	7.6	1.9	11.1	16.0
36 Kenya	10.0	8.7	4.6	6.2	7.0	2.3
37 Senegal	-0.2	2.3	3.2	2.1	1.1	2.5
38 Indonesia	1.0	10.9	3.4	7.6	4.8	15.3
Middle-income countries	6.4 m	7.4 m	5.3 m	4.9 m	7.6 m	7.2 m
39 Egypt	10.3	5.0	5.4	6.1	3.1	23.3
40 Ghana	6.1	-0.3	2.0	1.7	-3.2	-8.3
41 Yemen, PDR	..	..	..	..	..	..
42 Cameroon	8.9	5.8	3.4	4.8	8.4	7.0
43 Liberia	5.6	8.3	1.8	3.3	-4.6	6.1
44 Honduras	4.6	8.1	4.6	4.2	11.0	4.9
45 Zambia	11.0	2.3	6.9	-2.7	10.6	-2.9
46 Zimbabwe	..	2.9	..	3.5	..	-0.8
47 Thailand	9.6	8.3	7.0	6.7	15.4	7.8
48 Bolivia	8.9	8.5	4.1	7.4	9.6	6.4
49 Philippines	5.0	9.4	4.7	4.3	8.2	11.1
50 Yemen Arab Rep.	..	..	..	..	..	..
51 Congo, People's Rep.	5.4	7.0	-0.3	4.3	2.9	-0.1
52 Nigeria	10.0	26.9	(.)	4.0	7.4	23.3
53 Papua New Guinea	6.5	-1.1	6.9	2.0	21.2	-10.4
54 El Salvador	6.4	6.9	6.1	5.7	3.5	11.1
55 Morocco	4.5	13.8	4.0	4.4	8.0	17.4
56 Peru	8.8	5.8	6.7	4.1	2.4	4.2
57 Ivory Coast	11.8	7.5	8.0	8.2	12.7	14.0
58 Nicaragua	3.6	12.7	6.8	4.9	10.7	8.6
59 Colombia	5.5	4.8	5.5	5.9	4.5	6.3
60 Paraguay	6.9	3.8	4.5	6.9	5.8	20.6
61 Ecuador	..	12.4	..	8.4	..	10.2
62 Dominican Rep.	1.9	-0.9	6.3	7.6	11.4	13.2
63 Guatemala	4.7	5.2	4.7	5.4	7.9	11.3
64 Syrian Arab Rep.	..	13.0	..	10.4	..	18.2
65 Tunisia	5.5	8.8	3.0	8.8	4.5	11.9
66 Jordan	..	..	..	..	..	..

Average annual growth rate (percent)

	Public consumption		Private consumption		Gross domestic investment	
	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b	1960-70 ^a	1970-78 ^b
67 Malaysia	7.4	9.6	4.2	6.4	7.2	10.2
68 Jamaica	8.6	6.0	3.2	0.5	7.8	-10.4
69 Lebanon	5.9	..	4.4	..	6.2	..
70 Korea, Rep. of	5.5	8.7	7.0	7.5	23.6	13.7
71 Turkey	6.7	8.8	5.1	6.6	8.8	10.2
72 Algeria	1.7	8.2	4.6	11.3	1.9	11.7
73 Mexico	9.4	10.2	6.6	3.8	9.6	7.1
74 Panama	7.8	6.9	6.7	1.4	12.4	0.9
75 Taiwan	4.5	5.4	8.3	6.8	16.2	8.2
76 Chile	4.7	2.9	4.8	-0.4	3.7	-2.7
77 South Africa	7.1	..	6.2	..	9.5	..
78 Costa Rica	8.0	7.4	6.0	4.9	7.1	9.3
79 Brazil	3.5	8.6	5.1	9.0	7.0	10.7
80 Uruguay	4.4	3.2	0.7	-1.2	-1.8	4.8
81 Argentina	1.0	-3.1	4.1	2.4	4.1	1.2
82 Portugal	7.7	9.0	5.5	4.8	7.7	0.7
83 Yugoslavia	0.6	4.5	9.5	6.1	4.7	7.2
84 Trinidad and Tobago	6.2	10.4	4.3	-0.3	-2.8	5.3
85 Venezuela	6.3	9.1	4.9	7.1	7.3	11.8
86 Hong Kong	8.7	9.2	8.9	8.8	7.4	10.2
87 Greece	6.6	7.7	7.1	4.6	10.4	1.9
88 Singapore	12.6	6.4	5.4	7.1	20.5	5.5
89 Spain	5.5	6.2	7.0	4.2	10.5	3.0
90 Israel	13.8	5.3	7.4	5.7	5.7	0.7
Industrialized countries	4.8 <i>m</i>	3.8 <i>m</i>	4.3 <i>m</i>	3.5 <i>m</i>	5.6 <i>m</i>	1.5 <i>m</i>
91 Ireland	3.9	6.3	3.7	2.7	8.8	1.7
92 Italy	3.9	c	6.1	2.7	3.8	-0.4
93 New Zealand	..	..	..	..	..	..
94 United Kingdom	2.2	2.9	2.3	1.3	5.0	1.5
95 Finland	5.7	5.9	4.3	2.9	4.3	-1.5
96 Austria	2.9	4.0	4.4	4.2	5.6	4.1
97 Japan	6.4	5.0	9.0	5.3	14.0	2.5
98 Australia	6.8	5.8	2.7	3.8	6.2	0.7
99 France	3.4	3.4	5.5	4.5	7.3	1.7
100 Netherlands	3.1	2.7	6.1	3.8	6.8	-0.1
101 Belgium	5.7	4.7	3.8	4.0	6.0	1.9
102 Canada	6.2	3.3	4.9	5.6	5.8	4.7
103 Norway	6.4	5.6	4.1	4.0	5.1	4.1
104 Germany, Fed. Rep.	4.1	3.9	4.6	2.9	4.1	-0.2
105 United States	4.1	1.7	4.4	3.5	4.8	1.6
106 Denmark	6.0	3.6	4.3	3.0	6.7	0.2
107 Sweden	5.4	3.1	3.8	2.0	5.0	-1.3
108 Switzerland	4.8	2.0	4.3	1.4	4.1	-4.6
Capital-surplus oil exporters	..	..	..	..	..	..
109 Iraq	8.1	..	4.9	..	3.0	..
110 Iran	16.0	20.4	10.0	10.0	12.2	22.0
111 Libya	..	22.6	..	21.2	..	10.9
112 Saudi Arabia	..	c	..	16.5	..	51.0
113 Kuwait	..	..	..	..	..	..
Centrally planned economies	..	..	..	..	..	..
114 China	..	..	..	..	..	..
115 Korea, Dem. Rep.	..	..	..	..	..	..
116 Albania	..	..	..	..	..	..
117 Cuba	..	..	..	..	..	..
118 Mongolia	..	..	..	..	..	..
119 Romania	..	..	..	..	..	..
120 Bulgaria	..	..	..	..	..	..
121 Hungary	..	..	..	..	..	..
122 Poland	..	..	..	..	..	..
123 USSR	..	..	..	..	..	..
124 Czechoslovakia	..	..	..	..	..	..
125 German Dem. Rep.	..	..	..	..	..	..

a. Figures in italics are for 1961-70, not 1960-70.
b. Figures in italics are for 1970-77, not 1970-78.

c. Separate figures are not available for public consumption, which is therefore included in private consumption.

Table 5. Structure of Demand

Distribution of gross domestic product (percent)

	Public consumption		Private consumption		Gross domestic investment		Gross domestic saving		Exports of goods and nonfactor services		Resource balance	
	1960a 1978b		1960a 1978b		1960a 1978b		1960a 1978b		1960a 1978b		1960a 1978b	
	9 w	12 w	80 w	73 w	14 w	21 w	11 w	15 w	10 w	12 w	-3 w	-6 w
Low-income countries												
1 Kampuchea, Dem.	19	..	69	..	20	..	12	..	14	..	-8	..
2 Bangladesh	6	c	86	100	7	12	8	(.)	10	8	1	-12
3 Lao PDR	..	21	..	58	..	40	..	21	..	2	..	-19
4 Bhutan	..	..	..	..	..	..	..	..	..	..	..	..
5 Ethiopia	8	13	81	81	12	9	11	6	9	12	-1	-3
6 Mali	12	19	79	76	14	17	9	5	12	21	-5	-12
7 Nepal	..	c	..	98	..	9	..	2	..	5	..	-7
8 Somalia	8	19	89	79	10	16	3	2	11	12	-7	-14
9 Burundi	3	14	92	81	6	14	5	5	13	11	-1	-9
10 Chad	13	18	82	89	11	17	5	-7	23	27	-6	-24
11 Mozambique	11	15	81	86	10	10	8	-1	14	13	-2	-11
12 Burma	c	c	89	87	12	20	11	13	20	7	-1	-7
13 Upper Volta	10	13	94	90	10	25	-4	-3	9	15	-14	-28
14 Viet Nam	..	..	..	..	..	..	..	..	..	..	..	..
15 India	7	10	79	70	17	24	14	20	5	..	-3	-4
16 Malawi	16	13	88	71	10	32	-4	16	21	21	-14	-16
17 Rwanda	10	9	82	87	6	10	8	4	12	20	2	-6
18 Sri Lanka	13	10	76	73	15	22	11	17	46	38	-4	-5
19 Guinea	14	16	80	68	5	15	6	16	23	28	1	1
20 Sierra Leone	..	19	..	72	..	17	..	9	..	22	..	-8
21 Zaire	18	21	61	67	12	19	21	12	55	26	9	-7
22 Niger	9	11	79	77	13	19	12	12	9	23	-1	-7
23 Benin	16	14	75	91	15	22	9	-5	12	22	-6	-27
24 Pakistan	11	11	84	82	12	18	5	7	8	10	-7	-11
25 Tanzania	9	14	72	79	14	20	19	7	31	15	5	-13
26 Afghanistan	c	c	87	90	16	13	13	10	4	10	-3	-3
27 Central African Rep.	19	20	72	72	20	20	9	8	23	18	-11	-12
28 Madagascar	20	16	75	63	11	16	5	21	12	..	-6	5
29 Haiti	c	8	93	83	9	18	7	9	20	22	-2	-9
30 Mauritania	24	38	79	55	37	52	-3	7	18	41	-40	-45
31 Lesotho	17	17	108	154	2	30	-25	-71	12	22	-27	-101
32 Uganda	9	c	75	98	11	4	16	2	26	4	5	-2
33 Angola	9	26	77	56	12	9	14	18	20	41	2	9
34 Sudan	6	14	85	84	9	16	9	2	12	15	(.)	-14
35 Togo	8	13	88	73	11	37	4	14	19	34	-7	-23
36 Kenya	11	19	72	63	20	28	17	18	31	27	-3	-10
37 Senegal	17	17	68	72	16	23	15	11	40	32	-1	-12
38 Indonesia	12	11	80	67	8	20	8	22	13	21	(.)	2
Middle-income countries												
39 Egypt	17	21	71	65	13	28	12	14	20	21	-1	-14
40 Ghana	10	13	73	81	24	5	17	6	28	10	-7	1
41 Yemen, PDR	..	29	..	80	..	47	..	-9	..	..	..	-56
42 Cameroon	14	10	72	69	11	24	14	21	29	26	3	-3
43 Liberia	7	15	58	67	28	22	35	18	39	55	7	-4
44 Honduras	11	13	77	67	14	27	12	20	22	38	-2	-7
45 Zambia	11	25	48	44	25	31	41	31	56	32	16	(.)
46 Zimbabwe	11	13	67	63	23	19	22	24	..	..	-1	5
47 Thailand	10	11	76	67	16	27	14	22	17	21	-2	-5
48 Bolivia	7	13	86	74	14	21	7	13	13	17	-7	-8
49 Philippines	8	10	76	66	16	30	16	24	11	19	(.)	-6
50 Yemen Arab Rep.	..	12	..	96	..	35	..	-8	..	3	..	-43
51 Congo, People's Rep.	23	31	98	61	45	20	-21	8	21	..	-66	-12
52 Nigeria	6	15	87	57	13	30	7	28	15	37	-6	-2
53 Papua New Guinea	28	28	70	56	13	19	2	16	17	45	-11	-3
54 El Salvador	10	13	79	75	16	20	11	12	20	30	-5	-8
55 Morocco	12	21	77	68	10	24	11	11	24	18	1	-13
56 Peru	8	13	68	70	22	15	24	17	24	22	2	2
57 Ivory Coast	10	14	73	56	15	31	17	30	37	38	2	-1
58 Nicaragua	9	8	79	73	15	25	12	19	24	33	-3	-6
59 Colombia	6	7	73	68	21	24	21	25	16	16	(.)	1
60 Paraguay	8	7	76	73	17	27	16	20	18	13	-1	-7
61 Ecuador	10	14	74	60	14	26	16	26	17	24	2	(.)
62 Dominican Rep.	13	5	68	77	12	23	19	18	24	27	7	-5
63 Guatemala	8	7	84	76	10	22	8	17	13	22	-2	-5
64 Syrian Arab Rep.	..	21	..	65	..	32	..	14	..	18	..	-18
65 Tunisia	17	16	76	64	17	30	7	20	20	31	-10	-10
66 Jordan	..	32	..	87	..	40	..	-19	..	47	..	-59

Distribution of gross domestic product (percent)

	Public consumption		Private consumption		Gross domestic investment		Gross domestic saving		Exports of goods and nonfactor services		Resource balance	
	1960a	1978b	1960a	1978b	1960a	1978b	1960a	1978b	1960a	1978b	1960a	1978b
67 Malaysia	11	16	62	53	14	25	27	31	54	51	13	6
68 Jamaica	7	20	67	64	30	15	26	16	34	40	-4	1
69 Lebanon	10	..	85	..	16	..	5	..	27	..	-11	..
70 Korea, Rep. of	15	12	84	60	11	32	1	28	3	34	-10	-4
71 Turkey	11	13	76	70	16	21	13	17	3	6	-3	-4
72 Algeria	16	15	50	48	42	51	34	37	28	27	-8	-14
73 Mexico	6	11	76	64	20	25	18	25	10	11	-2	(.)
74 Panama	11	18	78	60	16	28	11	22	31	40	-5	-6
75 Taiwan	19	17	68	50	20	26	13	33	11	59	-7	7
76 Chile	11	12	75	81	17	11	14	7	14	21	-3	-4
77 South Africa	9	14	64	56	22	24	27	30	30	33	5	6
78 Costa Rica	10	c	77	85	18	25	13	15	21	29	-5	-10
79 Brazil	12	10	67	69	22	23	21	21	5	7	-1	-2
80 Uruguay	9	3	79	73	18	14	12	14	14	20	-6	(.)
81 Argentina	9	29	71	41	22	25	20	30	10	14	-2	5
82 Portugal	11	14	77	74	19	23	12	12	17	20	-7	-11
83 Yugoslavia	19	17	49	55	37	33	32	28	14	17	-5	-5
84 Trinidad and Tobago	9	14	61	53	28	26	30	33	37	47	2	7
85 Venezuela	14	15	53	51	21	40	33	34	32	29	12	-6
86 Hong Kong	7	7	92	78	19	26	1	15	79	98	-18	-11
87 Greece	12	16	77	64	19	27	11	20	9	17	-8	-7
88 Singapore	8	11	89	62	11	36	3	27	163	164	-8	-9
89 Spain	7	11	70	68	21	20	23	21	10	16	2	1
90 Israel	18	36	68	58	27	24	14	6	14	44	-13	-18
Industrialized countries	<i>15 w</i>	<i>18 w</i>	<i>63 w</i>	<i>60 w</i>	<i>21 w</i>	<i>22 w</i>	<i>22 w</i>	<i>22 w</i>	<i>12 w</i>	<i>18 w</i>	<i>1 w</i>	<i>(.) w</i>
91 Ireland	12	19	77	64	16	27	11	17	31	54	-5	-10
92 Italy	12	16	64	63	24	20	24	21	15	25	(.)	1
93 New Zealand	13	16	65	61	24	22	22	23	23	27	-2	1
94 United Kingdom	17	20	66	59	19	19	17	21	21	30	-2	2
95 Finland	13	19	58	56	30	21	29	25	23	31	-1	4
96 Austria	13	18	59	55	28	28	28	27	24	35	(.)	-1
97 Japan	9	10	57	58	34	31	34	32	11	11	(.)	1
98 Australia	10	16	65	60	29	23	25	24	15	16	-4	1
99 France	13	15	61	61	24	23	26	24	15	21	2	1
100 Netherlands	14	18	57	59	27	22	29	23	50	47	2	1
101 Belgium	13	18	69	62	19	21	18	20	33	51	-1	-1
102 Canada	14	20	65	57	23	23	21	23	18	26	-2	(.)
103 Norway	14	18	58	54	30	29	28	28	41	42	-2	-1
104 Germany, Fed. Rep.	14	20	57	55	27	22	29	25	19	25	2	3
105 United States	17	18	64	64	18	19	19	18	5	8	1	-1
106 Denmark	12	24	66	55	23	23	22	21	34	28	-1	-2
107 Sweden	16	29	60	53	25	18	24	18	23	29	-1	(.)
108 Switzerland	9	13	62	63	29	22	29	24	29	35	(.)	2
Capital-surplus oil exporters	..	<i>21 w</i>	..	<i>32 w</i>	..	<i>31 w</i>	..	<i>47 w</i>	..	<i>48 w</i>	..	<i>16 w</i>
109 Iraq	18	..	48	..	20	..	34	..	42	..	14	..
110 Iran	10	20	69	41	17	33	21	39	19	34	4	6
111 Libya	..	27	..	28	..	25	..	45	..	56	..	20
112 Saudi Arabia	..	21	..	23	..	30	..	56	..	62	..	26
113 Kuwait	..	21	..	24	..	18	..	55	..	71	..	37
Centrally planned economies	..	..	..	..	..	..	..	..	..	..	..	..
114 China	..	..	..	..	..	..	..	..	..	..	..	..
115 Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..
116 Albania	..	..	..	..	..	..	..	..	..	..	..	..
117 Cuba	..	..	..	..	..	..	..	..	..	..	..	..
118 Mongolia	..	..	..	..	..	..	..	..	..	..	..	..
119 Romania	..	..	..	..	..	..	..	..	..	..	..	..
120 Bulgaria	..	..	..	..	..	..	..	..	..	..	..	..
121 Hungary	7	8	72	64	24	37	21	28	..	..	-3	-9
122 Poland	8	12	68	59	24	32	24	29	..	..	(.)	-3
123 USSR	2	c	70	73	26	26	28	27	..	..	2	1
124 Czechoslovakia	6	7	75	68	17	25	19	25	..	..	2	(.)
125 German Dem. Rep.	..	..	..	..	..	..	..	..	..	..	..	..

a. Figures in italics are for 1961, not 1960.

b. Figures in italics are for 1977, not 1978.

c. Separate figures are not available for public consumption which is therefore included in private consumption.

Table 6. Industrialization

	Distribution of value added (percent)					Value added in manufacturing (millions of 1970 dollars)		Gross manufacturing output per capita (1970 dollars)	
	Food and agriculture	Textiles and clothing	Machinery and transport equipment	Chemicals	Other manufacturing	1970	1976 ^a	1970	1976 ^a
	1976 ^a	1976 ^a	1976 ^a	1976 ^a	1976 ^a				
Low-income countries									
1 Kampuchea, Dem.	..	..	..	..	..	..	..	..	..
2 Bangladesh	..	..	..	..	..	324	320	11	13
3 Lao PDR	..	..	..	..	..	..	..	..	..
4 Bhutan	..	..	..	..	..	..	..	..	..
5 Ethiopia	..	..	..	..	..	149	171	12	13
6 Mali	..	..	..	..	..	26	..	..	..
7 Nepal	..	..	..	..	..	..	..	..	..
8 Somalia	..	..	..	..	..	11	17	6	12
9 Burundi	..	..	..	..	..	19	24	..	..
10 Chad	..	..	..	..	..	18	27	..	..
11 Mozambique	68	13	..	4	15	104	82	28	..
12 Burma	40	20	..	..	40	225	271	..	..
13 Upper Volta	..	..	..	..	..	31	37	..	..
14 Viet Nam	..	..	..	..	..	..	..	..	..
15 India	15	29	13	12	31	7,093	8,973	51	62
16 Malawi	77	7	..	..	16	38	53	29	50
17 Rwanda	..	..	..	..	..	6	3	4	..
18 Sri Lanka	17	23	..	9	51	321	346	..	..
19 Guinea	..	..	..	..	..	12	18	..	..
20 Sierra Leone	..	..	..	..	..	22	27	..	..
21 Zaire	59	10	5	4	22	155	170	..	..
22 Niger	..	..	..	..	..	40	..	..	..
23 Benin	44	38	..	..	18	19	45	..	..
24 Pakistan	46	35	..	9	10	1,462	1,757	..	..
25 Tanzania	..	..	..	..	..	116	156	27	..
26 Afghanistan	..	..	..	..	..	..	..	..	..
27 Central African Rep.	31	..	..	..	69	14	9	..	11
28 Madagascar	95	..	..	..	5	118	112	40	44
29 Haiti	65	15	..	1	19	..	..	..	..
30 Mauritania	..	..	..	..	..	18	228	..	..
31 Lesotho	..	..	..	..	..	2	2	..	..
32 Uganda	53	..	..	..	47	109	86	..	..
33 Angola	67	..	..	..	33	80	38	..	..
34 Sudan	41	36	3	11	9	252	368	51	..
35 Togo	..	..	..	..	..	24	..	28	..
36 Kenya	18	13	19	8	42	174	357	55	116
37 Senegal	58	15	..	13	14	141	190	..	98
38 Indonesia	41	16	..	..	43	854	1,671	28	40
Middle-income countries									
39 Egypt	17	34	11	13	25	1,326	1,882	146	..
40 Ghana	75	..	..	..	25	253	186	58	..
41 Yemen, PDR	..	..	..	..	..	..	..	..	..
42 Cameroon	65	..	..	..	35	119	170	..	..
43 Liberia	..	..	..	..	..	15	27	..	..
44 Honduras	51	16	1	3	29	91	126	..	130
45 Zambia	55	9	6	5	25	181	213	107	..
46 Zimbabwe	26	14	11	11	38	297	..	142	..
47 Thailand	45	17	8	15	15	1,048	2,101	134	..
48 Bolivia	35	22	5	4	34	151	222	94	134
49 Philippines	44	13	6	13	24	1,579	2,334	108	..
50 Yemen Arab Rep.	..	..	..	..	..	12	23	..	..
51 Congo, People's Rep.	68	..	..	..	32	32	40	60	..
52 Nigeria	92	..	..	..	8	529	1,122	17	42
53 Papua New Guinea	..	..	..	..	..	..	..	..	..
54 El Salvador	45	31	..	10	14	194	280	..	155
55 Morocco	41	14	6	7	32	599	879	..	..
56 Peru	31	10	12	16	31	982	1,448	177	198
57 Ivory Coast	..	..	..	..	..	200	292	..	140
58 Nicaragua	61	29	..	..	10	159	226	..	..
59 Colombia	33	18	10	12	27	1,143	1,746	127	172
60 Paraguay	48	16	4	4	28	99	136	..	..
61 Ecuador	33	16	9	4	38	271	452	119	176
62 Dominican Rep.	68	5	(.)	4	23	275	455	133	192
63 Guatemala	50	37	..	4	9	..	..	..	..
64 Syrian Arab Rep.	50	33	..	3	14	238	458	117	100
65 Tunisia	65	10	..	22	3	115	234	90	163
66 Jordan	..	..	..	..	..	..	..	..	..

	Distribution of value added (percent)					Value added in manufacturing (millions of 1970 dollars)		Gross manufacturing output per capita (1970 dollars)	
	Food and agriculture	Textiles and clothing	Machinery and transport equipment	Chemicals	Other manufacturing	1970	1976 ^a	1970	1976 ^a
	1976 ^a	1976 ^a	1976 ^a	1976 ^a	1976 ^a				
67 Malaysia	35	8	11	12	34	543	1,103	178	..
68 Jamaica	87	..	..	..	13	221	239	348	..
69 Lebanon	..	..	..	..	..	202	..	..	..
70 Korea, Rep. of	15	25	24	8	28	1,431	3,934	111	320
71 Turkey	55	23	..	..	22	1,930	3,294	106	217
72 Algeria	29	18	11	6	36	735	1,117	..	..
73 Mexico	21	13	19	14	33	8,636	12,174	..	..
74 Panama	44	7	3	3	43	166	186	276	386
75 Taiwan	..	..	..	..	..	1,873	4,278	..	..
76 Chile	18	8	7	4	63	2,175	1,828	388	293
77 South Africa	17	13	16	12	42	3,959	..	432	..
78 Costa Rica	42	12	6	10	30	180	292	..	..
79 Brazil	15	10	30	12	33	9,972	19,147	229	..
80 Uruguay	42	19	4	9	26	515	578	..	489
81 Argentina	17	13	24	13	33	6,777	8,248	..	..
82 Portugal	17	19	23	9	32	1,847	2,481	..	721
83 Yugoslavia	9	14	24	10	43	3,235	5,423	411	846
84 Trinidad and Tobago	54	..	..	3	43	184	169	..	218
85 Venezuela	29	12	11	6	42	1,827	2,719	..	423
86 Hong Kong	..	98	..	..	2	899	1,314	..	844
87 Greece	16	29	10	7	38	1,642	2,601	498	832
88 Singapore	7	5	49	7	32	388	707	764	1,247
89 Spain	27	10	20	11	32	9,339	15,739	868	1,523
90 Israel	11	17	26	7	39	1,101	..	833	..
Industrialized countries									
91 Ireland	31	16	12	11	30	1,186	..	..	..
92 Italy	13	14	27	11	35	29,059	35,586	1,251	1,578
93 New Zealand	26	15	12	5	42	..	..	..	..
94 United Kingdom	14	9	30	12	35	34,317	35,381	1,493	1,640
95 Finland	13	10	25	6	46	2,788	3,467	1,731	2,039
96 Austria	15	12	22	8	43	4,873	6,188	1,706	2,339
97 Japan	8	7	36	11	38	73,167	103,478	1,816	2,561
98 Australia	17	8	24	9	42	8,498	..	1,712	..
99 France	13	6	35	8	38	40,510	53,113	..	2,429
100 Netherlands	20	6	22	19	33	9,192	11,708	2,137	2,391
101 Belgium	18	10	29	9	34	8,226	10,636	..	..
102 Canada	14	8	26	8	44	16,802	21,341	1,947	2,496
103 Norway	14	5	25	6	50	2,442	2,882	1,606	2,312
104 Germany, Fed. Rep.	9	7	33	11	40	75,765	85,792	2,184	2,636
105 United States	12	8	31	12	37	252,100	292,900	2,586	3,126
106 Denmark	23	8	26	7	36	3,100	..	1,485	2,149
107 Sweden	9	5	33	6	47	8,516	9,530	2,319	2,538
108 Switzerland	11	8	38	15	28	..	..	..	..
Capital-surplus oil exporters									
109 Iraq	37	23	..	2	38	325	652	77	144
110 Iran	14	34	34	5	13	1,501	3,720	140	..
111 Libya	..	..	..	..	..	82	198	88	142
112 Saudi Arabia	..	..	..	..	..	372	486	..	..
113 Kuwait	..	..	..	..	..	106	..	199	..
Centrally planned economies									
114 China	..	..	..	..	..	..	..	..	..
115 Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..
116 Albania	..	..	..	..	..	..	..	..	..
117 Cuba	72	..	..	..	28	..	..	..	..
118 Mongolia	..	..	..	..	..	..	..	..	..
119 Romania	15	18	32	9	26	..	..	..	..
120 Bulgaria	25	15	27	5	28	..	..	..	..
121 Hungary	12	11	32	5	40	..	..	..	..
122 Poland	17	15	27	10	31	..	..	..	..
123 USSR	10	6	..	7	77	..	..	..	..
124 Czechoslovakia	7	11	37	7	38	..	..	..	..
125 German Dem. Rep.	11	12	36	11	30	..	..	..	..

a. Figures in italics are for 1975, not 1976.

Table 7. Energy

	Average annual growth rate (percent)				Energy consumption per capita (kilograms of coal equivalent)		Energy consumption per dollar of GDP (kilograms of coal equivalent)		Energy imports as percentage of merchandise exports	
	Energy production		Energy consumption		1960	1978	1960	1978 ^b	1960 ^c	1977 ^d
	1960-74 ^a	1974-78	1960-74	1974-78						
	1960-74 ^a	1974-78	1960-74	1974-78	1960	1978	1960	1978 ^b	1960 ^c	1977 ^d
Low-income countries	6.8 w	8.2 w	5.7 w	6.8 w	98 w	161 w	0.8 w	1.0 w	9 w	16 w
1 Kampuchea, Dem.	..	..	-0.1	5.9	31	4	..	..	9	..
2 Bangladesh	..	12.8	..	16.5	..	43	..	0.3	..	48
3 Lao PDR	..	-0.6	13.4	1.5	18	60	..	..	..	..
4 Bhutan	..	..	..	..	..	..	..	..	..	..
5 Ethiopia	14.1	1.8	14.7	-7.8	8	20	0.1	0.2	11	27
6 Mali	..	10.8	5.5	5.9	15	30	0.2	0.3	13	25
7 Nepal	27.2	4.6	12.3	0.9	5	11	(.)	0.1	..	..
8 Somalia	..	..	7.4	27.4	19	55	0.2	0.6	4	13
9 Burundi	..	23.4	..	3.1	..	12	..	0.1	..	7
10 Chad	..	..	7.2	5.0	10	22	0.1	0.2	23	27
11 Mozambique	3.2	29.9	5.7	4.4	114	151	0.4	0.5	11	28
12 Burma	4.8	11.2	3.6	4.9	55	64	0.5	0.5	4	12
13 Upper Volta	..	..	6.5	10.9	5	25	0.1	0.3	38	19
14 Viet Nam	..	12.3	..	-9.0	..	125	..	..	..	..
15 India	4.4	5.5	4.9	5.1	108	176	1.0	1.2	11	26
16 Malawi	..	9.4	..	2.8	..	52	..	0.3	..	15
17 Rwanda	..	2.8	..	11.2	..	17	..	0.1	..	11
18 Sri Lanka	10.4	3.5	6.2	0.8	107	109	0.7	0.5	8	22
19 Guinea	16.1	(.)	3.2	1.8	65	91	0.3	0.4	7	..
20 Sierra Leone	..	..	10.3	-0.6	31	100	0.3	0.5	11	10
21 Zaire	3.0	53.5	4.3	2.0	87	69	0.9	1.0	3	16
22 Niger	..	..	14.3	7.5	5	38	(.)	0.2	6	..
23 Benin	..	..	8.8	-4.5	39	56	0.2	0.3	16	43
24 Pakistan	10.0	2.4	5.9	1.0	61	172	1.3	1.0	17	33
25 Tanzania	10.6	13.4	10.4	0.5	41	65	0.3	0.4	..	22
26 Afghanistan	39.7	-4.2	9.4	1.3	15	47	0.2	0.4	12	12
27 Central African Rep.	14.2	4.7	7.4	8.7	37	44	0.1	0.2	12	1
28 Madagascar	6.8	3.5	8.9	2.3	38	78	0.2	0.4	9	22
29 Haiti	..	17.4	2.8	11.1	36	57	0.2	0.3	..	17
30 Mauritania	..	..	16.8	4.3	18	203	0.1	0.7	39	6
31 Lesotho	..	..	..	..	..	..	..	..	..	..
32 Uganda	5.2	-4.1	9.5	-0.3	30	48	0.1	0.2	5	4
33 Angola	35.8	0.2	8.8	1.9	86	192	0.2	0.5	6	2
34 Sudan	..	16.8	13.2	1.4	52	172	0.2	0.7	8	26
35 Togo	..	..	12.5	12.3	23	96	0.1	0.3	10	1
36 Kenya	9.3	10.5	4.2	-0.6	143	139	0.8	0.5	18	24
37 Senegal	..	..	4.6	4.7	121	181	0.3	0.5	8	15
38 Indonesia	8.5	11.3	4.2	21.4	129	278	0.8	1.1	3	7
Middle-income countries	6.0 w	1.7 w	7.9 w	6.2 w	395 w	903 w	0.7 w	1.1 w	11 w	20 w
39 Egypt	9.8	31.6	2.7	11.7	298	463	1.7	1.4	12	6
40 Ghana	..	2.7	6.6	0.6	106	165	0.2	0.4	7	18
41 Yemen, PDR	..	..	-13.6	11.2	299	523	..	2.6	..	..
42 Cameroon	1.1	3.1	4.0	10.2	55	119	0.2	0.3	7	10
43 Liberia	31.8	-1.3	19.3	-0.6	86	395	0.2	0.9	3	12
44 Honduras	29.5	5.6	8.9	8.9	155	284	0.5	0.7	10	14
45 Zambia	..	4.4	..	1.8	..	474	..	1.2	..	5
46 Zimbabwe	1.9	-3.9	..	(.)	..	579	..	1.2	..	..
47 Thailand	28.0	11.4	16.9	7.6	64	327	0.3	0.8	12	29
48 Bolivia	17.2	-2.0	7.0	11.3	147	368	0.5	0.8	4	1
49 Philippines	5.6	12.4	9.6	6.3	147	339	0.6	0.8	9	33
50 Yemen Arab Rep.	..	..	12.7	20.1	7	53	..	0.3	..	..
51 Congo, People's Rep.	15.7	-9.3	5.2	-0.7	119	175	0.3	0.3	25	2
52 Nigeria	37.4	-2.9	10.2	8.1	34	106	0.1	0.2	7	2
53 Papua New Guinea	..	16.2	..	3.0	51	292	0.2	0.6	7	13
54 El Salvador	5.1	20.9	7.7	6.3	127	265	0.4	0.6	6	10
55 Morocco	1.9	4.4	7.7	6.6	148	285	0.4	0.5	9	28
56 Peru	3.5	13.4	6.2	2.4	445	649	0.8	0.8	4	23
57 Ivory Coast	9.7	-3.8	15.5	7.3	76	357	0.2	0.4	5	9
58 Nicaragua	26.6	-9.5	10.0	8.5	174	517	0.4	0.7	12	17
59 Colombia	3.4	-1.8	6.3	4.3	491	700	1.3	1.2	3	6
60 Paraguay	..	7.0	8.5	8.8	87	200	0.2	0.3	..	30
61 Ecuador	19.0	3.1	8.3	10.2	201	505	..	0.8	2	1
62 Dominican Rep.	4.4	8.4	14.6	-7.0	157	464	0.3	0.6	..	22
63 Guatemala	9.9	20.9	6.1	4.9	174	260	0.4	0.4	12	15
64 Syrian Arab Rep.	86.2	11.8	9.0	18.3	321	968	0.7	1.2	16	42
65 Tunisia	73.4	0.1	9.5	8.7	190	543	..	0.6	15	22
66 Jordan	..	..	6.5	15.2	197	535	0.7	1.3	79	53

	Average annual growth rate (percent)				Energy consumption per capita (kilograms of coal equivalent)		Energy consumption per dollar of GDP (kilograms of coal equivalent)		Energy imports as percentage of merchandise exports	
	Energy production		Energy consumption		1960	1978	1960	1978 ^b	1960 ^c	1977 ^d
	1960-74 ^a	1974-78	1960-74	1974-78						
67 Malaysia	37.4	27.1	11.1	4.7	242	716	0.6	0.8	2	10
68 Jamaica	-0.7	-2.8	11.2	0.3	426	1,823	0.2	1.5	11	32
69 Lebanon	12.7	-0.6	6.3	-3.4	548	936	..	..	68	4
70 Korea, Rep. of	6.3	3.2	13.2	9.6	258	1,359	1.2	1.8	70	22
71 Turkey	7.6	-0.8	9.9	9.4	245	793	0.5	0.8	16	79
72 Algeria	11.7	6.7	12.2	13.7	252	687	0.3	0.7	14	2
73 Mexico	6.0	12.6	7.7	6.7	770	1,384	0.9	1.0	3	4
74 Panama	14.8	4.4	10.5	7.1	448	991	0.7	0.9	..	..
75 Taiwan	2.3	1.4	8.6	14.5	583	2,202	1.5	1.9	..	15
76 Chile	4.0	-1.5	6.1	-0.8	845	997	1.2	1.1	10	25
77 South Africa	3.8	8.1	..	..	..	..	0.4	..	9	1
78 Costa Rica	9.5	4.7	10.4	5.6	233	564	0.4	0.5	7	13
79 Brazil	8.1	5.6	8.6	7.0	332	794	0.6	0.6	21	37
80 Uruguay	3.7	7.3	3.1	1.9	825	1,054	0.7	0.8	35	27
81 Argentina	6.5	2.2	5.7	2.2	1,129	1,873	0.9	1.4	14	12
82 Portugal	4.4	-5.9	8.3	2.3	382	1,030	0.5	0.6	17	36
83 Yugoslavia	4.7	3.2	7.1	4.8	872	2,035	1.3	1.2	8	23
84 Trinidad and Tobago	2.8	5.9	4.8	5.5	1,775	4,965	1.0	1.9	35	39
85 Venezuela	1.2	-6.3	6.6	5.3	1,694	2,989	1.1	1.2	1	..
86 Hong Kong	..	..	6.8	12.2	468	1,657	0.7	0.7	5	7
87 Greece	14.3	10.8	13.2	4.1	460	1,925	0.5	0.7	26	38
88 Singapore	..	..	16.8	9.3	372	2,461	0.4	0.8	17	32
89 Spain	2.5	4.3	8.5	3.9	756	2,405	0.6	0.8	22	49
90 Israel	41.9	-71.2	9.6	2.8	1,270	2,362	0.7	0.6	17	25
Industrialized countries	<i>3.2 w</i>	<i>0.8 w</i>	<i>4.9 w</i>	<i>1.5 w</i>	<i>4,462 w</i>	<i>7,060 w</i>	<i>1.2 w</i>	<i>1.1 w</i>	<i>11 w</i>	<i>23 w</i>
91 Ireland	0.1	3.8	4.7	2.6	1,838	3,292	1.2	1.1	17	15
92 Italy	2.2	-1.6	8.3	1.8	1,086	3,230	0.6	0.9	18	27
93 New Zealand	5.2	11.4	5.7	3.8	2,277	3,790	0.7	0.9	7	16
94 United Kingdom	-1.2	13.5	1.7	0.3	4,861	5,212	1.6	1.2	14	16
95 Finland	3.3	9.0	9.1	2.7	1,529	5,205	0.5	0.9	11	23
96 Austria	1.5	-1.5	5.1	1.1	2,129	4,048	0.8	0.7	12	15
97 Japan	-1.7	-0.8	10.7	1.5	1,171	3,825	0.8	0.7	18	39
98 Australia	11.1	5.3	5.6	3.6	3,857	6,622	0.8	0.7	12	9
99 France	-1.3	0.6	5.8	1.6	2,474	4,368	0.7	0.6	16	24
100 Netherlands	16.2	-1.6	8.7	-1.5	2,504	5,327	0.7	0.8	15	19
101 Belgium	-7.2	(.)	4.9	0.2	3,851	6,078	1.1	0.9	11	15
102 Canada	8.9	-1.3	6.0	1.7	5,750	9,930	1.3	1.3	9	9
103 Norway	6.8	37.5	5.9	4.0	2,702	5,571	0.7	0.7	15	16
104 Germany, Fed. Rep.	-0.7	-0.7	4.5	1.5	3,695	6,015	0.9	0.8	7	15
105 United States	3.5	-0.5	4.1	1.6	8,172	11,374	1.6	1.4	8	37
106 Denmark	-20.1	49.9	5.5	3.7	2,830	5,423	0.6	0.7	15	22
107 Sweden	3.6	4.6	4.9	2.5	3,572	5,954	0.7	0.7	16	19
108 Switzerland	4.2	4.0	5.9	1.4	1,873	3,690	0.3	0.4	10	10
Capital-surplus oil exporters	<i>11.5 w</i>	<i>1.4 w</i>	<i>9.2 w</i>	<i>11.7 w</i>	<i>404 w</i>	<i>1,620 w</i>	<i>0.4 w</i>	<i>0.5 w</i>	<i>..</i>	<i>(.) w</i>
109 Iraq	4.9	6.9	5.9	1.0	487	633	0.7	0.5	(.)	(.)
110 Iran	14.5	-1.5	15.6	11.9	270	1,808	0.4	0.9	1	(.)
111 Libya	29.1	8.9	17.9	21.8	251	1,889	0.1	0.3	83	(.)
112 Saudi Arabia	14.1	2.3	14.4	16.1	267	1,306	..	0.2	..	(.)
113 Kuwait	4.6	-4.2	6.7	12.2	10,396	6,771	0.4	0.6	..	(.)
Centrally planned economies	<i>4.8 w</i>	<i>6.5 w</i>	<i>4.8 w</i>	<i>5.4 w</i>	<i>1,347 w</i>	<i>2,117 w</i>	<i>1.9 w</i>	<i>2.1 w</i>	<i>..</i>	<i>..</i>
114 China	4.5	9.1	3.6	9.0	637	805	..	4.2	..	..
115 Korea, Dem. Rep.	9.1	4.3	9.1	4.3	989	2,702	3.8	4.4	..	..
116 Albania	10.1	6.3	12.5	12.8	302	998	1.1	1.7	..	..
117 Cuba	20.6	-19.4	4.4	2.7	912	1,168	1.0	1.8	..	39
118 Mongolia	10.4	9.3	7.3	8.1	540	1,240	0.8	1.6	..	..
119 Romania	5.8	1.6	8.0	4.5	1,342	4,042	3.8	2.7	..	..
120 Bulgaria	3.3	0.8	9.8	3.8	1,303	5,020	1.2	1.9	7	..
121 Hungary	1.8	2.0	3.9	3.0	2,072	3,451	1.5	1.2	13	14
122 Poland	3.9	4.2	4.1	5.8	3,107	5,596	2.1	1.8	..	..
123 USSR	5.6	5.5	5.3	4.2	2,839	5,500	1.9	1.8	4	4
124 Czechoslovakia	1.3	2.6	3.1	4.0	4,741	7,531	1.9	1.9	..	15
125 German Dem. Rep.	0.5	1.2	2.1	2.1	4,950	7,121	1.8	1.5	..	..

a. Figures in italics are for 1961-74, not 1960-74.
b. Figures in italics are for 1977, not 1978.

c. Figures in italics are for 1961, not 1960.
d. Figures in italics are for 1976, not 1977.

Table 8. Growth of Merchandise Trade

	Merchandise trade (millions of dollars)		Average annual growth rate ^a (percent)				Terms of trade (1970 = 100)	
			Exports		Imports		1960	1978
	Exports 1978b	Imports 1978b	1960-70	1970-78	1960-70	1970-78	1960	1978
Low-income countries	28,749 <i>t</i>	32,073 <i>t</i>	5.0 <i>m</i>	-0.8 <i>m</i>	5.0 <i>m</i>	3.2 <i>m</i>	98 <i>m</i>	98 <i>m</i>
1 Kampuchea, Dem.	..	..	-3.3	..	-3.0	..	102	136
2 Bangladesh	576	1,294	6.6	-4.7	7.0	-2.9	155	74
3 Lao PDR	9	64	..	..	..	..	..	..
4 Bhutan	..	..	..	..	..	..	..	..
5 Ethiopia	310	522	3.7	-5.4	6.2	-0.2	75	126
6 Mali	107	219	3.1	7.7	-0.4	5.0	91	93
7 Nepal	87	227	..	..	..	..	..	..
8 Somalia	107	241	2.3	7.8	2.6	13.7	107	72
9 Burundi	67	98	..	..	..	..	..	..
10 Chad	102	192	5.9	-3.0	5.0	1.7	106	122
11 Mozambique	129	278	6.0	-15.9	7.8	-13.4	103	96
12 Burma	243	309	-11.6	0.5	-5.7	-4.6	101	83
13 Upper Volta	57	210	14.4	8.5	7.8	9.4	75	89
14 Viet Nam	..	..	..	..	..	..	..	..
15 India	6,614	7,954	3.1	6.0	-0.9	3.2	104	80
16 Malawi	187	339	11.6	2.4	7.7	4.2	116	112
17 Rwanda	70	179	15.7	3.6	8.0	11.7	89	123
18 Sri Lanka	846	939	4.6	-3.8	-0.3	-2.7	175	124
19 Guinea	314	273	..	..	..	..	..	..
20 Sierra Leone	161	278	0.3	-3.1	1.9	-4.0	89	77
21 Zaire	925	589	-1.8	-4.1	5.5	-10.4	61	61
22 Niger	158	346	6.0	13.2	11.9	5.5	90	78
23 Benin	26	267	5.0	-13.6	7.5	6.8	89	79
24 Pakistan	1,471	3,275	8.2	-1.3	4.2	5.9	93	82
25 Tanzania	457	1,117	3.5	-6.0	6.0	-1.0	96	104
26 Afghanistan	322	681	2.4	2.4	0.8	8.1	99	133
27 Central African Rep.	72	57	8.1	1.8	4.5	-0.9	93	103
28 Madagascar	387	443	5.4	-0.9	4.0	-4.0	118	87
29 Haiti	152	140	..	..	..	..	..	..
30 Mauritania	119	181	55.2	-0.8	4.6	6.3	112	68
31 Lesotho	..	..	..	..	..	..	..	..
32 Uganda	350	255	5.0	-5.3	6.2	-7.6	95	106
33 Angola	500	340	9.0	-8.9	11.6	-4.7	89	145
34 Sudan	533	1,198	2.1	-3.2	1.1	6.4	100	92
35 Togo	235	381	10.5	0.3	8.4	12.4	95	105
36 Kenya	1,022	1,709	7.2	0.8	6.3	(.)	112	104
37 Senegal	391	788	1.2	4.4	2.7	4.7	91	100
38 Indonesia	11,643	6,690	3.5	7.2	1.9	15.8	138	225
Middle-income countries	179,935 <i>t</i>	231,663 <i>t</i>	5.5 <i>m</i>	5.2 <i>m</i>	6.8 <i>m</i>	5.8 <i>m</i>	93 <i>m</i>	90 <i>m</i>
39 Egypt	1,901	6,480	3.2	-2.3	-0.9	16.6	104	92
40 Ghana	1,304	1,266	0.1	-0.1	-1.6	2.7	92	80
41 Yemen, PDR	105	590	..	..	..	..	..	..
42 Cameroon	803	1,057	6.9	2.4	9.3	6.7	90	97
43 Liberia	486	481	18.3	1.5	2.8	2.0	194	85
44 Honduras	596	693	11.1	2.9	11.7	2.6	91	77
45 Zambia	832	611	2.2	-4.7	9.8	-6.9	50	56
46 Zimbabwe	..	..	..	..	..	..	..	..
47 Thailand	4,085	5,256	5.2	12.2	11.2	5.6	118	82
48 Bolivia	627	768	9.7	1.7	8.1	12.2	69	130
49 Philippines	3,425	5,143	2.2	5.4	7.2	4.7	73	69
50 Yemen Arab Rep.	34	1,043	..	..	..	..	..	..
51 Congo, People's Rep.	138	334	4.9	14.7	-1.0	6.7	98	114
52 Nigeria	9,483	12,857	6.1	0.5	1.7	25.0	97	290
53 Papua New Guinea	780	676	..	..	..	..	..	..
54 El Salvador	629	1,025	5.6	0.6	6.4	8.4	94	106
55 Morocco	1,511	2,970	2.5	2.6	3.3	13.7	103	86
56 Peru	1,949	1,960	1.9	-3.8	3.6	3.1	63	77
57 Ivory Coast	2,322	2,325	8.8	8.5	9.7	10.6	89	94
58 Nicaragua	594	646	9.7	5.6	10.3	4.2	88	90
59 Colombia	3,018	3,060	2.2	1.2	2.4	-0.7	90	107
60 Paraguay	257	319	5.4	7.6	7.5	8.0	92	107
61 Ecuador	1,494	1,627	3.7	9.5	11.6	12.7	110	129
62 Dominican Rep.	604	860	-2.3	6.7	10.0	4.5	77	62
63 Guatemala	1,090	1,286	9.0	3.4	7.1	7.1	97	100
64 Syrian Arab Rep.	1,053	2,437	3.2	7.1	4.2	15.5	94	139
65 Tunisia	1,126	2,162	4.1	21.1	2.2	30.3	104	133
66 Jordan	297	1,499	10.1	21.5	3.6	16.3	99	84

	Merchandise trade (millions of dollars)		Average annual growth rate ^a (percent)				Terms of trade (1970 = 100)	
	Exports 1978 ^b	Imports 1978 ^b	Exports		Imports		1960	1978
			1960-70	1970-78	1960-70	1970-78		
67 Malaysia	7,413	5,929	6.1	5.2	2.7	6.8	139	119
68 Jamaica	710	872	4.7	-2.7	8.2	-5.9	100	90
69 Lebanon	625	1,696	14.1	5.7	5.1	(.)	78	87
70 Korea, Rep. of	12,711	14,972	35.2	28.8	20.1	13.5	78	81
71 Turkey	2,288	4,597	1.6	2.5	5.5	8.1	..	71
72 Algeria	5,866	8,531	4.1	-0.8	-1.0	16.6	115	281
73 Mexico	5,739	7,744	3.3	5.2	6.4	4.0	87	108
74 Panama	244	942	10.4	2.2	10.4	-3.4	89	61
75 Taiwan	12,682	11,033	23.7	9.3	17.9	9.1	79	75
76 Chile	2,481	2,595	0.6	6.5	4.7	-0.9	53	50
77 South Africa	7,182	7,193	5.5	6.7	8.2	-1.8	100	75
78 Costa Rica	816	1,184	9.4	5.9	10.0	4.7	103	81
79 Brazil	12,527	14,538	5.0	6.0	4.9	6.6	88	90
80 Uruguay	686	774	2.1	-5.0	-2.8	2.3	99	82
81 Argentina	6,400	3,834	3.5	6.8	0.3	-0.1	101	95
82 Portugal	2,393	4,791	9.6	-5.9	14.1	4.7	83	86
83 Yugoslavia	5,659	9,987	7.8	4.8	9.0	4.9	96	98
84 Trinidad and Tobago	2,039	1,967	5.0	-1.3	3.2	-4.4	115	109
85 Venezuela	9,126	10,614	2.0	-10.1	4.3	14.9	112	292
86 Hong Kong	11,499	13,452	12.7	4.8	9.2	3.2	..	97
87 Greece	3,341	7,648	10.7	13.1	10.9	5.9	92	93
88 Singapore	10,134	13,049	4.2	9.8	5.9	8.1	..	..
89 Spain	13,115	18,708	11.6	11.0	18.4	3.3	93	68
90 Israel	3,716	5,582	10.9	10.6	8.7	4.5	91	83
Industrialized countries	<i>837,596 t</i>	<i>862,455 t</i>	<i>8.7 m</i>	<i>5.7 m</i>	<i>9.4 m</i>	<i>5.1 m</i>	<i>99 m</i>	<i>95 m</i>
91 Ireland	5,678	7,097	7.2	8.4	8.2	6.3	94	108
92 Italy	56,047	56,446	13.5	7.2	9.7	2.7	104	80
93 New Zealand	3,752	3,500	4.6	2.4	3.0	3.3	115	94
94 United Kingdom	71,691	78,557	4.8	5.5	5.0	4.6	95	94
95 Finland	8,618	7,864	6.7	3.0	7.1	1.6	98	97
96 Austria	12,205	16,013	9.6	6.8	9.7	7.2	100	97
97 Japan	97,501	78,731	17.5	9.7	13.7	5.0	102	88
98 Australia	14,127	13,885	6.5	4.0	7.2	5.1	116	98
99 France	76,609	81,805	8.3	7.3	10.9	6.7	93	96
100 Netherlands	50,188	53,082	9.9	5.7	9.4	4.4	100	92
101 Belgium	44,853	48,376	10.8	5.7	10.3	6.0	110	92
102 Canada	46,065	43,434	9.9	4.3	9.3	7.1	98	102
103 Norway	10,011	11,473	9.1	6.3	9.5	5.1	91	102
104 Germany, Fed. Rep.	142,090	120,668	10.2	6.9	10.0	6.3	90	104
105 United States	141,154	182,787	6.0	6.5	9.8	5.4	93	77
106 Denmark	11,886	14,810	7.1	4.2	8.1	3.4	108	94
107 Sweden	21,560	20,123	7.7	2.3	7.3	2.3	109	94
108 Switzerland	23,561	23,804	9.0	5.1	8.5	2.3	91	112
Capital-surplus oil exporters	<i>94,107 t</i>	<i>49,866 t</i>	<i>9.5 m</i>	<i>-1.2 m</i>	<i>11.1 m</i>	<i>21.1 m</i>	<i>107 m</i>	<i>393 m</i>
109 Iraq	11,008	4,213	7.3	0.6	1.3	21.1	112	403
110 Iran	22,430	16,019	12.7	-1.2	11.3	22.9	108	373
111 Libya	9,503	4,603	61.0	-7.0	15.4	18.7	98	280
112 Saudi Arabia	40,716	20,424	9.5	6.2	11.1	41.5	107	396
113 Kuwait	10,450	4,607	6.9	-9.7	10.4	19.2	105	393
Centrally planned economies	<i>128,821 t</i>	<i>136,420 t</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>
114 China	10,680	11,950	..	..	..	..	..	..
115 Korea, Dem. Rep.	..	950	..	..	..	..	..	..
116 Albania	..	..	..	..	..	..	..	..
117 Cuba	4,456	4,687	3.9	13.5	5.5	4.5	112	66
118 Mongolia	281	417	..	..	..	..	..	..
119 Romania	8,237	9,087	9.9	..	10.5	..	..	..
120 Bulgaria	7,478	7,651	14.5	10.7	12.8	10.8	..	..
121 Hungary	6,345	7,902	9.7	13.0	9.1	12.2	..	83
122 Poland	14,114	16,089	10.0	9.3	8.9	11.4	..	103
123 USSR	52,216	50,550	..	7.8	..	10.2	..	..
124 Czechoslovakia	11,747	12,565	6.6	6.0	6.9	6.5	..	..
125 German Dem. Rep.	13,267	14,572	8.3	7.9	8.6	8.0	..	..

a. See the technical notes.

b. Figures in italics are for 1977, not 1978.

Table 9. Structure of Merchandise Exports

	Percentage share of merchandise exports									
	Fuels, minerals and metals		Other primary commodities		Textiles and clothing		Machinery and transport equipment		Other manufactures	
	1960 ^a	1977	1960 ^a	1977	1960 ^a	1977	1960 ^a	1977	1960 ^a	1977
Low-income countries	13 w	37 w	70 w	44 w	12 w	7 w	(.) w	2 w	5 w	10 w
1 Kampuchea, Dem.	0	0	100	80	0	6	0	(.)	0	14
2 Bangladesh	..	2	..	42	..	45	..	1	..	10
3 Lao PDR	..	20	..	65	..	1	..	0	..	14
4 Bhutan	..	..	..	..	..	..	..	..	..	..
5 Ethiopia	0	0	100	97	0	(.)	1	1	0	2
6 Mali	0	(.)	96	98	1	(.)	1	1	2	1
7 Nepal	..	(.)	..	82	..	1	..	1	..	16
8 Somalia	0	0	88	97	0	0	8	3	4	0
9 Burundi	..	8	..	91	..	0	..	0	..	1
10 Chad	65	0	32	96	0	1	0	0	3	3
11 Mozambique	0	11	100	86	0	2	0	0	0	1
12 Burma	4	6	95	88	0	0	0	1	1	5
13 Upper Volta	0	(.)	100	95	0	(.)	0	1	(.)	4
14 Viet Nam	..	12	..	32	..	33	..	(.)	..	23
15 India	10	9	45	35	35	20	1	6	9	30
16 Malawi	..	(.)	..	96	..	2	..	(.)	..	2
17 Rwanda	..	10	..	90	..	0	..	0	..	(.)
18 Sri Lanka	(.)	6	99	82	0	2	0	(.)	1	10
19 Guinea	..	65	..	15	..	0	..	(.)	..	20
20 Sierra Leone	15	8	20	48	0	0	0	0	65	44
21 Zaire	42	71	57	21	0	0	0	1	1	7
22 Niger	..	31	100	35	0	1	0	0	0	33
23 Benin	0	6	100	85	0	2	(.)	0	0	7
24 Pakistan	0	5	73	36	23	44	1	2	3	13
25 Tanzania	(.)	4	87	90	0	1	0	(.)	13	5
26 Afghanistan	(.)	13	82	74	14	12	3	0	1	1
27 Central African Rep.	12	(.)	86	76	(.)	(.)	1	(.)	1	24
28 Madagascar	4	14	90	78	1	4	1	0	4	4
29 Haiti	0	12	100	53	0	7	0	3	0	25
30 Mauritania	4	87	69	9	1	(.)	20	(.)	6	4
31 Lesotho	..	..	..	..	..	..	..	..	..	..
32 Uganda	8	1	92	99	0	(.)	0	(.)	(.)	(.)
33 Angola	..	64	..	28	..	0	..	1	..	7
34 Sudan	0	5	100	95	0	(.)	0	(.)	0	(.)
35 Togo	0	49	96	45	0	3	0	2	4	1
36 Kenya	1	18	87	72	0	(.)	0	1	12	9
37 Senegal	3	13	94	80	1	1	1	(.)	1	6
38 Indonesia	33	71	67	27	0	(.)	(.)	1	(.)	1
Middle-income countries	25 w	33 w	61 w	30 w	4 w	10 w	2 w	9 w	8 w	18 w
39 Egypt	4	26	84	49	9	18	(.)	(.)	3	7
40 Ghana	7	16	83	80	0	0	0	0	10	4
41 Yemen, PDR	..	82	..	17	..	(.)	..	(.)	..	1
42 Cameroon	19	5	77	91	0	1	2	1	2	2
43 Liberia	45	64	55	34	0	(.)	0	(.)	0	2
44 Honduras	5	6	93	84	0	2	0	0	2	8
45 Zambia	..	94	..	2	..	0	..	(.)	..	4
46 Zimbabwe	71	..	25	..	1	..	(.)	..	3	..
47 Thailand	7	9	91	72	0	8	0	2	2	9
48 Bolivia	..	79	..	17	..	1	..	(.)	..	3
49 Philippines	10	17	86	58	1	5	0	2	3	18
50 Yemen Arab Rep.	..	(.)	..	90	..	3	..	1	..	6
51 Congo, People's Rep.	7	60	84	24	(.)	0	5	2	4	14
52 Nigeria	8	93	89	6	0	0	0	(.)	3	1
53 Papua New Guinea	0	35	92	63	0	0	0	0	8	2
54 El Salvador	0	2	94	78	3	7	(.)	2	3	11
55 Morocco	38	46	54	33	1	10	1	1	6	10
56 Peru	49	47	50	45	0	2	0	1	1	5
57 Ivory Coast	1	4	98	89	0	2	(.)	2	1	3
58 Nicaragua	3	1	95	82	0	3	0	1	2	13
59 Colombia	19	4	79	77	0	5	(.)	3	2	11
60 Paraguay	0	0	100	91	0	0	0	0	0	9
61 Ecuador	0	50	99	48	0	1	0	(.)	1	1
62 Dominican Rep.	6	3	92	79	0	(.)	0	1	2	17
63 Guatemala	2	1	95	82	1	4	0	1	2	12
64 Syrian Arab Rep.	0	62	81	28	2	4	0	3	17	3
65 Tunisia	24	49	66	17	1	19	1	1	8	14
66 Jordan	0	31	96	38	0	4	0	1	4	26

Percentage share of merchandise exports

	Fuels, minerals and metals		Other primary commodities		Textiles and clothing		Machinery and transport equipment		Other manufactures	
	1960 ^a	1977	1960 ^a	1977	1960 ^a	1977	1960 ^a	1977	1960 ^a	1977
67 Malaysia	20	27	74	56	(.)	2	(.)	7	6	8
68 Jamaica	50	24	45	21	2	1	0	0	3	54
69 Lebanon	..	3	..	27	..	11	..	26	..	33
70 Korea, Rep. of	30	2	56	13	8	32	(.)	17	6	36
71 Turkey	8	8	89	67	0	18	0	1	3	6
72 Algeria	12	97	81	2	0	(.)	1	(.)	6	1
73 Mexico	24	32	64	39	4	4	1	6	7	19
74 Panama	..	28	..	63	..	3	..	1	..	5
75 Taiwan	..	14	..	37	..	23	..	3	..	23
76 Chile	92	83	4	10	0	(.)	0	(.)	4	7
77 South Africa	29	29	42	29	2	1	4	6	23	35
78 Costa Rica	0	(.)	95	76	0	3	0	3	5	18
79 Brazil	8	10	89	64	0	4	(.)	11	3	11
80 Uruguay	..	1	..	60	..	18	..	2	..	19
81 Argentina	1	1	95	75	0	2	(.)	9	4	13
82 Portugal	8	4	37	26	18	26	3	15	34	29
83 Yugoslavia	18	11	45	20	4	8	15	32	18	29
84 Trinidad and Tobago	82	92	14	3	0	(.)	0	1	4	4
85 Venezuela	74	97	26	1	0	(.)	0	(.)	(.)	2
86 Hong Kong	5	1	15	3	45	46	4	16	31	34
87 Greece	9	14	81	36	1	18	1	5	8	27
88 Singapore	1	32	73	24	5	5	7	24	14	15
89 Spain	21	6	57	23	7	6	2	26	13	39
90 Israel	4	1	35	19	8	7	2	10	51	63
Industrialized countries	<i>11 w</i>	<i>9 w</i>	<i>23 w</i>	<i>15 w</i>	<i>7 w</i>	<i>5 w</i>	<i>30 w</i>	<i>39 w</i>	<i>29 w</i>	<i>32 w</i>
91 Ireland	5	3	67	42	6	9	4	15	18	31
92 Italy	8	7	19	10	17	11	29	34	27	38
93 New Zealand	(.)	6	97	77	0	3	(.)	3	3	11
94 United Kingdom	7	10	9	9	8	5	44	37	32	39
95 Finland	3	6	50	20	1	6	13	26	33	42
96 Austria	26	5	22	11	10	10	16	28	26	46
97 Japan	11	1	10	2	28	5	23	56	28	36
98 Australia	13	34	79	45	(.)	(.)	3	4	5	17
99 France	9	6	18	17	10	6	25	38	38	33
100 Netherlands	15	22	34	25	8	5	18	19	25	29
101 Belgium	15	11	9	12	12	8	13	24	51	45
102 Canada	33	26	37	23	1	1	8	33	21	17
103 Norway	22	32	34	15	2	1	10	29	32	23
104 Germany, Fed. Rep.	9	5	4	6	4	5	44	48	39	36
105 United States	10	6	27	24	3	2	35	43	25	25
106 Denmark	2	5	63	39	3	5	19	27	13	24
107 Sweden	10	6	29	14	1	2	31	44	29	34
108 Switzerland	2	3	8	5	12	7	30	33	48	52
Capital-surplus oil exporters	<i>95 w</i>	<i>99 w</i>	<i>4 w</i>	<i>(.) w</i>	<i>0 w</i>	<i>(.) w</i>	<i>0 w</i>	<i>(.) w</i>	<i>1 w</i>	<i>1 w</i>
109 Iraq	97	99	3	1	0	(.)	0	(.)	0	(.)
110 Iran	88	99	9	1	0	(.)	0	(.)	3	(.)
111 Libya	100	100	0	(.)	0	(.)	0	(.)	0	(.)
112 Saudi Arabia	6	100	84	0	0	0	0	0	10	0
113 Kuwait	..	88	..	1	..	1	..	3	..	7
Centrally planned economies	<i>..</i>	<i>24 w</i>	<i>..</i>	<i>16 w</i>	<i>..</i>	<i>4 w</i>	<i>..</i>	<i>31 w</i>	<i>..</i>	<i>25 w</i>
114 China	..	14	..	37	..	23	..	3	..	23
115 Korea, Dem. Rep.	..	51	..	31	..	6	..	1	..	11
116 Albania	..	33	..	26	..	6	..	4	..	31
117 Cuba	..	7	..	80	..	8	..	(.)	..	5
118 Mongolia	2	7	93	93	1	0	(.)	(.)	4	(.)
119 Romania	..	12	..	20	..	9	..	24	..	35
120 Bulgaria	3	2	75	34	12	5	6	39	4	20
121 Hungary	6	7	28	25	7	8	38	33	21	27
122 Poland	24	43	28	11	1	(.)	21	19	26	27
123 USSR	..	21	..	11	..	7	..	39	..	22
124 Czechoslovakia	20	7	11	6	(.)	6	45	51	24	30
125 German Dem. Rep.	..	3	..	3	..	5	..	57	..	32

a. Figures in italics are for 1961, not 1960.

Table 10. Structure of Merchandise Imports

	Percentage share of merchandise imports									
	Food		Fuels		Other primary commodities		Machinery and transport equipment		Other manufactures	
	1960a	1977b	1960a	1977b	1960a	1977b	1960a	1977b	1960a	1977b
	22 w	16 w	7 w	19 w	16 w	9 w	25 w	26 w	30 w	30 w
Low-income countries										
1 Kampuchea, Dem.	..	..	..	..	..	..	..	..	..	..
2 Bangladesh	..	18	..	24	..	6	..	13	..	39
3 Lao PDR	..	..	..	..	..	..	..	..	..	..
4 Bhutan	..	..	..	..	..	..	..	..	..	..
5 Ethiopia	..	6	..	15	..	3	..	34	..	42
6 Mali	20	19	5	14	4	2	18	30	53	35
7 Nepal	..	..	..	..	..	..	..	..	..	..
8 Somalia	27	..	4	..	0	..	18	..	51	..
9 Burundi	..	23	..	11	..	8	..	27	..	31
10 Chad	19	..	12	..	4	..	19	..	46	..
11 Mozambique	..	..	..	..	..	..	..	..	..	..
12 Burma	14	..	4	..	9	..	17	..	56	..
13 Upper Volta	21	..	4	..	1	..	24	..	50	..
14 Viet Nam	..	..	..	..	..	..	..	..	..	..
15 India	21	16	6	26	28	15	30	19	15	24
16 Malawi	..	8	..	13	..	2	..	30	..	47
17 Rwanda	..	..	..	..	..	..	..	..	..	..
18 Sri Lanka	39	40	7	24	5	3	15	12	34	21
19 Guinea	..	..	..	..	..	..	..	..	..	..
20 Sierra Leone	23	23	12	7	5	1	15	19	45	50
21 Zaire	..	..	..	..	..	..	..	..	..	..
22 Niger	24	..	5	..	4	..	18	..	49	..
23 Benin	17	17	10	8	1	0	18	30	54	45
24 Pakistan	22	17	10	16	2	7	27	28	39	32
25 Tanzania	..	10	..	18	..	5	..	35	..	32
26 Afghanistan	14	14	7	8	4	0	14	7	61	71
27 Central African Rep.	15	16	9	1	2	2	26	36	48	45
28 Madagascar	17	..	6	..	3	..	23	..	51	..
29 Haiti	..	28	..	11	..	4	..	20	..	37
30 Mauritania	5	..	3	..	3	..	39	..	50	..
31 Lesotho	..	..	..	..	..	..	..	..	..	..
32 Uganda	6	11	8	1	8	3	25	44	53	41
33 Angola	..	..	..	..	..	..	..	..	..	..
34 Sudan	17	..	8	..	3	..	14	..	58	..
35 Togo	16	19	6	7	3	1	32	31	43	42
36 Kenya	12	6	11	22	8	4	27	34	42	34
37 Senegal	30	..	5	..	2	..	19	..	44	..
38 Indonesia	23	16	5	12	10	5	17	37	45	30
Middle-income countries										
39 Egypt	23	23	11	2	16	10	25	35	25	30
40 Ghana	19	14	5	15	4	4	26	27	46	40
41 Yemen, PDR	..	..	..	..	..	..	..	..	..	..
42 Cameroon	20	12	8	9	3	1	17	38	52	40
43 Liberia	16	..	4	..	7	..	34	..	39	..
44 Honduras	13	9	9	12	3	2	24	31	51	46
45 Zambia	..	..	..	..	..	..	..	..	..	..
46 Zimbabwe	..	..	..	..	..	..	..	..	..	..
47 Thailand	10	5	11	22	11	10	25	30	43	33
48 Bolivia	..	..	..	..	..	..	..	..	..	..
49 Philippines	15	10	10	24	5	7	36	26	34	33
50 Yemen Arab Rep.	..	41	..	3	..	1	..	26	..	29
51 Congo, People's Rep.	18	21	6	5	1	1	31	35	44	38
52 Nigeria	14	13	5	2	6	2	24	47	51	36
53 Papua New Guinea	30	23	5	14	4	1	23	32	38	30
54 El Salvador	17	..	6	..	6	..	26	..	45	..
55 Morocco	27	17	8	12	7	7	19	38	39	26
56 Peru	16	14	5	19	5	4	37	35	37	28
57 Ivory Coast	18	14	6	11	2	2	27	38	47	35
58 Nicaragua	9	8	10	14	5	2	22	31	54	45
59 Colombia	8	12	3	7	15	7	43	38	31	36
60 Paraguay	..	15	..	25	..	1	..	34	..	25
61 Ecuador	13	7	3	1	9	3	33	50	42	39
62 Dominican Rep.	..	17	..	21	..	4	..	25	..	33
63 Guatemala	12	..	10	..	7	..	26	..	45	..
64 Syrian Arab Rep.	24	12	8	17	5	5	15	34	48	32
65 Tunisia	20	13	9	11	4	7	23	34	44	35
66 Jordan	..	18	..	9	..	3	..	35	..	35

Percentage share of merchandise imports

	Food		Fuels		Other primary commodities		Machinery and transport equipment		Other manufactures	
	1960 ^a	1977 ^b	1960 ^a	1977 ^b	1960 ^a	1977 ^b	1960 ^a	1977 ^b	1960 ^a	1977 ^b
67 Malaysia	29	17	16	13	13	7	14	33	28	30
68 Jamaica	22	20	8	29	9	6	24	12	37	33
69 Lebanon	..	..	..	..	..	..	..	..	..	..
70 Korea, Rep. of	10	8	7	20	25	19	12	27	46	26
71 Turkey	7	1	11	26	16	6	42	34	24	33
72 Algeria	26	17	4	1	2	4	14	46	54	32
73 Mexico	4	13	2	3	10	8	52	45	32	31
74 Panama	15	10	10	33	1	1	22	19	52	37
75 Taiwan	..	11	..	19	..	14	..	27	..	29
76 Chile	..	..	..	..	..	..	..	..	..	..
77 South Africa	6	6	7	1	9	7	37	52	41	34
78 Costa Rica	13	8	6	10	6	3	26	30	49	49
79 Brazil	14	7	19	34	13	7	36	26	18	26
80 Uruguay	..	7	..	25	..	11	..	29	..	28
81 Argentina	3	5	13	16	11	10	44	36	29	33
82 Portugal	15	18	10	15	28	13	26	26	21	28
83 Yugoslavia	11	9	5	13	25	12	37	35	22	31
84 Trinidad and Tobago	16	10	34	48	7	2	18	18	25	22
85 Venezuela	18	12	1	1	10	4	36	50	35	33
86 Hong Kong	27	17	3	6	16	8	10	19	44	50
87 Greece	11	8	8	15	16	8	44	46	21	23
88 Singapore	21	12	15	26	38	9	7	26	19	27
89 Spain	16	15	22	29	25	13	22	20	15	23
90 Israel	20	13	7	15	18	6	28	21	27	45
Industrialized countries	<i>22 w</i>	<i>13 w</i>	<i>11 w</i>	<i>22 w</i>	<i>24 w</i>	<i>10 w</i>	<i>16 w</i>	<i>24 w</i>	<i>27 w</i>	<i>31 w</i>
91 Ireland	18	13	12	13	11	5	21	27	38	42
92 Italy	20	17	14	26	31	14	13	19	22	24
93 New Zealand	8	7	8	15	16	6	29	32	39	40
94 United Kingdom	36	18	11	14	27	11	8	23	18	34
95 Finland	13	9	10	24	20	7	33	30	24	30
96 Austria	16	8	10	10	20	9	29	34	25	39
97 Japan	17	17	17	44	49	20	9	6	8	13
98 Australia	6	6	10	10	16	5	31	38	37	41
99 France	25	14	17	21	25	10	14	23	19	32
100 Netherlands	18	16	13	19	14	7	22	23	33	35
101 Belgium	15	13	10	14	26	10	21	26	28	37
102 Canada	12	8	9	10	12	5	36	50	31	27
103 Norway	12	7	9	11	13	6	36	42	30	34
104 Germany, Fed. Rep.	26	16	8	17	28	11	10	19	28	37
105 United States	24	10	10	30	25	8	10	25	31	27
106 Denmark	18	13	12	17	11	6	23	27	36	37
107 Sweden	13	9	14	18	13	6	26	31	34	36
108 Switzerland	18	11	8	10	13	7	21	24	40	48
Capital-surplus oil exporters	..	<i>13 w</i>	..	<i>1 w</i>	..	<i>2 w</i>	..	<i>43 w</i>	..	<i>41 w</i>
109 Iraq	..	15	..	(.)	..	3	..	54	..	28
110 Iran	14	11	1	(.)	1	3	23	45	61	41
111 Libya	13	19	5	1	10	3	40	37	32	40
112 Saudi Arabia	..	11	..	1	..	2	..	41	..	46
113 Kuwait	..	12	..	1	..	2	..	45	..	40
Centrally planned economies	..	..	..	..	..	..	..	..	..	..
114 China	..	..	..	..	..	..	..	..	..	..
115 Korea, Dem. Rep.	..	..	..	..	..	..	..	..	..	..
116 Albania	..	..	..	..	..	..	..	..	..	..
117 Cuba	..	..	..	..	..	..	..	..	..	..
118 Mongolia	..	..	..	..	..	..	..	..	..	..
119 Romania	..	..	..	..	..	..	..	..	..	..
120 Bulgaria	..	..	..	..	..	..	..	..	..	..
121 Hungary	8	11	12	13	28	12	28	31	24	33
122 Poland	..	..	..	..	..	..	..	..	..	..
123 USSR	12	..	4	..	18	..	30	..	36	..
124 Czechoslovakia	..	12	..	14	..	15	..	36	..	23
125 German Dem. Rep.	..	..	..	..	..	..	..	..	..	..

a. Figures in italics are for 1961, not 1960.

b. Figures in italics are for 1976, not 1977.

Table 11. Destination of Merchandise Exports

Origin	Destination of merchandise exports (percentage of total)							
	Industrialized countries		Developing countries		Centrally planned economies		Capital-surplus oil exporters	
	1960	1978 ^a	1960	1978 ^a	1960	1978 ^a	1960	1978 ^a
Low-income countries	65 w	66 w	27 w	23 w	7 w	5 w	1 w	6 w
1 Kampuchea, Dem.	..	..	..	..	..	..	..	..
2 Bangladesh	..	47	..	34	..	14	..	5
3 Lao PDR	..	20	..	77	..	(.)	..	3
4 Bhutan	..	..	..	..	..	..	..	..
5 Ethiopia	69	64	24	26	1	4	6	6
6 Mali	93	50	7	20	0	30	(.)	(.)
7 Nepal	..	34	..	66	..	0	..	(.)
8 Somalia	85	22	15	14	0	13	(.)	51
9 Burundi	..	84	..	6	..	10	..	0
10 Chad	73	34	27	63	0	0	0	3
11 Mozambique	29	71	71	29	(.)	(.)	(.)	(.)
12 Burma	23	37	71	62	6	(.)	(.)	1
13 Upper Volta	4	50	96	48	0	2	0	0
14 Viet Nam	..	..	..	..	..	..	..	..
15 India	66	55	23	20	8	13	3	12
16 Malawi	..	75	..	25	..	(.)	..	0
17 Rwanda	..	90	..	10	..	(.)	..	(.)
18 Sri Lanka	75	42	14	30	11	10	0	18
19 Guinea	63	..	19	..	18	..	(.)	..
20 Sierra Leone	99	96	1	4	0	0	0	(.)
21 Zaire	89	65	11	34	(.)	1	(.)	(.)
22 Niger	74	84	26	15	0	0	0	1
23 Benin	..	52	..	17	..	31	..	(.)
24 Pakistan	56	41	33	30	8	5	3	24
25 Tanzania	74	65	25	28	1	6	0	1
26 Afghanistan	48	34	24	23	28	43	0	(.)
27 Central African Rep.	83	79	17	21	0	(.)	0	(.)
28 Madagascar	79	75	20	21	1	4	(.)	(.)
29 Haiti	98	98	2	2	(.)	(.)	0	(.)
30 Mauritania	89	85	11	15	0	0	0	(.)
31 Lesotho	..	..	..	..	..	..	..	..
32 Uganda	62	70	34	26	4	2	0	2
33 Angola	64	38	34	62	2	0	0	0
34 Sudan	59	50	23	27	14	18	4	5
35 Togo	74	77	26	14	0	9	0	0
36 Kenya	77	62	22	35	1	2	(.)	1
37 Senegal	89	69	11	31	0	0	0	(.)
38 Indonesia	54	79	38	21	8	(.)	(.)	(.)
Middle-income countries	70 w	67 w	24 w	25 w	5 w	5 w	1 w	3 w
39 Egypt	26	54	29	12	43	30	2	4
40 Ghana	88	69	5	11	7	20	(.)	(.)
41 Yemen, PDR	42	35	56	51	(.)	10	2	4
42 Cameroon	93	85	6	13	1	2	(.)	0
43 Liberia	100	89	(.)	10	0	1	0	0
44 Honduras	77	86	23	14	0	0	0	0
45 Zambia	..	82	..	13	..	5	..	0
46 Zimbabwe	..	..	..	..	..	..	..	..
47 Thailand	47	61	48	32	2	2	3	5
48 Bolivia	88	54	12	37	0	9	0	0
49 Philippines	94	81	5	14	1	4	(.)	1
50 Yemen Arab Rep.	46	65	36	13	18	18	(.)	4
51 Congo, People's Rep.	93	66	7	33	0	1	0	0
52 Nigeria	95	78	4	22	1	(.)	0	0
53 Papua New Guinea	..	87	..	12	..	1	..	0
54 El Salvador	88	74	12	26	0	0	0	(.)
55 Morocco	74	61	22	27	4	11	(.)	1
56 Peru	84	71	16	18	(.)	11	0	(.)
57 Ivory Coast	84	83	16	15	0	2	0	(.)
58 Nicaragua	91	69	9	31	(.)	0	0	0
59 Colombia	94	79	5	16	1	5	0	(.)
60 Paraguay	61	66	39	34	0	0	0	0
61 Ecuador	91	69	8	28	1	3	0	(.)
62 Dominican Rep.	92	84	7	14	0	2	1	0
63 Guatemala	94	71	6	27	0	1	0	1
64 Syrian Arab Rep.	34	57	28	18	24	19	14	6
65 Tunisia	76	68	19	23	3	3	2	6
66 Jordan	1	8	62	39	11	9	26	44

Destination of merchandise exports (percentage of total)

Origin	Industrialized countries		Developing countries		Centrally planned economies		Capital-surplus oil exporters	
	1960	1978 ^a	1960	1978 ^a	1960	1978 ^a	1960	1978 ^a
67 Malaysia	58	62	35	32	7	5	0	1
68 Jamaica	96	84	4	15	0	1	0	(.)
69 Lebanon	24	8	28	26	6	10	42	56
70 Korea, Rep. of	89	73	11	17	0	(.)	0	10
71 Turkey	71	64	16	12	12	15	1	9
72 Algeria	93	94	6	4	1	2	(.)	0
73 Mexico	93	81	7	18	(.)	1	0	(.)
74 Panama	99	71	1	28	0	(.)	0	1
75 Taiwan	56	70	33	26	0	0	11	4
76 Chile	91	67	9	30	(.)	1	(.)	2
77 South Africa	71	82	27	18	2	(.)	(.)	0
78 Costa Rica	93	68	7	28	(.)	3	(.)	1
79 Brazil	81	64	13	26	6	7	(.)	3
80 Uruguay	82	54	8	38	10	7	0	1
81 Argentina	75	52	19	38	6	9	(.)	1
82 Portugal	56	80	42	17	2	3	(.)	(.)
83 Yugoslavia	48	35	18	16	33	43	1	6
84 Trinidad and Tobago	80	80	20	20	0	(.)	(.)	(.)
85 Venezuela	62	58	38	42	0	(.)	0	(.)
86 Hong Kong	54	70	42	26	3	1	1	3
87 Greece	65	60	12	16	22	12	1	12
88 Singapore	38	45	54	47	7	3	1	5
89 Spain	80	64	17	27	3	3	(.)	6
90 Israel	76	75	22	21	2	1	0	3
Industrialized countries	67 w	67 w	28 w	23 w	3 w	4 w	2 w	6 w
91 Ireland	96	90	4	7	(.)	1	(.)	3
92 Italy	65	66	27	20	6	5	2	9
93 New Zealand	95	73	4	19	1	5	(.)	3
94 United Kingdom	57	65	37	24	3	3	3	8
95 Finland	69	67	11	10	20	21	(.)	2
96 Austria	69	69	15	14	15	14	1	3
97 Japan	45	45	51	38	2	7	2	10
98 Australia	75	64	18	25	5	7	2	4
99 France	53	67	42	25	4	4	1	4
100 Netherlands	78	83	19	12	2	2	1	3
101 Belgium	79	83	16	12	4	2	1	3
102 Canada	90	87	9	9	1	3	(.)	1
103 Norway	80	82	15	13	5	4	(.)	1
104 Germany, Fed. Rep.	70	71	23	17	5	6	2	6
105 United States	61	56	36	34	1	3	2	7
106 Denmark	83	82	12	12	4	3	1	3
107 Sweden	79	77	15	14	5	5	1	4
108 Switzerland	72	67	23	22	4	5	1	6
Capital-surplus oil exporters	78 w	70 w	21 w	29 w	1 w	(.) w	(.) w	1 w
109 Iraq	85	61	14	37	1	2	(.)	(.)
110 Iran	62	71	34	28	3	1	1	(.)
111 Libya	67	82	26	17	7	1	0	0
112 Saudi Arabia	74	72	26	28	0	0	0	(.)
113 Kuwait	91	60	9	33	0	(.)	0	7
Centrally planned economies	21 w	..	8 w	..	70 w	..	1 w	..
114 China	14	..	24	..	62	..	(.)	..
115 Korea, Dem. Rep.	..	..	..	..	..	..	..	..
116 Albania	1	..	1	..	98	..	0	..
117 Cuba	72	..	9	..	19	..	(.)	..
118 Mongolia	..	..	..	..	..	..	..	..
119 Romania	20	27	9	15	71	50	(.)	8
120 Bulgaria	13	..	4	..	83	..	(.)	..
121 Hungary	22	..	8	..	69	..	1	..
122 Poland	29	..	10	..	60	..	1	..
123 USSR	18	..	10	..	71	..	1	..
124 Czechoslovakia	16	..	6	..	78	..	0	..
125 German Dem. Rep.	19	..	7	..	74	..	(.)	..

a. Figures in italics are for 1977, not 1978.

Table 12. Trade in Manufactured Goods

Origin	Destination of manufactured exports (percentage of total)								Value of manufactured exports (millions of dollars)	
	Industrialized countries		Developing countries		Centrally planned economies		Capital-surplus oil exporters		1963	1977 ^a
	1963	1977 ^a	1963	1977 ^a	1963	1977 ^a	1963	1977 ^a		
Low-income countries	..	51 w	..	27 w	..	12 w	..	10 w		
1 Kampuchea, Dem.	58	15	42	85	0	0	0	0	1	2
2 Bangladesh	..	47	..	41	..	6	..	6	..	251
3 Lao PDR	..	83	..	17	..	0	..	0	(.)	2
4 Bhutan	..	..	..	..	..	..	..	..	..	..
5 Ethiopia	..	28	..	68	..	2	..	2	(.)	12
6 Mali	14	29	66	71	20	0	0	0	(.)	2
7 Nepal	..	60	..	40	..	0	..	0	..	14
8 Somalia	..	20	..	67	..	13	..	0	2	2
9 Burundi	..	100	..	0	..	0	..	0	..	1
10 Chad	12	31	77	69	11	0	(.)	0	1	3
11 Mozambique	..	67	..	27	..	0	..	6	..	3
12 Burma	..	79	..	21	..	0	..	0	1	15
13 Upper Volta	12	50	88	50	0	0	0	0	1	3
14 Viet Nam	..	2	..	2	..	95	..	1	..	216
15 India	56	52	35	24	7	12	2	12	677	3,356
16 Malawi	..	34	..	66	..	0	..	0	..	7
17 Rwanda	..	0	..	100	..	0	..	0	(.)	(.)
18 Sri Lanka	70	65	28	24	2	1	(.)	10	4	96
19 Guinea	..	27	..	73	..	0	..	0	..	53
20 Sierra Leone	100	100	(.)	0	0	0	0	0	23	59
21 Zaire	..	88	..	11	..	1	..	0	1	75
22 Niger	23	89	77	11	0	0	0	0	1	56
23 Benin	18	28	82	72	0	0	0	0	1	3
24 Pakistan	49	45	48	26	1	8	2	21	109	681
25 Tanzania	..	85	..	15	..	0	..	0	16	35
26 Afghanistan	98	88	2	1	0	1	0	10	7	42
27 Central African Rep.	50	83	50	17	0	0	0	0	11	19
28 Madagascar	82	83	18	17	0	0	0	0	4	26
29 Haiti	..	93	..	7	..	0	..	0	..	51
30 Mauritania	95	84	5	16	0	0	0	0	3	6
31 Lesotho	..	..	..	..	..	..	..	..	..	..
32 Uganda	..	100	..	0	..	0	..	0	(.)	2
33 Angola	..	80	..	18	..	0	..	2	..	55
34 Sudan	35	90	54	10	0	0	11	0	(.)	5
35 Togo	45	42	55	58	0	(.)	0	0	1	9
36 Kenya	..	11	..	86	..	1	..	2	12	116
37 Senegal	74	50	26	50	(.)	0	0	0	9	36
38 Indonesia	..	44	..	56	..	(.)	..	(.)	2	191
Middle-income countries	..	58 w	..	30 w	..	6 w	..	6 w		
39 Egypt	..	13	..	11	..	65	..	11	88	429
40 Ghana	82	56	17	44	0	0	1	0	3	44
41 Yemen, PDR	..	48	..	52	..	0	..	0	..	1
42 Cameroon	23	69	77	31	0	0	0	0	4	30
43 Liberia	100	78	0	22	0	0	0	0	3	9
44 Honduras	3	22	97	78	0	0	0	0	2	49
45 Zambia	..	66	..	34	..	0	..	0	..	37
46 Zimbabwe	..	..	..	..	..	..	..	..	..	..
47 Thailand	41	65	59	32	0	(.)	0	3	16	647
48 Bolivia	91	93	9	7	0	0	0	0	6	22
49 Philippines	92	82	8	16	0	(.)	(.)	2	34	764
50 Yemen Arab Rep.	..	10	..	25	..	0	..	65	..	1
51 Congo, People's Rep.	93	62	7	38	0	0	0	(.)	22	29
52 Nigeria	81	85	17	15	1	(.)	1	0	16	72
53 Papua New Guinea	..	100	..	0	..	0	..	0	2	15
54 El Salvador	1	27	99	73	0	0	0	0	18	209
55 Morocco	..	74	..	19	..	2	..	5	..	272
56 Peru	45	43	55	37	(.)	14	(.)	6	6	115
57 Ivory Coast	40	35	60	65	0	0	0	0	7	161
58 Nicaragua	..	8	..	92	..	0	..	0	3	105
59 Colombia	45	42	55	57	0	1	0	(.)	17	466
60 Paraguay	85	52	15	48	0	0	0	0	4	25
61 Ecuador	52	16	48	84	0	0	0	0	3	30
62 Dominican Rep.	..	97	..	3	..	0	..	0	1	128
63 Guatemala	..	9	..	91	..	0	..	0	15	218
64 Syrian Arab Rep.	..	11	..	16	..	42	..	31	21	100
65 Tunisia	42	86	53	10	0	2	5	2	12	311
66 Jordan	..	(.)	..	26	..	0	..	74	1	57

Origin	Destination of manufactured exports (percentage of total)								Value of manufactured exports (millions of dollars)	
	Industrialized countries		Developing countries		Centrally planned economies		Capital-surplus oil exporters		1963	1977 ^a
	1963	1977 ^a	1963	1977 ^a	1963	1977 ^a	1963	1977 ^a	1963	1977 ^a
67 Malaysia	..	64	..	35	..	(.)	..	1	63	1,121
68 Jamaica	83	68	17	29	0	3	0	0	13	345
69 Lebanon	..	19	..	35	..	3	..	43	8	452
70 Korea, Rep. of	57	74	43	14	0	(.)	0	12	39	8,480
71 Turkey	73	74	14	9	13	5	(.)	12	6	431
72 Algeria	..	76	..	19	..	3	..	2	..	38
73 Mexico	69	61	31	39	(.)	(.)	(.)	0	147	1,182
74 Panama	5	10	95	90	0	0	0	0	(.)	23
75 Taiwan	..	30	..	52	..	13	..	5	129	7,925
76 Chile	38	57	62	43	(.)	0	(.)	(.)	22	145
77 South Africa	..	67	..	29	..	0	..	4	318	2,576
78 Costa Rica	..	12	..	88	..	(.)	..	0	5	203
79 Brazil	59	53	40	43	1	2	(.)	2	45	3,141
80 Uruguay	..	56	..	41	..	3	..	(.)	31	235
81 Argentina	52	31	46	63	2	6	(.)	(.)	79	1,349
82 Portugal	53	79	46	16	(.)	4	1	1	246	1,420
83 Yugoslavia	37	29	29	17	33	45	1	9	468	3,415
84 Trinidad and Tobago	40	86	60	14	0	(.)	0	(.)	10	105
85 Venezuela	79	52	21	48	(.)	0	(.)	0	43	153
86 Hong Kong	71	83	28	14	0	(.)	1	3	617	7,267
87 Greece	60	58	34	18	2	6	4	18	27	1,373
88 Singapore	5	54	95	43	(.)	(.)	(.)	3	352	3,626
89 Spain	62	60	35	32	2	3	1	5	227	7,214
90 Israel	72	75	26	21	2	1	0	3	203	2,453
Industrialized countries	65 w	65 w	31 w	25 w	3 w	4 w	1 w	6 w		
91 Ireland	94	92	6	6	(.)	1	(.)	1	133	2,420
92 Italy	64	64	29	21	5	6	2	9	3,842	37,630
93 New Zealand	..	85	..	14	..	(.)	..	1	40	520
94 United Kingdom	57	65	39	25	3	3	1	7	9,412	46,884
95 Finland	59	63	13	8	28	27	(.)	2	634	5,686
96 Austria	66	66	17	15	17	16	0	3	985	8,241
97 Japan	44	47	50	40	5	4	1	9	4,812	77,514
98 Australia	59	68	40	28	1	1	(.)	3	332	2,808
99 France	58	63	39	28	2	5	1	4	5,744	48,585
100 Netherlands	79	79	18	15	2	3	1	3	2,693	23,123
101 Belgium	85	83	13	12	1	2	1	3	3,572	28,991
102 Canada	87	91	13	8	(.)	(.)	(.)	1	2,165	21,046
103 Norway	78	69	19	26	3	4	(.)	1	529	4,654
104 Germany, Fed. Rep.	75	69	22	19	2	6	1	6	12,812	104,361
105 United States	56	58	42	33	(.)	1	2	8	12,453	82,521
106 Denmark	73	78	19	15	8	4	0	3	752	5,580
107 Sweden	78	76	19	15	3	5	(.)	4	2,143	15,284
108 Switzerland	72	66	25	23	2	6	1	5	2,163	15,821
Capital-surplus oil exporters	..	31 w	..	24 w	..	3 w	..	42 w		
109 Iraq	(.)	9	21	79	(.)	0	79	12	5	18
110 Iran	64	39	28	13	1	31	7	17	33	158
111 Libya	33	..	22	..	45	..	0	..	(.)	..
112 Saudi Arabia	..	22	..	70	..	1	..	7	0	121
113 Kuwait	..	31	..	19	..	(.)	..	50	..	1,059
Centrally planned economies	..	14 w	..	18 w	..	64 w	..	4 w		
114 China	..	31	..	50	..	14	..	5	..	3,684
115 Korea, Dem. Rep.	..	5	..	13	..	73	..	9	..	197
116 Albania	..	35	..	37	..	28	..	0	..	42
117 Cuba	..	72	..	4	..	24	..	0	..	10
118 Mongolia	..	2	..	0	..	98	..	0	..	32
119 Romania	..	26	..	17	..	52	..	5	..	4,763
120 Bulgaria	..	6	..	11	..	81	..	2	..	4,025
121 Hungary	..	20	..	14	..	62	..	4	..	3,939
122 Poland	..	19	..	9	..	70	..	2	..	8,351
123 USSR	..	10	..	25	..	59	..	6	..	21,020
124 Czechoslovakia	..	14	..	11	..	73	..	2	..	9,045
125 German Dem. Rep.	..	10	..	10	..	79	..	1	..	10,242

a. Figures in italics are for 1976, not 1977.

Table 13. Balance of Payments and Debt Service Ratios

	Current account balance before interest payments on external public debt (millions of dollars)		Interest payments on external public debt (millions of dollars)		Debt service as percentage of:			
	1970	1978 ^a	1970	1978	GNP		Exports of goods and services	
					1970	1978 ^a	1970	1978 ^a
Low-income countries					1.2 <i>w</i>	1.7 <i>w</i>	12.3 <i>w</i>	11.7 <i>w</i>
1 Kampuchea, Dem.	..	..	..	..	..	..	..	..
2 Bangladesh	..	-302	..	42	..	1.3	..	11.7
3 Lao PDR	..	..	..	..	..	..	..	..
4 Bhutan	..	..	..	..	..	..	..	..
5 Ethiopia	-26	-98	6	13	1.2	0.8	11.4	7.5
6 Mali	-2	-72	(.)	3	0.2	1.1	1.2	7.1
7 Nepal	..	-25	(.)	1	0.3	0.2	10.9	1.4
8 Somalia	-5	-63	(.)	2	0.5	1.2	2.1	3.7
9 Burundi	..	-22	(.)	1	0.3	0.4	2.5	3.2
10 Chad	2	-188	(.)	3	1.0	2.3	3.7	13.0
11 Mozambique	..	..	..	..	..	..	..	..
12 Burma	-62	-137	3	17	1.0	1.2	16.1	18.0
13 Upper Volta	9	-79	(.)	3	0.6	0.9	4.0	3.8
14 Viet Nam	..	..	..	..	..	..	..	..
15 India	-205	915	189	342	0.9	0.8	20.9	9.4
16 Malawi	-32	-116	3	9	1.8	2.0	7.0	8.7
17 Rwanda	6	-46	(.)	1	0.2	0.2	1.4	1.4
18 Sri Lanka	-45	-33	12	25	2.1	3.6	10.3	9.2
19 Guinea	..	-16	4	17	3.4	5.7	21.3	17.4
20 Sierra Leone	-14	-96	2	7	2.9	4.5	9.8	16.0
21 Zaire	-55	88	9	160	2.0	6.5	4.4	31.3
22 Niger	1	-81	1	4	0.6	0.8	3.8	2.9
23 Benin	-1	-70	(.)	3	0.7	1.5	2.2	6.4
24 Pakistan	-591	-550	76	179	1.9	2.1	21.6	12.2
25 Tanzania	-29	-442	6	18	2.1	1.1	8.2	7.4
26 Afghanistan	..	38	9	15	2.5	1.3	25.6	13.7
27 Central African Rep.	-11	-23	(.)	1	1.1	0.7	3.2	2.5
28 Madagascar	12	-51	2	6	0.8	0.6	3.5	3.2
29 Haiti	2	-39	(.)	3	1.0	1.0	7.7	5.8
30 Mauritania	-5	-65	(.)	10	2.0	6.6	3.2	17.0
31 Lesotho	..	-110	(.)	(.)	0.5	0.3	8.8	1.9
32 Uganda	24	-129	4	1	0.8	0.1	3.4	2.2
33 Angola	..	..	..	..	..	..	..	..
34 Sudan	-29	-54	13	36	1.3	1.4	10.7	9.4
35 Togo	4	-234	1	13	0.9	5.9	2.9	15.2
36 Kenya	-38	-474	11	45	2.6	2.4	7.9	8.3
37 Senegal	-14	-114	2	31	0.8	5.4	2.8	14.9
38 Indonesia	-286	-773	24	492	0.9	3.1	6.9	13.0
Middle-income countries					1.5 <i>w</i>	2.9 <i>w</i>	9.3 <i>w</i>	13.8 <i>w</i>
39 Egypt	-116	-540	38	386	4.1	8.7	28.7	22.2
40 Ghana	-56	32	12	23	1.1	0.3	5.0	4.4
41 Yemen, PDR	-9	-20	..	1	..	0.2	..	1.7
42 Cameroon	-26	-112	4	46	0.9	2.0	3.1	7.7
43 Liberia	..	-122	6	13	5.5	3.5	..	5.4
44 Honduras	-61	-126	3	31	0.8	3.5	2.8	8.4
45 Zambia	131	-191	23	46	3.2	7.1	5.5	20.8
46 Zimbabwe	..	..	..	..	..	..	..	..
47 Thailand	-234	-1,098	16	96	0.6	0.9	3.3	3.7
48 Bolivia	-16	-301	6	83	2.2	8.5	10.9	48.7
49 Philippines	-23	-991	25	167	1.4	2.8	7.5	13.4
50 Yemen Arab Rep.	..	80	(.)	3	0.2	0.5	..	1.1
51 Congo, People's Rep.	..	-156	3	11	3.2	3.3	..	7.2
52 Nigeria	-348	-3,696	20	75	0.7	0.3	4.1	1.2
53 Papua New Guinea	..	-12	1	23	0.1	1.8	..	4.0
54 El Salvador	12	-230	4	13	0.9	0.8	3.6	2.6
55 Morocco	-101	-1,040	23	252	1.5	4.3	7.7	18.7
56 Peru	245	119	43	317	2.4	7.4	11.6	31.1
57 Ivory Coast	-26	-533	11	199	2.8	5.9	6.7	14.1
58 Nicaragua	-32	23	7	48	3.2	4.6	11.0	12.5
59 Colombia	-249	305	44	172	1.7	1.7	11.6	9.8
60 Paraguay	-13	-109	3	15	1.7	1.4	11.1	7.3
61 Ecuador	-106	-54	7	96	1.5	2.8	9.1	11.7
62 Dominican Rep.	-98	-334	4	39	0.8	1.7	4.5	9.4
63 Guatemala	-2	-192	6	15	1.4	0.4	7.4	1.7
64 Syrian Arab Rep.	-64	-406	6	58	2.1	2.9	10.8	15.1
65 Tunisia	-35	-411	18	95	4.5	3.5	17.5	12.3
66 Jordan	-15	-256	2	24	0.7	2.5	3.6	4.0

	Current account balance before interest payments on external public debt (millions of dollars)		Interest payments on external public debt (millions of dollars)		Debt service as percentage of:			
	1970	1978 ^a	1970	1978	GNP		Exports of goods and services	
					1970	1978 ^a	1970	1978 ^a
67 Malaysia	29	284	21	146	1.7	4.6	3.6	8.8
68 Jamaica	-145	-72	8	70	1.1	7.0	2.5	17.9
69 Lebanon	..	-494	1	4	0.2	..	..	0.8
70 Korea, Rep. of	-553	-455	70	653	3.1	3.9	19.4	10.5
71 Turkey	-28	-1,121	42	182	1.3	0.9	16.3	11.0
72 Algeria	-116	-2,977	10	561	0.8	5.9	3.2	20.9
73 Mexico	-850	-896	218	1,823	2.1	6.9	23.6	59.6
74 Panama	-57	-91	7	130	3.0	25.2	7.7	39.2
75 Taiwan	27	1,979	23	239	1.4	2.6	4.5	4.4
76 Chile	-13	-659	78	290	3.1	7.3	18.9	38.2
77 South Africa	-1,156	2,010	59	366	1.2	4.2	5.1	11.7
78 Costa Rica	-67	-309	7	63	2.9	7.2	9.7	23.0
79 Brazil	-701	-5,310	136	1,725	0.9	2.2	13.5	28.4
80 Uruguay	-29	-66	16	60	2.6	8.7	21.5	45.7
81 Argentina	-36	2,512	121	513	1.9	3.5	21.5	26.8
82 Portugal	..	-337	28	105	1.3	1.1	4.4	3.7
83 Yugoslavia	-276	-834	72	183	1.7	0.7	8.2	3.2
84 Trinidad and Tobago	-74	61	6	22	1.9	0.9	2.6	1.1
85 Venezuela	-64	-4,973	40	394	0.8	1.9	2.9	6.9
86 Hong Kong	..	377	..	15	(.)	0.7	..	..
87 Greece	-364	-1,056	41	206	1.0	1.7	7.2	8.5
88 Singapore	-565	-669	6	78	0.6	4.0	0.6	2.3
89 Spain	151	321	72	600	0.5	1.8	3.6	11.0
90 Israel	-572	-732	41	248	3.1	3.8	12.3	8.1
Industrialized countries^b								
91 Ireland	-189	-178	..	..	..	..	..	..
92 Italy	902	6,355	..	..	..	..	..	..
93 New Zealand	-29	-387	..	..	..	..	..	..
94 United Kingdom	1,865	1,932	..	..	..	..	..	..
95 Finland	-239	606	..	..	..	..	..	..
96 Austria	-23	-1,410	..	..	..	..	..	..
97 Japan	1,980	17,528	..	..	..	..	..	..
98 Australia	-832	-3,845	..	..	..	..	..	..
99 France	67	3,766	..	..	..	..	..	..
100 Netherlands	-487	-1,449	..	..	..	..	..	..
101 Belgium	537	-556	..	..	..	..	..	..
102 Canada	1,078	-4,617	..	..	..	..	..	..
103 Norway	-242	-2,145	..	..	..	..	..	..
104 Germany, Fed. Rep.	850	8,852	..	..	..	..	..	..
105 United States	6,200	-4,432	..	..	..	..	..	..
106 Denmark	-544	-1,469	..	..	..	..	..	..
107 Sweden	-266	-954	..	..	..	..	..	..
108 Switzerland	70	4,403	..	..	..	..	..	..
Capital-surplus oil exporters								
109 Iraq	110	1,209	9	37	0.9	1.1	2.2	1.1
110 Iran	-422	5,370	85	391	3.0	1.2	12.2	3.2
111 Libya	645	1,024	..	..	..	..	..	..
112 Saudi Arabia	71	12,793	..	..	..	..	..	..
113 Kuwait	..	6,166	..	..	..	..	..	..
Centrally planned economies^b								
114 China	..	..	..	..	..	..	..	..
115 Korea, Dem. Rep.	..	..	..	..	..	..	..	..
116 Albania	..	..	..	..	..	..	..	..
117 Cuba	..	..	..	..	..	..	..	..
118 Mongolia	..	..	..	..	..	..	..	..
119 Romania	..	..	..	..	..	..	..	..
120 Bulgaria	..	..	..	..	..	..	..	..
121 Hungary	..	..	..	..	..	..	..	..
122 Poland	..	..	..	..	..	..	..	..
123 USSR	..	..	..	..	..	..	..	..
124 Czechoslovakia	..	..	..	..	..	..	..	..
125 German Dem. Rep.	..	..	..	..	..	..	..	..

a. Figures in italics are for 1977, not 1978.

b. See the technical notes.

Table 14. Flow of External Capital

	Public and publicly guaranteed medium- and long-term loans (millions of dollars)						Net direct private investment (millions of dollars)	
	Gross inflow		Repayment of principal		Net inflow		1970	1978 ^a
	1970	1978	1970	1978	1970	1978		
Low-income countries								
1 Kampuchea, Dem.	..	..	..	..	..	..	..	..
2 Bangladesh	..	488	..	51	..	437	..	..
3 Lao PDR	..	..	..	..	..	..	..	..
4 Bhutan	..	..	..	..	..	..	..	..
5 Ethiopia	27	97	15	17	12	80	4	6
6 Mali	21	68	(.)	6	21	62	..	-5
7 Nepal	1	27	2	2	-1	25	..	..
8 Somalia	4	114	(.)	3	4	111	5	(.)
9 Burundi	1	23	(.)	2	1	21	..	..
10 Chad	6	43	2	12	4	31	1	21
11 Mozambique	..	..	..	..	..	..	..	..
12 Burma	16	315	18	38	-2	277	..	..
13 Upper Volta	2	44	2	5	(.)	39	(.)	..
14 Viet Nam	..	..	..	..	..	..	..	..
15 India	890	1,150	307	595	583	555	6	..
16 Malawi	38	90	3	12	35	78	9	10
17 Rwanda	(.)	19	(.)	1	(.)	18	(.)	5
18 Sri Lanka	61	239	27	64	34	175	(.)	2
19 Guinea	90	112	10	47	80	65	10	..
20 Sierra Leone	8	83	10	28	-2	55	8	19
21 Zaire	31	348	28	342	3	6	42	15
22 Niger	12	69	1	6	11	63	1	..
23 Benin	2	38	1	9	1	29	7	..
24 Pakistan	484	748	114	204	370	544	23	36
25 Tanzania	50	171	10	20	40	151	..	..
26 Afghanistan	34	171	15	37	19	134	..	..
27 Central African Rep.	2	22	2	3	(.)	19	1	8
28 Madagascar	11	50	5	9	6	41	10	1
29 Haiti	4	43	4	8	(.)	35	3	10
30 Mauritania	4	111	3	18	1	93	1	-17
31 Lesotho	(.)	5	(.)	1	(.)	4	..	..
32 Uganda	26	25	4	3	22	22	4	1
33 Angola	..	..	..	..	..	..	..	..
34 Sudan	54	290	22	40	32	250	..	..
35 Togo	5	200	2	32	3	168	1	..
36 Kenya	30	234	15	69	15	165	14	67
37 Senegal	18	196	5	75	13	121	5	..
38 Indonesia	441	1,616	59	977	382	639	83	272
Middle-income countries								
39 Egypt	302	2,464	247	822	55	1,642	..	297
40 Ghana	40	82	12	24	28	58	68	12
41 Yemen, PDR	1	89	..	1	1	88	..	..
42 Cameroon	28	287	4	58	24	229	16	-7
43 Liberia	7	74	12	14	-5	60	..	..
44 Honduras	29	163	3	28	26	135	8	13
45 Zambia	351	104	32	145	319	-41	-297	19
46 Zimbabwe	..	..	..	..	..	..	..	..
47 Thailand	55	740	23	91	32	649	43	53
48 Bolivia	54	531	17	266	37	265	-76	12
49 Philippines	132	1,416	73	484	59	932	-29	163
50 Yemen Arab Rep.	2	101	(.)	12	2	89	..	..
51 Congo, People's Rep.	35	222	6	17	29	205	..	7
52 Nigeria	62	1,305	36	53	26	1,252	205	189
53 Papua New Guinea	25	29	(.)	10	25	19	..	34
54 El Salvador	8	80	6	12	2	68	4	23
55 Morocco	163	1,191	36	296	127	895	20	46
56 Peru	148	842	100	431	48	411	-70	25
57 Ivory Coast	77	948	27	223	50	725	31	10
58 Nicaragua	44	142	17	49	27	93	15	7
59 Colombia	235	341	75	231	160	110	39	60
60 Paraguay	15	139	7	20	8	119	4	22
61 Ecuador	42	503	16	108	26	395	89	40
62 Dominican Rep.	36	164	7	39	29	125	72	40
63 Guatemala	37	107	20	9	17	98	29	118
64 Syrian Arab Rep.	59	683	30	169	29	514	..	..
65 Tunisia	89	576	45	106	44	470	16	89
66 Jordan	14	221	3	34	11	187	..	22

	Public and publicly guaranteed medium- and long-term loans (millions of dollars)						Net direct private investment (millions of dollars)	
	Gross inflow		Repayment of principal		Net inflow		1970	1978 ^a
	1970	1978	1970	1978	1970	1978		
67 Malaysia	43	1,044	45	558	-2	486	94	596
68 Jamaica	15	221	6	114	9	107	161	-11
69 Lebanon	12	91	2	6	10	857	17	..
70 Korea, Rep. of	440	3,919	198	1,142	242	2,777	66	61
71 Turkey	328	798	128	262	200	536	58	95
72 Algeria	292	5,103	33	927	259	4,176	45	135
73 Mexico	797	8,606	476	4,416	321	4,190	323	530
74 Panama	67	986	24	442	43	544	33	9
75 Taiwan	154	621	54	394	100	227	62	110
76 Chile	397	1,491	163	926	234	565	-79	178
77 South Africa	519	1,173	146	1,422	373	-249	318	-789
78 Costa Rica	30	396	21	174	9	222	26	66
79 Brazil	1,063	10,055	333	2,406	730	7,649	407	1,886
80 Uruguay	37	416	47	366	-10	50	..	129
81 Argentina	489	3,203	342	1,578	147	1,625	11	298
82 Portugal	20	1,157	62	98	-42	1,059	..	50
83 Yugoslavia	180	445	168	196	12	249	..	..
84 Trinidad and Tobago	8	161	10	10	-2	151	83	140
85 Venezuela	224	2,707	42	356	182	2,351	-23	68
86 Hong Kong	(.)	117	(.)	79	(.)	38	..	..
87 Greece	164	754	61	354	103	400	50	18
88 Singapore	58	266	6	226	52	40	93	422
89 Spain	268	2,003	122	1,822	146	211	179	428
90 Israel	663	1,365	131	290	532	1,075	40	129
Industrialized countries^b								
91 Ireland							32	250
92 Italy							496	342
93 New Zealand							22	9
94 United Kingdom							-440	-1,515
95 Finland							-34	-29
96 Austria							85	74
97 Japan							-261	-2,341
98 Australia							787	1,266
99 France							248	660
100 Netherlands							-14	-1,231
101 Belgium							162	776
102 Canada							566	-1,721
103 Norway							32	407
104 Germany, Fed. Rep.							-280	-1,953
105 United States							-6,120	-10,404
106 Denmark							75	101
107 Sweden							-105	-334
108 Switzerland							..	..
Capital-surplus oil exporters								
109 Iraq	63	308	18	195	45	113	24	..
110 Iran	940	2,901	235	960	705	1,941	25	802
111 Libya	..	..	..	..	..	..	139	-950
112 Saudi Arabia	..	..	..	..	..	..	20	822
113 Kuwait	..	..	..	..	..	..	..	-131
Centrally planned economies^b								
114 China							..	..
115 Korea, Dem. Rep.							..	..
116 Albania							..	..
117 Cuba							..	..
118 Mongolia							..	..
119 Romania							..	..
120 Bulgaria							..	..
121 Hungary							..	..
122 Poland							..	..
123 USSR							..	..
124 Czechoslovakia							..	..
125 German Dem. Rep.							..	..

a. Figures in italics are for 1977, not 1978.

b. See the technical notes for Table 13.

Table 15. External Public Debt and International Reserves

	External public debt outstanding and disbursed				Gross international reserves		
	Millions of dollars		As percentage of GNP		Millions of dollars		In months of import coverage 1978 ^a
	1970	1978	1970	1978 ^a	1970	1978 ^a	
Low-income countries			18.1 <i>w</i>	21.7 <i>w</i>			3.5 <i>w</i>
1 Kampuchea, Dem.	..	..	..	..	..	..	..
2 Bangladesh	..	2,798	..	38.2	..	322	2.3
3 Lao PDR	..	..	..	..	..	..	..
4 Bhutan	..	..	..	..	..	..	..
5 Ethiopia	169	551	9.5	15.4	72	218	4.4
6 Mali	238	539	88.1	65.3	1	11	0.5
7 Nepal	3	88	0.3	5.4	95	181	7.8
8 Somalia	77	496	41.1	101.7	21	131	4.9
9 Burundi	7	64	3.1	10.6	15	83	12.8
10 Chad	32	156	11.8	23.4	2	14	0.9
11 Mozambique	..	..	..	..	..	..	..
12 Burma	102	818	4.7	18.1	98	151	3.7
13 Upper Volta	21	191	6.4	21.6	36	39	2.1
14 Viet Nam	..	..	..	..	..	..	..
15 India	7,936	15,326	14.8	13.1	1,023	8,316	10.2
16 Malawi	121	390	38.7	36.8	29	77	2.2
17 Rwanda	2	95	0.9	11.1	8	87	3.7
18 Sri Lanka	317	1,013	17.1	41.0	43	406	4.4
19 Guinea	314	916	72.5	81.7	..	..	..
20 Sierra Leone	59	275	14.3	36.1	39	35	1.3
21 Zaire	311	2,566	17.1	33.4	189	196	1.3
22 Niger	32	194	8.7	16.2	19	131	3.4
23 Benin	41	146	16.0	19.5	16	18	0.9
24 Pakistan	3,059	7,568	30.5	40.8	194	795	2.3
25 Tanzania	248	1,095	19.4	25.1	65	96	0.9
26 Afghanistan	547	1,216	58.1	30.8	50	606	10.4
27 Central African Rep.	19	138	11.2	26.5	1	27	1.5
28 Madagascar	94	259	10.9	11.7	37	59	1.2
29 Haiti	40	163	10.3	13.8	4	41	1.6
30 Mauritania	27	574	16.8	138.1	3	82	2.5
31 Lesotho	8	28	9.2	7.5	..	..	..
32 Uganda	128	252	9.8	3.0	57	..	..
33 Angola	..	..	..	..	..	..	..
34 Sudan	309	2,076	11.6	38.6	22	29	0.4
35 Togo	40	494	15.4	65.4	35	73	1.5
36 Kenya	313	953	20.3	17.9	220	369	2.1
37 Senegal	103	587	12.2	29.8	22	23	0.5
38 Indonesia	2,443	13,089	27.1	27.6	160	2,676	2.6
Middle-income countries			10.8 <i>w</i>	17.6 <i>w</i>			2.5 <i>w</i>
39 Egypt	1,639	9,879	23.7	71.5	165	1,049	1.9
40 Ghana	489	843	22.6	5.3	58	330	3.6
41 Yemen, PDR	1	349	0.3	47.5	60	194	5.6
42 Cameroon	131	1,167	13.0	30.2	81	57	0.5
43 Liberia	158	334	49.6	42.3	..	18	0.5
44 Honduras	90	591	12.9	34.9	20	187	2.6
45 Zambia	596	1,396	34.5	51.6	515	96	1.0
46 Zimbabwe	..	..	..	..	..	..	..
47 Thailand	322	1,777	4.9	8.2	911	2,559	4.9
48 Bolivia	477	1,666	46.4	40.7	46	314	3.3
49 Philippines	633	4,188	9.2	18.0	255	2,104	4.0
50 Yemen Arab Rep.	147	464	49.9	14.3	..	1,461	15.3
51 Congo, People's Rep.	129	726	49.4	85.5	9	11	0.2
52 Nigeria	478	2,180	6.4	4.5	223	2,037	1.7
53 Papua New Guinea	36	370	6.2	21.2	..	431	5.1
54 El Salvador	88	333	8.6	11.0	63	381	3.5
55 Morocco	711	5,139	18.6	40.1	141	773	2.2
56 Peru	848	5,367	14.0	53.1	338	738	3.3
57 Ivory Coast	256	2,818	18.3	39.5	119	455	1.5
58 Nicaragua	155	964	20.6	45.8	50	58	0.9
59 Colombia	1,249	2,833	18.1	12.2	207	2,810	8.3
60 Paraguay	98	447	16.7	17.4	18	467	9.2
61 Ecuador	213	1,563	13.3	21.5	85	762	4.7
62 Dominican Rep.	212	724	14.6	16.1	32	176	1.7
63 Guatemala	106	374	5.7	6.0	80	857	6.0
64 Syrian Arab Rep.	232	2,091	13.6	26.6	57	622	2.6
65 Tunisia	545	2,359	38.8	40.5	60	479	2.4
66 Jordan	118	840	19.0	36.1	258	1,069	6.2

	External public debt outstanding and disbursed				Gross international reserves		
	Millions of dollars		As percentage of GNP		Millions of dollars		In months of import coverage 1978 ^a
	1970	1978	1970	1978 ^a	1970	1978 ^a	
67 Malaysia	390	2,671	10.0	17.6	667	3,670	5.5
68 Jamaica	154	1,036	11.5	39.4	139	53	0.5
69 Lebanon	64	125	4.2	..	405	3,918	25.4
70 Korea, Rep. of	1,797	11,992	20.9	26.1	610	2,828	1.8
71 Turkey	1,854	6,188	14.4	12.2	440	1,662	3.6
72 Algeria	937	13,168	18.5	52.6	352	3,230	3.6
73 Mexico	3,238	25,775	9.8	28.7	756	2,269	2.0
74 Panama	194	1,910	19.0	84.1	16	151	1.1
75 Taiwan	601	2,903	10.6	12.1	627	1,950	1.8
76 Chile	2,066	4,359	26.2	26.2	392	1,405	4.0
77 South Africa	1,089	5,704	6.3	13.3	1,057	2,636	2.3
78 Costa Rica	134	963	13.8	29.3	16	212	1.8
79 Brazil	3,589	28,821	8.0	15.6	1,190	12,191	6.7
80 Uruguay	267	766	11.0	15.7	186	1,111	12.5
81 Argentina	1,880	6,801	7.6	11.4	682	5,934	12.2
82 Portugal	473	2,642	7.0	14.0	1,565	5,873	11.7
83 Yugoslavia	1,198	3,454	8.5	6.4	144	2,756	2.6
84 Trinidad and Tobago	101	417	12.5	12.2	43	1,813	8.0
85 Venezuela	728	6,921	6.7	17.1	1,047	8,571	6.6
86 Hong Kong	2	223	0.1	1.6	..	..	..
87 Greece	905	3,123	8.9	9.7	318	1,851	2.8
88 Singapore	152	1,134	7.9	14.8	1,012	5,302	4.6
89 Spain	1,209	7,631	3.3	5.5	1,851	13,394	7.2
90 Israel	2,274	9,209	41.3	65.7	451	2,890	3.5
Industrialized countries^b							4.2 w
91 Ireland					698	2,770	4.4
92 Italy					5,547	29,831	5.4
93 New Zealand					258	467	1.2
94 United Kingdom					2,918	21,184	2.7
95 Finland					458	1,438	1.8
96 Austria					1,806	9,804	5.6
97 Japan					4,876	37,824	4.7
98 Australia					1,709	3,823	2.2
99 France					5,199	32,328	3.8
100 Netherlands					3,362	17,469	3.4
101 Belgium					2,947	13,591	2.9
102 Canada					4,732	8,562	1.7
103 Norway					813	3,116	2.0
104 Germany, Fed. Rep.					13,879	75,287	5.8
105 United States					15,237	69,448	3.8
106 Denmark					488	3,577	2.3
107 Sweden					775	5,479	2.5
108 Switzerland					5,317	36,584	15.1
Capital-surplus oil exporters			..	..			7.9 w
109 Iraq	274	878	8.8	4.0	472	7,237	9.2
110 Iran	2,193	8,251	20.8	8.2	217	12,840	6.4
111 Libya	..	..	..	..	1,596	4,659	6.0
112 Saudi Arabia	..	..	..	..	670	20,227	12.1
113 Kuwait	..	..	..	..	209	3,072	5.7
Centrally planned economies^b							
114 China					..	..	..
115 Korea, Dem. Rep.					..	..	..
116 Albania					..	..	..
117 Cuba					..	..	..
118 Mongolia					..	..	..
119 Romania					..	..	..
120 Bulgaria					..	..	..
121 Hungary					..	..	..
122 Poland					..	..	..
123 USSR					..	..	..
124 Czechoslovakia					..	..	..
125 German Dem. Rep.					..	..	..

a. Figures in italics are for 1977, not 1978.

b. See the technical notes for Table 13.

Table 16. Official Development Assistance from OECD and OPEC Members

	Amount								
	1960	1965	1970	1975	1976	1977	1978	1979	1980 ^a
OECD Millions of US dollars									
92 Italy	77	60	147	182	226	186	375	279	320
93 New Zealand	..	..	14	66	53	52	55	62	65
94 United Kingdom	407	472	500	910	885	1,120	1,456	2,067	2,453
95 Finland	..	2	7	48	51	49	55	86	104
96 Austria	..	10	11	79	48	108	166	127	174
97 Japan	105	244	458	1,148	1,105	1,424	2,215	2,638	3,071
98 Australia	59	119	212	552	377	400	588	620	690
99 France	823	752	971	2,093	2,146	2,267	2,705	3,358	3,836
100 Netherlands	35	70	196	608	728	908	1,074	1,404	1,547
101 Belgium	101	102	120	378	340	371	536	631	714
102 Canada	75	96	337	848	763	945	1,060	1,042	1,151
103 Norway	5	11	37	184	218	295	355	428	491
104 Germany, Fed. Rep.	223	456	599	1,689	1,592	1,717	2,347	3,350	3,581
105 United States	2,702	4,023	3,153	4,161	4,360	4,682	5,664	4,567	4,567
106 Denmark	5	13	59	205	214	258	388	448	488
107 Sweden	7	38	117	566	608	779	783	956	1,124
108 Switzerland	4	12	30	104	112	119	173	205	218
Total	4,628	6,478	6,967	13,820	13,829	15,680	19,994	22,267	24,594
OECD As percentage of donor GNP									
92 Italy	.22	.10	.16	.11	.13	.10	.14	.09	.09
93 New Zealand	..	..	.23	.52	.41	.39	.34	.30	.30
94 United Kingdom	.56	.47	.41	.39	.40	.46	.48	.52	.52
95 Finland	..	.02	.06	.18	.17	.16	.17	.21	.22
96 Austria	..	.11	.07	.21	.12	.22	.29	.19	.23
97 Japan	.24	.27	.23	.23	.20	.21	.23	.26	.27
98 Australia	.37	.53	.59	.59	.41	.42	.54	.52	.51
99 France	1.35	.76	.66	.62	.62	.60	.57	.59	.59
100 Netherlands	.31	.36	.61	.75	.83	.86	.82	.93	.94
101 Belgium	.88	.60	.46	.59	.51	.46	.55	.56	.59
102 Canada	.19	.19	.41	.52	.39	.48	.52	.47	.46
103 Norway	.11	.16	.32	.66	.70	.83	.90	.93	.95
104 Germany, Fed. Rep.	.31	.40	.32	.40	.36	.33	.37	.44	.44
105 United States	.53	.58	.32	.27	.26	.25	.27	.19	.18
106 Denmark	.09	.13	.38	.58	.56	.60	.75	.75	.67
107 Sweden	.05	.19	.38	.82	.82	.99	.90	.94	.95
108 Switzerland	.04	.09	.15	.19	.19	.19	.20	.21	.22
OECD National currencies									
92 Italy (billions of lire)	48	38	92	119	188	148	318	233	262
93 New Zealand (millions of dollars)	..	..	13	55	53	54	53	61	64
94 United Kingdom (millions of pounds)	145	168	208	411	490	642	759	974	1,096
95 Finland (millions of markkaa)	..	6	29	177	195	196	226	335	400
96 Austria (millions of schillings)	..	260	286	1,376	861	1,785	2,411	1,698	2,327
97 Japan (billions of yen)	38	88	165	341	328	383	466	578	669
98 Australia (millions of dollars)	53	106	189	422	308	361	514	555	611
99 France (millions of francs)	4,063	3,713	5,393	8,975	10,255	11,762	12,207	14,287	16,334
100 Netherlands (millions of guilders)	133	253	710	1,538	1,925	2,229	2,323	2,817	3,106
101 Belgium (millions of francs)	5,050	5,100	6,000	13,903	13,129	13,234	16,836	18,500	20,913
102 Canada (millions of dollars)	73	104	353	863	752	1,005	1,209	1,221	1,347
103 Norway (millions of kroner)	36	78	264	962	1,190	1,570	1,861	2,167	2,470
104 Germany, Fed. Rep. (millions of deutsche marks)	937	1,824	2,192	4,156	4,009	3,987	4,715	6,140	6,550
105 United States (millions of dollars)	2,702	4,023	3,153	4,161	4,360	4,682	5,664	4,567	4,567
106 Denmark (millions of kroner)	35	90	443	1,178	1,294	1,549	2,140	2,357	2,573
107 Sweden (millions of kroner)	36	196	605	2,350	2,647	3,504	3,538	4,098	4,743
108 Switzerland (millions of francs)	17	52	131	260	281	284	309	341	361
OECD Summary									
ODA (billions of US dollars, nominal prices)	4.6	6.5	7.0	13.8	13.8	15.7	20.0	22.3	24.6
ODA as percentage of GNP	.51	.49	.34	.36	.33	.33	.35	.34	.34
ODA (billions of US dollars, constant 1978 prices)	13.1	16.7	14.9	17.9	17.3	18.0	20.0	20.1	20.2
GNP (trillions of US dollars, nominal prices)	.9	1.3	2.0	3.8	4.2	4.7	5.6	6.5	7.2
ODA deflator ^c	.35	.39	.47	.77	.80	.87	1.00	1.11	1.22

1981 ^a	1982 ^a	1983 ^a	1984 ^a	1985 ^a
385	461	554	605	668
73	81	90	99	108
2,573	2,674	2,765	2,903	3,041
121	141	164	191	223
212	256	294	336	384
3,532	4,061	4,671	5,371	6,177
768	854	943	1,062	1,172
4,282	4,786	5,369	5,932	6,546
1,749	1,976	2,213	2,457	2,745
814	928	1,057	1,205	1,374
1,279	1,420	1,552	1,701	1,863
558	631	707	790	882
4,029	4,533	5,100	5,737	6,336
6,250	6,966	7,662	8,416	9,421
571	638	707	781	861
1,259	1,400	1,545	1,702	1,872
276	318	350	400	455
28,731	32,124	35,743	39,688	44,128
.10	.10	.11	.11	.11
.30	.30	.30	.30	.30
.49	.45	.42	.40	.38
.23	.24	.26	.27	.28
.25	.27	.28	.29	.30
.27	.28	.28	.29	.30
.50	.50	.50	.51	.51
.59	.59	.60	.60	.60
.94	.96	.97	.98	.99
.60	.61	.63	.65	.67
.45	.45	.45	.44	.44
.96	.97	.98	.99	1.00
.44	.44	.45	.46	.46
.22	.22	.22	.22	.22
.70	.70	.70	.70	.70
.95	.95	.95	.95	.95
.25	.26	.26	.27	.28
315	377	453	495	547
72	80	89	98	106
1,150	1,195	1,235	1,297	1,359
465	542	631	734	857
2,835	3,423	3,931	4,493	5,134
770	885	1,018	1,170	1,346
681	757	836	941	1,039
18,233	20,379	22,861	25,258	27,873
3,512	3,968	4,444	4,934	5,512
23,842	27,181	30,960	35,294	40,244
1,497	1,662	1,816	1,991	2,180
2,807	3,174	3,556	3,974	4,437
7,369	8,291	9,328	10,494	11,589
6,250	6,966	7,662	8,416	9,241
3,010	3,363	3,727	4,117	4,539
5,313	5,908	6,520	7,182	7,899
457	526	579	662	753
28.7	32.1	35.7	39.7	44.1
.36	.36	.36	.36	.36
21.6	22.3	23.2	24.1	25.2
8.0	9.0	9.9	11.0	12.1
1.33	1.44	1.54	1.65	1.75

	Amount				
	1975	1976	1977	1978 ^b	1979 ^b
OPEC					
Millions of US dollars					
52 Nigeria	14	83	64	38	28
72 Algeria	41	54	48	44	45
85 Venezuela	31	103	52	109	83
109 Iraq	218	232	61	172	861
110 Iran	593	753	224	278	21
111 Libya	261	94	115	169	146
112 Saudi Arabia	1,997	2,407	2,410	1,470	1,970
113 Kuwait	976	615	1,518	1,268	1,099
Qatar	339	195	197	106	251
United Arab Emirates	1,046	1,060	1,177	690	207
Total OAPEC ^d	4,879	4,656	5,526	3,919	4,579
Total OPEC	5,516	5,596	5,866	4,344	4,711

	As percentage of donor GNP				
	1975	1976	1977	1978 ^b	1979 ^b
OPEC					
As percentage of donor GNP					
52 Nigeria	.05	.25	.16	.08	.05
72 Algeria	.28	.33	.25	.18	.14
85 Venezuela	.11	.33	.14	.28	.18
109 Iraq	1.65	1.44	.32	.76	2.94
110 Iran	1.13	1.13	.27	.33	.03
111 Libya	2.31	.63	.65	.93	.58
112 Saudi Arabia	5.40	5.73	4.32	2.76	3.15
113 Kuwait	8.12	4.36	10.61	6.35	5.14
Qatar	15.62	7.95	7.93	3.65	5.60
United Arab Emirates	14.12	11.02	10.22	5.60	1.58
Total OAPEC ^d	4.99	4.03	3.95	2.55	2.43
Total OPEC	2.71	2.27	1.96	1.35	1.28

Net bilateral flow to low-income countries

	1960	1965	1970	1975	1976	1977	1978
OECD							
As percentage of donor GNP							
92 Italy	.03	.04	.06	.01	.01	.02	.01
93 New Zealand	..	..	..	.14	.06	.04	.03
94 United Kingdom	.22	.23	.15	.11	.14	.11	.15
95 Finland	..	..	..	.06	.07	.06	.04
96 Austria	..	.06	.05	.02	.02	.01	.01
97 Japan	.12	.13	.11	.08	.08	.06	.07
98 Australia	..	.08	.09	.10	.07	.07	.08
99 France	.01	.12	.10	.12	.12	.10	.10
100 Netherlands	.19	.08	.24	.24	.26	.33	.34
101 Belgium	.27	.56	.30	.31	.26	.24	.23
102 Canada	.11	.10	.22	.24	.14	.13	.17
103 Norway	.02	.04	.12	.25	.22	.30	.39
104 Germany, Fed. Rep.	.13	.14	.10	.12	.09	.07	.10
105 United States	.22	.26	.14	.08	.05	.03	.04
106 Denmark	..	.02	.10	.20	.21	.24	.21
107 Sweden	.01	.07	.12	.41	.40	.44	.37
108 Switzerland	..	.02	.05	.10	.07	.05	.08
Total	.18	.20	.13	.11	.09	.07	.09

a. Estimated.

b. Provisional.

c. See the technical notes.

d. Organization of Arab Petroleum Exporting Countries.

Table 17. Population Growth, Past and Projected, and Hypothetical Stationary Population^a

	Average annual growth of population (percent)		Projected population (millions)		Hypothetical size of stationary population (millions)	Assumed year of reaching net reproduction rate of 1	Year of reaching stationary population
	1960-70	1970-78	1980	2000			
Low-income countries	2.5 <i>w</i>	2.2 <i>w</i>	1,348 <i>t</i>	2,050 <i>t</i>	4,074 <i>t</i>		
1 Kampuchea, Dem.	..	..	..	..	..	..	..
2 Bangladesh	2.5	2.7	89	143	314	2035	2160
3 Lao PDR	2.2	1.3	3	5	11	2035	2175
4 Bhutan	2.0	2.1	1	2	4	2035	2165
5 Ethiopia	2.4	2.5	33	52	139	2045	2175
6 Mali	2.4	2.5	7	11	28	2040	2170
7 Nepal	2.0	2.2	14	21	46	2035	2160
8 Somalia	2.4	2.3	4	6	17	2045	2170
9 Burundi	2.4	2.0	5	8	21	2045	2160
10 Chad	1.8	2.2	5	7	18	2045	2165
11 Mozambique	2.2	2.5	10	17	44	2040	2135
12 Burma	2.2	2.2	34	51	92	2020	2145
13 Upper Volta	1.6	1.6	6	9	24	2040	2170
14 Viet Nam	3.1	2.9	55	87	149	2015	2105
15 India	2.5	2.0	672	974	1,645	2020	2150
16 Malawi	2.8	2.9	6	11	32	2045	2165
17 Rwanda	2.6	2.9	5	8	24	2045	2160
18 Sri Lanka	2.4	1.7	15	21	31	2010	2070
19 Guinea	2.8	2.9	5	9	23	2045	2170
20 Sierra Leone	2.2	2.5	3	6	14	2035	2160
21 Zaire	2.0	2.7	28	47	125	2045	2160
22 Niger	3.3	2.8	5	9	24	2040	2170
23 Benin	2.6	2.8	4	6	15	2035	2160
24 Pakistan	2.8	3.1	82	139	332	2035	2150
25 Tanzania	2.7	3.0	18	32	92	2045	2145
26 Afghanistan	2.2	2.2	15	25	65	2045	2175
27 Central African Rep.	2.2	2.2	2	3	8	2045	2165
28 Madagascar	2.2	2.5	9	14	38	2045	2160
29 Haiti	1.5	1.7	5	8	17	2030	2145
30 Mauritania	2.5	2.7	2	3	7	2040	2150
31 Lesotho	2.0	2.3	1	2	5	2045	2155
32 Uganda	3.7	2.9	13	23	58	2035	2130
33 Angola	1.5	2.3	7	11	29	2040	2155
34 Sudan	2.2	2.6	18	31	88	2045	2135
35 Togo	2.7	2.7	3	4	12	2040	2135
36 Kenya	3.4	3.3	16	32	109	2045	2140
37 Senegal	2.4	2.6	6	9	24	2040	2150
38 Indonesia	2.2	1.8	142	204	350	2020	2155
Middle-income countries	2.5 <i>w</i>	2.4 <i>w</i>	916 <i>t</i>	1,409 <i>t</i>	2,599 <i>t</i>		
39 Egypt	2.5	2.2	42	62	101	2015	2105
40 Ghana	2.4	3.0	12	21	56	2040	2130
41 Yemen, PDR	1.9	1.9	2	3	6	2030	2125
42 Cameroon	1.8	2.2	8	13	31	2040	2135
43 Liberia	3.1	3.3	2	3	9	2040	2130
44 Honduras	3.1	3.3	4	7	15	2030	2090
45 Zambia	2.8	3.0	6	10	28	2040	2130
46 Zimbabwe	3.9	3.3	7	13	37	2040	2105
47 Thailand	3.0	2.7	46	68	103	2005	2095
48 Bolivia	2.5	2.6	6	9	20	2030	2120
49 Philippines	3.0	2.7	48	75	126	2015	2075
50 Yemen Arab Rep.	1.8	1.9	6	9	19	2030	2170
51 Congo, People's Rep.	2.1	2.5	2	3	7	2045	2115
52 Nigeria	2.5	2.5	85	153	425	2040	2135
53 Papua New Guinea	2.3	2.4	3	5	9	2025	2120
54 El Salvador	2.9	2.9	5	8	14	2015	2075
55 Morocco	2.5	2.9	20	34	70	2025	2090
56 Peru	2.8	2.7	18	29	57	2025	2090
57 Ivory Coast	3.7	5.6	8	14	37	2040	2130
58 Nicaragua	2.9	3.3	3	5	9	2020	2090
59 Colombia	3.0	2.3	27	39	57	2005	2070
60 Paraguay	2.6	2.8	3	5	9	2015	2075
61 Ecuador	3.1	3.3	8	14	26	2020	2080
62 Dominican Rep.	2.9	2.9	5	9	16	2015	2075
63 Guatemala	2.8	2.9	7	12	23	2025	2085
64 Syrian Arab Rep.	3.2	3.2	9	15	33	2025	2085
65 Tunisia	1.9	2.0	6	9	14	2010	2075
66 Jordan	3.0	3.3	3	5	12	2025	2090

	Average annual growth of population (percent)		Projected population (millions)		Hypothetical size of stationary population (millions)	Assumed year of reaching net reproduction rate of 1	Year of reaching stationary population
	1960-70	1970-78	1980	2000			
67 Malaysia	2.9	2.7	14	20	30	2005	2070
68 Jamaica	1.4	1.7	2	3	5	2005	2065
69 Lebanon	2.8	2.5	3	5	8	2010	2070
70 Korea, Rep. of	2.4	1.9	38	50	66	2005	2070
71 Turkey	2.5	2.5	45	65	100	2010	2075
72 Algeria	2.4	3.2	19	34	94	2040	2100
73 Mexico	3.3	3.3	70	116	205	2015	2075
74 Panama	2.9	2.6	2	3	4	2005	2065
75 Taiwan	2.6	2.0	18	24	30	2005	2065
76 Chile	2.1	1.7	11	15	19	2005	2070
77 South Africa	2.6	2.7	29	49	107	2030	2090
78 Costa Rica	3.4	2.5	2	3	5	2005	2065
79 Brazil	2.9	2.8	126	201	345	2015	2075
80 Uruguay	1.1	0.3	3	4	4	2005	2070
81 Argentina	1.4	1.3	27	33	41	2005	2065
82 Portugal	0.0	1.0	10	12	14	2005	2100
83 Yugoslavia	1.0	0.9	22	26	29	2005	2095
84 Trinidad and Tobago	2.0	1.2	1	2	2	2005	2065
85 Venezuela	3.4	3.3	15	24	40	2010	2070
86 Hong Kong	2.5	1.9	5	6	8	2005	2065
87 Greece	0.5	0.7	9	10	11	2005	2065
88 Singapore	2.4	1.5	2	3	4	2005	2065
89 Spain	1.1	1.2	38	44	51	2005	2065
90 Israel	3.4	2.7	4	5	8	2020	2080
Industrialized countries	1.0 w	0.7 w	673 t	736 t	774 t		
91 Ireland	0.4	1.2	3	4	5	2005	2065
92 Italy	0.7	0.7	57	61	63	2005	2035
93 New Zealand	1.7	1.6	3	4	5	2005	2075
94 United Kingdom	0.5	0.1	56	58	59	2005	2025
95 Finland	0.4	0.4	5	5	5	2005	2020
96 Austria	0.5	0.2	7	8	8	2005	2025
97 Japan	1.0	1.2	117	131	134	2005	2015
98 Australia	2.0	1.6	14	17	19	2005	2075
99 France	1.0	0.6	54	58	61	2005	2030
100 Netherlands	1.3	0.8	14	15	16	2005	2025
101 Belgium	0.5	0.3	10	10	10	2005	2025
102 Canada	1.8	1.2	24	28	30	2005	2030
103 Norway	0.8	0.6	4	4	5	2005	2030
104 Germany, Fed. Rep.	0.9	0.1	61	61	61	2005	2005
105 United States	1.3	0.8	225	252	273	2005	2030
106 Denmark	0.7	0.4	5	5	5	2005	2020
107 Sweden	0.7	0.4	8	8	8	2005	2005
108 Switzerland	1.6	0.1	6	7	7	2005	2005
Capital-surplus oil exporters	2.9 w	3.2 w	64 t	104 t	203 t		
109 Iraq	3.1	3.3	13	23	48	2025	2085
110 Iran	2.7	2.9	38	59	102	2015	2105
111 Libya	3.8	4.1	3	5	12	2030	2090
112 Saudi Arabia	2.6	3.5	9	15	35	2030	2090
113 Kuwait	9.8	6.1	1	2	6	2030	2085
Centrally planned economies	1.7 w	1.4 w	1,386 t	1,730 t	2,121 t		
114 China	2.1	1.6	977	1,251	1,555	2005	2065
115 Korea, Dem. Rep.	2.8	2.6	18	27	43	2010	2070
116 Albania	2.8	2.5	3	4	6	2005	2060
117 Cuba	2.0	1.6	10	13	17	2005	2070
118 Mongolia	2.9	2.9	2	3	4	2005	2090
119 Romania	1.0	0.9	22	26	30	2005	2090
120 Bulgaria	0.8	0.5	9	10	10	2005	2080
121 Hungary	0.4	0.4	11	11	12	2005	2085
122 Poland	1.0	0.9	36	41	47	2005	2090
123 USSR	1.2	0.9	266	310	360	2005	2095
124 Czechoslovakia	0.5	0.7	15	17	19	2005	2090
125 German Dem. Rep.	-0.1	-0.2	17	17	18	2005	2015
Total ^b			4,387	6,029	9,771		

a. For the assumptions used in the projections, see the technical notes.

b. Excludes countries with populations of less than one million.

Table 18. Demographic and Fertility-related Indicators

	Crude birth rate per thousand population		Crude death rate per thousand population		Percentage change in:		Total fertility rate 1978	Percentage of women in reproductive age group (aged 15-44) 1978	Percentage of married women using contraceptives ^a	
	1960	1978	1960	1978	Crude birth rate 1960-78	Crude death rate 1960-78			1970	1977
	48 w	39 w	24 w	15 w	-14.4 w	-31.5 w			5.4 w	44 w
Low-income countries	48 w	39 w	24 w	15 w	-14.4 w	-31.5 w	5.4 w	44 w	..	..
1 Kampuchea, Dem.	..	..	..	..	..	..	..	..	..	..
2 Bangladesh	51	46	25	18	-9.8	-28.0	6.1	45	..	9
3 Lao PDR	44	45	23	22	2.3	-4.3	6.4	40	..	..
4 Bhutan	46	44	28	23	-4.3	-17.9	6.2	43	..	..
5 Ethiopia	51	49	28	25	-3.9	-10.7	6.7	42	..	..
6 Mali	50	49	27	22	-2.0	-18.5	6.7	41	..	..
7 Nepal	46	45	29	21	-2.2	-27.6	6.5	42	1	4
8 Somalia	57	48	29	20	-15.8	-31.0	6.1	44	..	..
9 Burundi	48	47	27	20	-2.1	-25.9	6.3	42	..	..
10 Chad	46	44	29	21	-4.3	-27.6	5.9	42	..	..
11 Mozambique	46	46	26	19	0.0	-26.9	6.1	41	..	..
12 Burma	43	39	22	14	-9.3	-36.4	5.5	42	..	..
13 Upper Volta	49	48	27	22	-2.0	-18.5	6.5	42	..	..
14 Viet Nam	47	37	21	9	-21.3	-57.1	5.5	41	..	..
15 India	43	35	21	14	-18.6	-33.3	5.0	44	12	17
16 Malawi	53	52	27	20	-1.9	-25.9	7.0	39	..	..
17 Rwanda	51	51	27	19	0.0	-29.6	6.9	40	..	..
18 Sri Lanka	36	26	9	6	-27.8	-33.3	3.6	46	8	41
19 Guinea	47	46	30	21	-2.1	-30.0	6.2	42	..	..
20 Sierra Leone	47	46	27	19	-2.1	-29.6	6.1	41	..	..
21 Zaire	48	46	24	19	-4.2	-20.8	6.1	42	..	(.)
22 Niger	52	51	27	22	-1.9	-18.5	7.1	41	..	..
23 Benin	51	49	27	19	-3.9	-29.6	6.7	41	..	..
24 Pakistan	48	45	23	15	-6.3	-34.8	6.7	40	4	6
25 Tanzania	47	48	22	16	2.1	-27.3	6.5	40	..	..
26 Afghanistan	48	48	30	22	0.0	-26.7	6.9	41	..	1
27 Central African Rep.	42	42	26	19	0.0	-26.9	5.5	42	..	..
28 Madagascar	47	45	27	19	-4.3	-29.6	6.1	41	..	..
29 Haiti	45	43	23	17	-4.4	-26.1	5.9	42	..	5
30 Mauritania	51	50	27	22	-2.0	-18.5	6.9	41	..	..
31 Lesotho	40	40	23	16	0.0	-30.4	5.4	42	..	..
32 Uganda	45	45	21	14	0.0	-33.3	6.1	41	..	..
33 Angola	50	48	31	23	-4.0	-25.8	6.4	42	..	..
34 Sudan	47	45	25	18	-4.3	-28.0	6.6	42	..	..
35 Togo	51	50	27	19	-2.0	-29.6	6.7	41	..	..
36 Kenya	51	51	19	14	0.0	-26.3	7.8	39	2	4
37 Senegal	48	49	27	22	2.1	-18.5	6.5	41	..	..
38 Indonesia	47	37	23	17	-21.3	-26.1	4.9	44	(.)	19
Middle-income countries	40 w	35 w	14 w	11 w	-17.4 w	-29.9 w	4.9 w	43 w	..	..
39 Egypt	45	37	19	13	-17.8	-31.6	5.0	44	9	21
40 Ghana	49	48	24	17	-2.0	-29.2	6.7	41	2	4
41 Yemen, PDR	54	48	30	21	-11.1	-30.0	7.0	41	..	..
42 Cameroon	43	42	27	19	-2.3	-29.6	5.7	41	..	..
43 Liberia	51	51	25	18	0.0	-28.0	6.9	40	..	..
44 Honduras	51	47	19	12	-7.8	-36.8	6.9	39	..	9
45 Zambia	51	49	24	17	-3.9	-29.2	6.9	40	..	..
46 Zimbabwe	47	48	19	14	2.1	-26.3	6.6	40	..	5
47 Thailand	46	32	17	8	-30.4	-52.9	4.5	42	27	40
48 Bolivia	48	44	23	15	-8.3	-34.8	6.5	41	..	..
49 Philippines	45	35	15	9	-22.2	-40.0	5.0	42	2	22
50 Yemen Arab Rep.	49	48	29	25	-2.0	-13.8	6.8	41	..	..
51 Congo, People's Rep.	46	45	27	19	-2.2	-29.6	6.0	42	..	..
52 Nigeria	52	50	25	18	-3.8	-28.0	6.9	41	..	..
53 Papua New Guinea	44	41	23	16	-6.8	-30.4	6.0	42	..	3
54 El Salvador	48	39	17	9	-18.8	-47.1	5.5	41	..	22
55 Morocco	52	45	23	13	-13.5	-43.5	6.5	41	1	5
56 Peru	47	39	19	12	-17.0	-36.8	5.6	43	..	1
57 Ivory Coast	50	50	27	19	0.0	-29.6	6.7	42	..	..
58 Nicaragua	51	45	19	13	-11.8	-31.6	6.2	41	..	19
59 Colombia	46	31	14	8	-32.6	-42.9	4.0	45	..	36
60 Paraguay	43	39	13	9	-9.3	-30.8	5.8	41	..	16
61 Ecuador	47	44	14	10	-6.4	-28.6	6.5	41	..	6
62 Dominican Rep.	50	37	16	9	-26.0	-43.8	5.3	42	..	31
63 Guatemala	48	41	18	12	-14.6	-33.3	5.7	43	..	3
64 Syrian Arab Rep.	47	45	26	13	-4.3	-50.0	7.4	38	..	(.)
65 Tunisia	49	32	21	12	-34.7	-42.9	4.6	42	8	18
66 Jordan	48	46	20	13	-4.2	-35.0	7.0	41	..	..

	Crude birth rate per thousand population		Crude death rate per thousand population		Percentage change in:		Total fertility rate 1978	Percentage of women in reproductive age group (aged 15-44) 1978	Percentage of married women using contraceptives ^a	
	1960	1978	1960	1978	Crude birth rate 1960-78	Crude death rate 1960-78			1970	1977
67 Malaysia	39	29	9	6	-25.6	-33.3	3.9	44	7	36
68 Jamaica	39	29	9	6	-25.6	-33.3	4.2	39	..	40
69 Lebanon	43	33	14	8	-23.3	-42.9	4.7	42	14	..
70 Korea, Rep. of	41	21	13	8	-48.8	-38.5	2.8	47	32	44
71 Turkey	44	32	17	10	-27.3	-41.2	4.4	43	8	38
72 Algeria	50	48	23	14	-4.0	-39.1	7.3	39	..	..
73 Mexico	45	38	12	8	-15.6	-33.3	5.7	41	..	21
74 Panama	41	31	10	6	-24.4	-40.0	4.1	43	..	44
75 Taiwan	39	21	7	5	-46.2	-28.6	2.5	49	44	65
76 Chile	37	22	12	7	-40.5	-41.7	2.7	46	..	..
77 South Africa	39	38	15	10	-2.6	-33.3	5.1	42	..	..
78 Costa Rica	47	28	10	5	-40.4	-50.0	3.6	46	..	67
79 Brazil	40	36	11	9	-10.0	-18.2	4.9	43	2	..
80 Uruguay	22	20	9	9	-9.1	0.0	2.9	41	..	..
81 Argentina	24	21	9	8	-12.5	-11.1	2.9	43	..	..
82 Portugal	24	18	8	10	-25.0	25.0	2.5	42	..	..
83 Yugoslavia	23	18	10	8	-21.7	-20.0	2.2	45	59	..
84 Trinidad and Tobago	37	22	7	6	-40.5	-14.3	2.6	46	44	..
85 Venezuela	45	36	10	7	-20.0	-30.0	4.9	43	..	..
86 Hong Kong	35	19	7	6	-45.7	-14.3	2.6	45	51	77
87 Greece	19	15	8	9	-21.1	12.5	2.3	40	..	..
88 Singapore	38	17	8	6	-55.3	-25.0	2.1	51	45	71
89 Spain	21	18	9	8	-14.3	-11.1	2.6	41	..	..
90 Israel	26	26	8	7	0.0	-12.5	3.5	42	..	..
Industrialized countries	<i>20 w</i>	<i>14 w</i>	<i>10 w</i>	<i>9 w</i>	<i>-31.3 w</i>	<i>-6.0 w</i>	<i>1.8 w</i>	<i>43 w</i>	..	..
91 Ireland	21	21	12	11	0.0	-8.3	3.5	39	..	..
92 Italy	18	13	10	9	-27.8	-10.0	1.9	41	..	..
93 New Zealand	26	17	9	8	-34.6	-11.1	2.2	44	..	..
94 United Kingdom	17	12	12	12	-29.4	0.0	1.7	39	72	..
95 Finland	19	14	9	9	-26.3	0.0	1.7	44	77	..
96 Austria	18	11	13	12	-38.9	-7.7	1.7	39	..	..
97 Japan	18	15	8	6	-16.7	-25.0	1.8	46	..	61
98 Australia	22	16	9	8	-27.3	-11.1	2.1	44	66	..
99 France	18	14	12	10	-22.2	-16.7	1.9	41	64	..
100 Netherlands	21	13	8	8	-38.1	0.0	1.6	44	59	71
101 Belgium	17	12	12	11	-29.4	-8.3	1.8	41	..	87
102 Canada	27	16	8	8	-40.7	0.0	1.9	47	..	..
103 Norway	18	13	9	10	-27.8	11.1	1.8	39	..	..
104 Germany, Fed. Rep.	17	9	11	12	-47.1	9.1	1.4	40	..	..
105 United States	24	15	9	9	-37.5	0.0	1.8	44	65	..
106 Denmark	17	12	9	10	-29.4	11.1	1.7	41	67	..
107 Sweden	15	12	10	11	-20.0	10.0	1.7	40	..	..
108 Switzerland	18	11	10	9	-38.9	-10.0	1.5	43	..	..
Capital-surplus oil exporters	<i>48 w</i>	<i>43 w</i>	<i>21 w</i>	<i>14 w</i>	<i>-10.5 w</i>	<i>-35.0 w</i>	<i>6.5 w</i>	<i>41 w</i>	..	..
109 Iraq	51	47	19	13	-7.8	-31.6	7.0	41	..	23
110 Iran	47	40	21	14	-14.9	-33.3	5.9	41	3	24
111 Libya	49	47	19	13	-4.1	-31.6	7.4	40	..	..
112 Saudi Arabia	51	51	28	15	0.0	-46.4	8.0	39	..	..
113 Kuwait	44	47	10	5	6.8	-50.0	7.0	42	..	..
Centrally planned economies	<i>32 w</i>	<i>18 w</i>	<i>13 w</i>	<i>7 w</i>	<i>-41.5 w</i>	<i>-40.1 w</i>	<i>2.4 w</i>	<i>45 w</i>	..	..
114 China	36	18	15	6	-50.0	-60.0	2.3	46	..	..
115 Korea, Dem. Rep.	41	33	13	8	-19.5	-38.5	4.5	44	..	..
116 Albania	41	30	11	6	-26.8	-45.5	4.2	44	..	..
117 Cuba	32	19	9	6	-40.6	-33.3	2.5	44	..	..
118 Mongolia	41	37	15	8	-9.8	-46.7	5.4	42	..	..
119 Romania	20	19	9	9	-5.0	0.0	2.6	42	..	..
120 Bulgaria	18	16	9	11	-11.1	22.2	2.3	42	..	..
121 Hungary	16	16	10	12	0.0	20.0	2.2	41	..	..
122 Poland	24	19	8	9	-20.8	12.5	2.3	45	57	..
123 USSR	24	18	7	10	-25.0	42.9	2.4	43	..	..
124 Czechoslovakia	17	18	10	11	5.9	10.0	2.4	41	66	..
125 German Dem. Rep.	17	13	13	13	-23.5	0.0	1.8	40	..	..

a. Figures in italics are for years other than those specified. See the technical notes.

Table 19. Labor Force

	Percentage of population of working age (15-64 years)		Percentage of labor force in:						Average annual growth of labor force (percent)		
	1960	1978	Agriculture		Industry		Services		1960-70	1970-80	1980-2000
			1960	1978	1960	1978	1960	1978			
Low-income countries	56 w	55 w	77 w	72 w	9 w	11 w	14 w	17 w	1.7 w	1.9 w	2.2 w
1 Kampuchea, Dem.	..	..	..	..	..	..	..	..	2.5	2.4	2.5
2 Bangladesh	53	54	87	74	3	11	10	15	2.5	2.4	2.5
3 Lao PDR	56	51	83	75	4	7	13	18	1.4	0.3	2.0
4 Bhutan	56	55	95	93	2	2	3	5	1.7	2.0	1.9
5 Ethiopia	54	52	88	81	5	7	7	12	2.2	1.8	2.2
6 Mali	54	52	94	88	3	6	3	6	2.0	2.2	2.5
7 Nepal	57	55	95	93	2	2	3	5	1.5	2.0	2.1
8 Somalia	54	54	88	82	4	7	8	11	1.7	2.3	2.4
9 Burundi	55	53	90	85	3	5	7	10	1.9	1.6	2.3
10 Chad	57	54	95	86	2	6	3	8	1.5	2.0	2.3
11 Mozambique	56	53	81	67	8	18	11	15	1.9	1.7	2.2
12 Burma	59	55	68	53	11	20	21	27	1.1	1.5	2.0
13 Upper Volta	54	53	92	83	5	12	3	5	1.2	1.4	2.3
14 Viet Nam	..	52	81	73	5	8	14	19	1.0	1.9	2.6
15 India	57	56	74	74	11	11	15	15	1.5	1.7	2.0
16 Malawi	52	50	92	86	3	5	5	9	2.3	2.4	2.8
17 Rwanda	53	51	95	91	1	2	4	7	2.2	2.5	2.8
18 Sri Lanka	54	58	56	54	14	15	30	31	2.1	2.1	2.1
19 Guinea	55	54	88	82	6	11	6	7	2.4	2.2	2.1
20 Sierra Leone	55	53	78	67	12	18	10	15	1.5	1.8	2.3
21 Zaire	53	53	83	76	9	13	8	11	1.4	2.1	2.4
22 Niger	53	51	95	91	1	3	4	6	3.0	2.6	2.9
23 Benin	53	51	54	46	9	15	37	39	2.0	2.2	2.1
24 Pakistan	52	51	61	58	18	19	21	23	1.8	2.5	2.9
25 Tanzania	54	51	89	83	4	6	7	11	2.1	2.3	2.7
26 Afghanistan	55	53	85	79	6	9	9	12	1.9	1.8	2.5
27 Central African Rep.	58	56	94	89	2	3	4	8	1.7	1.6	2.3
28 Madagascar	55	53	93	86	2	4	5	10	1.8	2.0	2.3
29 Haiti	55	53	80	70	6	8	14	22	0.7	1.4	2.4
30 Mauritania	53	52	91	85	3	5	6	10	2.2	2.3	2.7
31 Lesotho	57	55	93	87	2	4	5	9	1.6	1.9	2.1
32 Uganda	54	52	89	83	4	6	7	11	3.2	2.5	2.5
33 Angola	55	53	69	60	12	16	19	24	1.0	1.9	2.4
34 Sudan	53	53	86	79	6	9	8	12	2.1	2.3	2.7
35 Togo	53	51	80	69	8	14	12	17	2.2	2.1	2.6
36 Kenya	50	48	86	79	5	8	9	13	2.9	2.8	3.3
37 Senegal	54	53	84	77	5	8	11	15	1.8	1.9	2.2
38 Indonesia	56	56	75	60	8	11	17	29	1.8	2.1	1.8
Middle-income countries	55 w	55 w	58 w	45 w	17 w	23 w	25 w	32 w	2.0 w	2.4 w	2.5 w
39 Egypt	55	56	58	51	12	26	30	23	2.2	2.2	2.3
40 Ghana	53	51	64	54	14	19	22	27	1.6	2.4	2.9
41 Yemen, PDR	52	51	70	60	15	21	15	19	1.4	1.3	2.8
42 Cameroon	57	55	87	82	5	7	8	11	1.3	1.3	1.7
43 Liberia	52	50	80	71	10	13	10	16	2.3	2.6	2.9
44 Honduras	52	49	70	64	11	14	19	22	2.5	3.0	3.3
45 Zambia	53	51	79	68	7	11	14	21	2.4	2.4	2.8
46 Zimbabwe	52	50	69	60	11	15	20	25	3.1	2.6	3.0
47 Thailand	53	53	84	77	4	8	12	15	2.1	2.9	2.3
48 Bolivia	55	53	61	51	18	24	21	25	1.9	2.4	2.9
49 Philippines	52	52	61	48	15	16	24	36	2.1	2.4	2.7
50 Yemen Arab Rep.	54	51	83	76	7	11	10	13	1.5	1.4	2.3
51 Congo, People's Rep.	56	54	52	35	17	26	31	39	1.5	2.0	2.7
52 Nigeria	52	54	71	56	10	17	19	27	1.8	2.0	2.9
53 Papua New Guinea	57	55	89	82	4	7	7	11	1.8	1.9	2.0
54 El Salvador	52	51	62	52	17	22	21	26	2.5	2.8	3.3
55 Morocco	53	50	62	53	14	20	24	27	1.6	2.9	3.3
56 Peru	52	53	53	39	19	21	28	40	2.0	3.0	3.1
57 Ivory Coast	54	54	89	81	2	3	9	16	3.6	4.5	2.4
58 Nicaragua	50	49	62	44	16	15	22	41	2.6	3.3	3.6
59 Colombia	50	56	52	30	19	23	29	47	3.0	3.2	2.6
60 Paraguay	51	52	56	50	19	19	25	31	2.3	3.1	3.4
61 Ecuador	52	52	58	46	19	25	23	29	2.9	3.2	3.2
62 Dominican Rep.	49	51	67	57	12	16	21	27	2.3	3.4	3.3
63 Guatemala	51	54	67	57	14	20	19	23	2.5	3.0	2.8
64 Syrian Arab Rep.	52	48	54	49	19	22	27	29	2.1	2.9	3.5
65 Tunisia	53	54	56	45	18	24	26	31	0.7	2.9	2.6
66 Jordan	52	51	44	27	26	39	30	34	2.8	2.9	3.2

	Percentage of population of working age (15-64 years)		Percentage of labor force in:						Average annual growth of labor force (percent)		
			Agriculture		Industry		Services				
	1960	1978	1960	1978	1960	1978	1960	1978	1960-70	1970-80	1980-2000
67 Malaysia	51	54	63	50	12	16	25	34	2.8	3.0	2.8
68 Jamaica	54	51	39	28	25	17	36	55	0.4	2.4	3.3
69 Lebanon	53	55	38	12	23	27	39	61	2.1	3.0	2.8
70 Korea, Rep. of	54	60	66	41	9	37	25	22	2.9	2.8	2.0
71 Turkey	55	56	78	60	11	14	11	26	1.4	2.2	2.1
72 Algeria	52	49	67	30	12	25	21	45	0.2	3.5	3.5
73 Mexico	51	51	55	39	20	26	25	35	2.8	3.3	3.5
74 Panama	52	55	51	35	14	18	35	47	3.3	2.8	2.6
75 Taiwan	52	63	56	37	11	37	33	26	2.4	1.9	1.6
76 Chile	57	61	30	20	30	26	40	54	1.4	2.6	2.1
77 South Africa	55	54	32	30	30	29	38	41	3.2	2.6	3.0
78 Costa Rica	50	57	51	29	19	23	30	48	3.4	3.6	2.7
79 Brazil	54	55	52	41	15	22	33	37	2.7	2.8	2.9
80 Uruguay	64	63	21	12	29	33	50	55	0.9	0.2	1.1
81 Argentina	64	63	20	14	36	29	44	57	1.3	1.2	1.2
82 Portugal	63	63	44	27	29	37	27	36	0.2	0.8	0.9
83 Yugoslavia	63	66	63	33	18	32	19	35	1.0	1.1	0.7
84 Trinidad and Tobago	53	60	22	16	34	36	44	48	2.4	2.6	2.2
85 Venezuela	51	54	35	20	22	27	43	53	2.7	3.9	3.2
86 Hong Kong	56	65	8	3	52	57	40	40	3.1	3.0	1.3
87 Greece	65	64	56	39	20	28	24	33	(.)	0.6	0.5
88 Singapore	55	65	8	2	23	38	69	60	2.7	2.7	1.4
89 Spain	64	63	42	18	31	43	27	39	0.2	1.2	0.9
90 Israel	59	59	14	7	35	36	51	57	3.5	2.4	2.1
Industrialized countries	63 w	65 w	17 w	6 w	38 w	39 w	45 w	55 w	1.2 w	1.1 w	0.6 w
91 Ireland	58	58	36	20	25	37	39	43	(.)	1.0	1.6
92 Italy	66	64	31	13	40	48	29	39	-0.1	0.7	0.4
93 New Zealand	59	63	15	10	37	35	48	55	2.2	2.1	1.2
94 United Kingdom	65	64	4	2	48	43	48	55	0.6	0.3	0.4
95 Finland	62	68	36	14	31	37	33	49	0.5	1.0	0.4
96 Austria	66	63	24	10	46	40	30	50	-0.7	0.8	0.4
97 Japan	64	68	33	13	30	39	37	48	1.8	1.3	0.7
98 Australia	61	64	11	6	40	34	49	60	2.6	1.8	0.9
99 France	62	63	22	9	39	40	39	51	0.6	1.1	0.6
100 Netherlands	61	65	11	6	42	45	47	49	1.6	1.3	0.5
101 Belgium	65	65	8	3	48	43	44	54	0.3	0.7	0.3
102 Canada	59	66	13	6	35	30	52	64	2.5	2.0	0.9
103 Norway	63	63	20	8	37	38	43	54	0.5	0.7	0.6
104 Germany, Fed. Rep.	68	65	14	4	48	48	38	48	0.2	0.7	(.)
105 United States	60	65	7	2	36	33	57	65	1.7	1.5	0.9
106 Denmark	64	64	18	8	37	37	45	55	1.1	0.6	0.4
107 Sweden	66	64	14	5	45	37	41	58	1.0	0.3	0.2
108 Switzerland	66	66	12	6	50	47	38	47	1.9	0.4	0.2
Capital-surplus oil exporters	51 w	51 w	57 w	42 w	20 w	29 w	23 w	29 w	2.6 w	2.8 w	2.9 w
109 Iraq	51	51	53	42	18	25	29	33	2.8	2.9	3.2
110 Iran	51	51	54	40	23	33	23	27	2.5	2.6	2.9
111 Libya	53	51	53	21	17	27	30	52	5.2	3.5	3.0
112 Saudi Arabia	54	52	71	62	10	13	19	25	2.3	3.5	2.7
113 Kuwait	63	53	1	2	34	35	65	63	7.3	4.1	3.1
Centrally planned economies	58 w	62 w	64 w	49 w	20 w	31 w	16 w	20 w	1.4 w	1.7 w	1.2 w
114 China	56	61	75	62	15	25	10	13	1.7	1.9	1.4
115 Korea, Dem. Rep.	53	56	62	49	23	32	15	19	2.3	2.9	2.7
116 Albania	54	57	71	62	18	24	11	14	2.3	2.7	2.4
117 Cuba	61	59	39	25	22	31	39	44	0.8	2.0	2.0
118 Mongolia	54	53	70	56	13	21	17	23	2.1	2.4	2.7
119 Romania	65	64	64	50	21	31	15	19	0.8	0.6	0.7
120 Bulgaria	66	66	56	40	25	38	19	22	0.7	0.3	0.3
121 Hungary	66	66	38	18	35	55	27	27	0.5	0.4	0.2
122 Poland	61	66	48	33	29	39	23	28	1.8	1.4	0.8
123 USSR	63	65	42	17	29	47	29	36	0.7	1.2	0.7
124 Czechoslovakia	64	64	26	12	46	50	28	38	0.9	0.8	0.7
125 German Dem. Rep.	65	63	18	10	48	51	34	39	-0.2	0.5	0.3

Table 20. Urbanization

	Urban population				Percentage of urban population				Number of cities of over 500,000 persons	
	As percentage of total population		Average annual growth rate (percent)		In largest city		In cities of over 500,000 persons			
	1960	1980	1960-70	1970-80	1960	1980	1960	1980	1960	1980
Low-income countries	17 <i>w</i>	21 <i>w</i>	3.7 <i>w</i>	4.0 <i>w</i>	14 <i>w</i>	16 <i>w</i>	24 <i>w</i>	45 <i>w</i>	20 <i>t</i>	76 <i>t</i>
1 Kampuchea, Dem.	..	..	6.5	6.6	20	30	20	51	1	3
2 Bangladesh	5	11	4.1	4.8	69	48	0	0	0	0
3 Lao PDR	8	13	4.2	4.5	..	..	0	0	0	0
4 Bhutan	3	4	6.1	6.9	30	37	0	37	0	1
5 Ethiopia	6	15	5.4	5.5	32	34	0	0	0	0
6 Mali	11	20	4.3	4.7	41	27	0	0	0	0
7 Nepal	3	5	5.3	5.1	..	34	0	0	0	0
8 Somalia	17	30	2.4	2.6	..	..	0	0	0	0
9 Burundi	2	2	6.8	6.7	..	39	0	0	0	0
10 Chad	7	18	6.6	6.8	75	83	0	83	0	1
11 Mozambique	4	9	3.9	4.0	23	23	23	29	1	1
12 Burma	19	27	5.3	4.1	..	41	0	0	0	0
13 Upper Volta	5	9	5.3	5.1	32	21	32	50	1	4
14 Viet Nam	15	23	3.3	3.3	7	6	26	47	11	36
15 India	18	22	6.6	6.2	..	19	0	0	0	0
16 Malawi	4	9	5.3	5.9	..	..	0	0	0	0
17 Rwanda	2	4	4.3	3.7	28	16	0	16	0	1
18 Sri Lanka	18	27	6.1	6.1	37	80	0	80	0	1
19 Guinea	10	19	5.5	5.6	37	47	0	0	0	0
20 Sierra Leone	13	25	5.2	7.2	14	28	14	38	1	2
21 Zaire	16	34	7.0	6.8	..	31	0	0	0	0
22 Niger	6	13	5.3	3.9	..	63	0	63	0	1
23 Benin	10	14	4.0	4.3	20	21	33	52	2	7
24 Pakistan	22	28	6.3	8.3	34	50	0	50	0	1
25 Tanzania	5	12	5.4	5.6	33	17	0	17	0	1
26 Afghanistan	8	15	5.3	4.9	40	36	0	0	0	0
27 Central African Rep.	23	41	5.1	5.2	44	36	0	36	0	1
28 Madagascar	11	18	3.9	4.2	42	56	0	56	0	1
29 Haiti	16	35	15.8	8.6	..	39	0	0	0	0
30 Mauritania	3	23	7.5	7.8	..	..	0	0	0	0
31 Lesotho	2	5	6.3	7.0	38	52	0	52	0	1
32 Uganda	5	12	5.1	5.8	44	64	0	64	0	1
33 Angola	10	21	6.9	6.8	30	31	0	31	0	1
34 Sudan	10	25	5.6	5.6	..	60	0	0	0	0
35 Togo	10	17	6.6	6.8	40	57	0	57	0	1
36 Kenya	7	14	2.9	3.3	53	65	0	65	0	1
37 Senegal	23	25	3.8	3.6	20	23	34	49	3	9
38 Indonesia	15	20								
Middle-income countries	37 <i>w</i>	51 <i>w</i>	4.2 <i>w</i>	3.8 <i>w</i>	29 <i>w</i>	30 <i>w</i>	36 <i>w</i>	49 <i>w</i>	52 <i>t</i>	115 <i>t</i>
39 Egypt	38	45	3.6	3.0	38	39	53	53	2	2
40 Ghana	23	36	4.6	5.2	25	35	0	48	0	2
41 Yemen, PDR	28	37	3.2	3.5	61	50	0	0	0	0
42 Cameroon	14	35	5.6	7.5	26	21	0	21	0	1
43 Liberia	21	33	5.6	5.6	..	..	0	0	0	0
44 Honduras	23	36	5.5	5.5	31	33	0	0	0	0
45 Zambia	23	38	5.4	5.4	..	35	0	35	0	1
46 Zimbabwe	13	23	6.8	6.4	40	50	0	50	0	1
47 Thailand	13	14	3.7	3.5	65	69	65	68	1	1
48 Bolivia	24	33	4.1	4.3	47	44	0	44	0	1
49 Philippines	30	36	3.9	3.6	27	30	27	36	1	3
50 Yemen Arab Rep.	3	10	7.5	7.3	..	25	0	0	0	0
51 Congo, People's Rep.	33	37	2.6	3.2	77	56	0	0	0	0
52 Nigeria	13	20	4.7	4.9	13	17	22	57	2	9
53 Papua New Guinea	3	17	15.3	8.5	..	25	0	0	0	0
54 El Salvador	38	41	3.2	3.4	26	22	0	0	0	0
55 Morocco	29	41	4.2	4.5	16	13	16	29	1	5
56 Peru	46	67	5.0	4.4	38	39	38	44	1	2
57 Ivory Coast	19	38	7.3	8.2	27	33	0	33	0	1
58 Nicaragua	41	53	4.2	4.5	41	47	0	47	0	1
59 Colombia	48	70	5.2	3.9	17	26	28	53	3	5
60 Paraguay	36	39	3.0	3.5	44	44	0	44	0	1
61 Ecuador	34	45	4.5	4.5	31	29	0	52	0	2
62 Dominican Rep.	30	51	5.8	5.3	50	54	0	70	0	2
63 Guatemala	33	39	3.6	3.7	41	36	41	36	1	1
64 Syrian Arab Rep.	37	50	4.8	4.7	35	33	35	55	1	2
65 Tunisia	36	52	3.8	3.8	40	31	40	31	1	1
66 Jordan	43	56	4.5	4.5	31	37	0	37	0	1

	Urban population				Percentage of urban population				Number of cities of over 500,000 persons	
	As percentage of total population		Average annual growth rate (percent)		In largest city		In cities of over 500,000 persons		1960	1980
	1960	1980	1960-70	1970-80	1960	1980	1960	1980		
67 Malaysia	25	29	3.6	3.5	19	27	0	27	0	1
68 Jamaica	34	50	3.5	3.6	77	65	0	65	0	1
69 Lebanon	44	76	6.2	4.5	64	79	64	79	1	1
70 Korea, Rep. of	28	55	6.2	4.8	35	41	61	77	3	7
71 Turkey	30	47	5.1	4.6	18	24	32	42	3	4
72 Algeria	30	61	6.1	6.4	27	12	27	12	1	1
73 Mexico	51	67	4.8	4.5	28	32	36	48	3	7
74 Panama	41	54	4.4	3.9	30	33	0	33	0	1
75 Taiwan	58	77	3.3	4.1	..	..	..	..	..	..
76 Chile	68	81	3.1	2.4	38	44	38	44	1	1
77 South Africa	47	50	2.8	3.1	16	13	44	53	4	7
78 Costa Rica	37	43	4.2	3.4	67	64	0	64	0	1
79 Brazil	46	65	4.8	4.3	14	16	35	52	6	14
80 Uruguay	80	84	1.3	0.7	56	52	56	52	1	1
81 Argentina	74	82	2.0	1.8	46	45	54	60	3	5
82 Portugal	23	31	1.5	2.5	47	42	47	42	1	1
83 Yugoslavia	28	42	3.2	2.9	11	10	11	23	1	3
84 Trinidad and Tobago	22	22	1.7	1.4	..	..	0	0	0	0
85 Venezuela	67	83	4.8	4.2	26	26	26	39	1	3
86 Hong Kong	89	90	2.6	1.9	100	100	100	100	1	1
87 Greece	43	62	2.6	2.4	51	57	51	70	1	2
88 Singapore	100	100	2.4	1.5	100	100	100	100	1	1
89 Spain	57	74	2.6	2.3	13	16	37	44	5	6
90 Israel	77	89	4.3	3.1	46	35	46	35	1	1
Industrialized countries	<i>67 w</i>	<i>77 w</i>	<i>1.8 w</i>	<i>1.2 w</i>	<i>19 w</i>	<i>18 w</i>	<i>48 w</i>	<i>55 w</i>	<i>99 t</i>	<i>152 t</i>
91 Ireland	46	58	1.6	2.2	51	48	51	48	1	1
92 Italy	59	69	1.5	1.3	13	17	46	55	7	9
93 New Zealand	76	85	2.4	1.9	25	30	0	30	0	1
94 United Kingdom	86	91	0.8	0.3	24	20	61	52	15	18
95 Finland	38	62	3.2	2.5	28	27	0	27	0	1
96 Austria	50	54	0.9	0.5	51	39	51	39	1	1
97 Japan	62	78	2.4	2.0	18	22	35	41	5	9
98 Australia	81	89	2.5	1.8	26	24	62	68	4	5
99 France	62	78	2.4	1.4	25	23	34	35	4	7
100 Netherlands	80	76	1.0	0.5	9	9	27	24	3	3
101 Belgium	66	72	1.2	0.5	17	14	28	24	2	2
102 Canada	69	80	2.7	1.7	14	17	31	66	2	10
103 Norway	32	53	3.5	2.7	50	32	50	32	1	1
104 Germany, Fed. Rep.	77	85	1.4	0.5	20	18	48	45	11	12
105 United States	67	73	1.7	1.2	13	12	61	77	40	67
106 Denmark	74	84	1.5	0.9	40	32	40	32	1	1
107 Sweden	73	87	1.8	1.0	15	15	15	15	1	3
108 Switzerland	51	58	2.2	0.7	19	22	19	22	1	1
Capital-surplus oil exporters	<i>35 w</i>	<i>58 w</i>	<i>5.8 w</i>	<i>5.5 w</i>	<i>28 w</i>	<i>36 w</i>	<i>23 w</i>	<i>51 w</i>	<i>2 t</i>	<i>13 t</i>
109 Iraq	43	72	6.2	5.4	35	55	35	70	1	3
110 Iran	34	50	4.7	4.9	26	28	26	47	1	6
111 Libya	23	52	8.0	8.2	57	64	0	64	0	1
112 Saudi Arabia	30	67	7.8	6.5	15	18	0	41	0	3
113 Kuwait	72	88	10.4	7.2	75	32	0	0	0	0
Centrally planned economies	<i>29 w</i>	<i>36 w</i>	<i>3.0 w</i>	<i>2.6 w</i>	<i>9 w</i>	<i>7 w</i>	<i>31 w</i>	<i>37 w</i>	<i>76 t</i>	<i>133 t</i>
114 China	19	25	3.6	3.1	6	6	42	44	38	65
115 Korea, Dem. Rep.	40	60	5.0	4.3	15	12	15	19	1	2
116 Albania	31	37	3.8	3.4	27	25	0	0	0	0
117 Cuba	55	65	2.9	2.4	38	31	38	31	1	1
118 Mongolia	36	50	5.2	4.1	53	52	0	0	0	0
119 Romania	34	48	2.8	2.5	22	17	22	17	1	1
120 Bulgaria	39	64	3.8	2.5	23	18	23	18	1	1
121 Hungary	40	54	1.7	2.2	45	38	45	38	1	1
122 Poland	48	57	1.8	1.7	17	15	41	43	5	8
123 USSR	49	65	2.7	2.2	6	4	21	33	25	50
124 Czechoslovakia	47	63	2.1	2.0	17	12	17	12	1	1
125 German Dem. Rep.	72	77	0.1	0.2	9	9	14	17	2	3

Table 21. Indicators Related to Life Expectancy

	Life expectancy at birth (years)		Infant mortality rate (aged 0-1) ^a		Child death rate (aged 1-4) ^a	
	1960	1978	1960	1978	1960	1978
Low-income countries	42 <i>w</i>	50 <i>w</i>	..	..	30 <i>w</i>	20 <i>w</i>
1 Kampuchea, Dem.	..	..	..	..	..	..
2 Bangladesh	40	47	..	139	29	23
3 Lao PDR	40	42	..	..	29	27
4 Bhutan	36	41	..	..	41	28
5 Ethiopia	36	39	126	..	43	37
6 Mali	37	42	210	..	41	32
7 Nepal	36	43	..	..	35	23
8 Somalia	36	43	..	..	43	31
9 Burundi	37	45	..	..	41	28
10 Chad	35	43	..	..	45	30
11 Mozambique	37	46	..	..	41	27
12 Burma	44	53	..	..	25	15
13 Upper Volta	37	42	263	..	41	32
14 Viet Nam	41	62	..	..	28	6
15 India	43	51	..	..	28	18
16 Malawi	37	46	..	..	41	27
17 Rwanda	37	46	..	127	41	27
18 Sri Lanka	62	69	63	..	7	2
19 Guinea	35	43	..	..	45	30
20 Sierra Leone	37	46	..	..	41	27
21 Zaire	40	46	..	..	37	27
22 Niger	37	42	212	..	41	32
23 Benin	37	46	206	..	41	27
24 Pakistan	44	52	..	..	27	17
25 Tanzania	42	51	..	185	32	20
26 Afghanistan	34	42	..	237	42	27
27 Central African Rep.	37	46	190	..	40	27
28 Madagascar	37	46	..	..	41	27
29 Haiti	42	51	..	..	39	23
30 Mauritania	37	42	..	..	41	32
31 Lesotho	42	50	..	..	34	21
32 Uganda	44	53	160	..	30	17
33 Angola	33	41	..	..	49	34
34 Sudan	39	46	..	..	46	31
35 Togo	37	46	177	..	41	27
36 Kenya	47	53	126	..	25	14
37 Senegal	37	42	93	..	41	32
38 Indonesia	41	47	125	..	31	20
Middle-income countries	54 <i>w</i>	61 <i>w</i>	..	..	18 <i>w</i>	10 <i>w</i>
39 Egypt	46	54	..	108	31	18
40 Ghana	40	48	141	..	36	23
41 Yemen, PDR	36	44	..	..	54	36
42 Cameroon	37	46	167	..	40	27
43 Liberia	40	48	..	..	36	23
44 Honduras	46	57	130	118	30	14
45 Zambia	40	48	..	..	36	23
46 Zimbabwe	45	54	..	..	28	16
47 Thailand	51	61	..	68	15	6
48 Bolivia	43	52	..	158	36	22
49 Philippines	51	60	98	65	16	7
50 Yemen Arab. Rep.	36	39	..	..	55	31
51 Congo, People's Rep.	37	46	180	..	40	27
52 Nigeria	39	48	..	..	38	24
53 Papua New Guinea	41	50	159	..	32	19
54 El Salvador	50	63	..	60	24	8
55 Morocco	47	55	..	..	30	17
56 Peru	48	56	..	..	28	16
57 Ivory Coast	37	46	..	..	41	27
58 Nicaragua	47	55	..	37	30	17
59 Colombia	53	62	..	98	17	9
60 Paraguay	56	63	..	..	16	8
61 Ecuador	51	60	140	66	23	10
62 Dominican Rep.	51	60	..	37	23	10
63 Guatemala	47	57	..	77	31	15
64 Syrian Arab Rep.	48	57	..	..	29	14
65 Tunisia	48	57	148	123	29	15
66 Jordan	47	56	..	..	30	16

	Life expectancy at birth (years)		Infant mortality rate (aged 0-1) ^a		Child death rate (aged 1-4) ^a	
	1960	1978	1960	1978	1960	1978
67 Malaysia	57	67	..	<i>31</i>	9	3
68 Jamaica	64	70	<i>63</i>	<i>20</i>	7	3
69 Lebanon	58	65	..	..	14	6
70 Korea, Rep. of	54	63	<i>62</i>	<i>37</i>	13	5
71 Turkey	51	61	..	<i>118</i>	24	10
72 Algeria	47	56	..	..	30	16
73 Mexico	58	65	78	60	14	6
74 Panama	62	70	90	47	10	3
75 Taiwan	64	72	56	25	8	1
76 Chile	57	67	108	55	14	5
77 South Africa	53	60	..	..	17	10
78 Costa Rica	62	70	80	<i>28</i>	10	3
79 Brazil	57	62	128	92	13	9
80 Uruguay	68	71	..	<i>46</i>	4	3
81 Argentina	65	71	55	..	6	3
82 Portugal	63	69	78	39	7	2
83 Yugoslavia	62	69	88	34	4	2
84 Trinidad and Tobago	63	70	45	29	8	3
85 Venezuela	59	66	72	40	12	5
86 Hong Kong	65	72	42	12	3	1
87 Greece	68	73	40	19	2	1
88 Singapore	64	70	31	12	4	1
89 Spain	68	73	44	16	2	1
90 Israel	69	72	31	15	2	1
Industrialized countries	<i>69 w</i>	<i>74 w</i>	<i>29 w</i>	<i>13 w</i>	<i>1 w</i>	<i>1 w</i>
91 Ireland	69	73	29	<i>16</i>	1	1
92 Italy	69	73	44	<i>18</i>	2	1
93 New Zealand	71	73	21	<i>14</i>	1	1
94 United Kingdom	70	73	22	<i>14</i>	1	1
95 Finland	68	72	21	9	1	1
96 Austria	68	72	38	15	1	1
97 Japan	68	76	31	10	3	1
98 Australia	70	73	20	13	1	1
99 France	70	73	27	11	1	1
100 Netherlands	73	74	18	10	1	1
101 Belgium	70	72	31	12	1	1
102 Canada	71	74	27	12	1	1
103 Norway	73	75	19	9	1	1
104 Germany, Fed. Rep.	69	72	34	15	1	1
105 United States	70	73	26	14	1	1
106 Denmark	72	74	22	9	1	1
107 Sweden	72	75	17	8	1	1
108 Switzerland	71	74	21	10	1	1
Capital-surplus oil exporters	<i>45 w</i>	<i>53 w</i>	..	<i>94 w</i>	<i>29 w</i>	<i>16 w</i>
109 Iraq	46	55	..	92	31	17
110 Iran	46	52	..	..	24	14
111 Libya	47	55	..	53	30	17
112 Saudi Arabia	38	53	..	118	48	28
113 Kuwait	60	69	..	39	12	2
Centrally planned economies	<i>58 w</i>	<i>70 w</i>	..	..	<i>10 w</i>	<i>1 w</i>
114 China	53	70	..	..	14	1
115 Korea, Dem. Rep.	54	63	..	..	13	5
116 Albania	62	69	..	..	6	2
117 Cuba	64	72	35	25	8	1
118 Mongolia	52	63	..	..	14	5
119 Romania	66	70	76	31	3	1
120 Bulgaria	67	72	45	22	3	1
121 Hungary	67	70	48	24	2	1
122 Poland	66	71	57	22	2	1
123 USSR	68	70	41	..	1	1
124 Czechoslovakia	69	70	24	19	1	1
125 German Dem. Rep.	68	72	39	13	2	1

a. Figures in italics are for years other than those specified. See the technical notes.

Table 22. Health-related Indicators

	Population per:				Percentage of population with access to safe water 1975	Daily calorie supply per capita	
	Physicians ^a		Nursing persons ^a			Total 1977	As percentage of requirement 1977
	1960	1977	1960	1977			
Low-income countries	18,020 <i>w</i>	9,900 <i>w</i>	9,050 <i>w</i>	8,790 <i>w</i>	28 <i>w</i>	2,052 <i>w</i>	91 <i>w</i>
1 Kampuchea, Dem.	..	..	..	..	..	1,926	78
2 Bangladesh	..	9,260	..	42,080	53	1,812	78
3 Lao PDR	38,000	21,600	..	2,440	..	2,082	94
4 Bhutan	..	..	..	..	..	2,028	88
5 Ethiopia	89,360	76,320	..	20,310	6	1,754	75
6 Mali	38,640	24,100	4,980	3,080	9	2,117	90
7 Nepal	72,000	35,210	..	51,220	9	2,002	91
8 Somalia	36,570	..	6,220	..	33	2,033	88
9 Burundi	77,160	50,840	6,850	6,980	..	2,254	97
10 Chad	70,930	42,150	8,040	4,220	26	1,762	74
11 Mozambique	20,000	..	4,660	..	..	1,906	81
12 Burma	9,900	5,120	..	5,190	17	2,286	106
13 Upper Volta	59,850	55,770	..	1,280	10	1,875	79
14 Viet Nam	..	5,620	..	..	..	1,801	83
15 India	5,800	3,620	9,630	5,680	33	2,021	91
16 Malawi	42,400	48,200	12,920	3,890	33	2,066	90
17 Rwanda	138,100	36,440	11,200	9,830	35	2,264	98
18 Sri Lanka	4,500	6,270	4,150	2,260	20	2,126	96
19 Guinea	48,000	16,630	3,890	2,450	10	1,943	84
20 Sierra Leone	19,960	..	5,900	..	..	2,150	93
21 Zaire	36,850	15,540	3,440	1,940	16	2,271	104
22 Niger	74,050	42,610	8,450	5,160	27	2,139	91
23 Benin	47,000	26,910	..	3,010	20	2,249	98
24 Pakistan	11,000	3,780	..	10,040	29	2,281	99
25 Tanzania	21,020	15,450	10,440	2,760	39	2,063	89
26 Afghanistan	22,460	19,890	23,210	25,100	6	2,695	110
27 Central African Rep.	35,600	17,610	2,760	1,560	16	2,242	99
28 Madagascar	9,620	10,300	3,110	3,540	26	2,486	115
29 Haiti	10,600	5,940	11,880	3,510	14	2,100	93
30 Mauritania	39,150	15,160	7,320	3,430	..	1,976	86
31 Lesotho	22,530	18,640	..	4,340	17	2,245	99
32 Uganda	12,960	27,600	9,420	4,300	35	2,110	91
33 Angola	14,000	..	..	..	..	2,133	91
34 Sudan	27,880	8,700	3,040	1,340	46	2,184	93
35 Togo	35,130	18,360	5,340	2,040	16	2,069	90
36 Kenya	10,560	11,950	2,230	1,120	17	2,032	88
37 Senegal	22,380	15,700	..	1,610	37	2,261	95
38 Indonesia	41,000	14,580	..	2,820	12	2,272	105
Middle-income countries	8,960 <i>w</i>	4,310 <i>w</i>	..	1,860 <i>w</i>	60 <i>w</i>	2,590 <i>w</i>	108 <i>w</i>
39 Egypt	2,600	1,070	2,730	1,150	66	2,760	109
40 Ghana	12,160	9,930	5,430	840	35	1,983	86
41 Yemen, PDR	..	7,510	..	1,570	24	1,945	81
42 Cameroon	40,190	16,510	6,150	2,230	26	2,069	89
43 Liberia	12,270	9,260	5,810	2,900	20	2,404	104
44 Honduras	12,610	3,420	..	1,240	46	2,015	89
45 Zambia	11,990	10,190	9,920	1,930	42	2,002	87
46 Zimbabwe	..	7,110	..	1,390	..	2,576	108
47 Thailand	7,800	8,170	4,900	3,540	22	1,929	105
48 Bolivia	3,660	1,850	..	3,070	34	1,974	83
49 Philippines	..	2,760	..	3,060	39	2,189	97
50 Yemen Arab Rep.	..	13,830	..	4,930	4	2,192	91
51 Congo, People's Rep.	16,260	6,350	1,510	660	38	2,284	103
52 Nigeria	56,900	15,800	6,020	4,030	..	1,951	83
53 Papua New Guinea	..	11,800	..	1,930	20	2,268	85
54 El Salvador	5,660	3,600	..	900	53	2,051	90
55 Morocco	9,400	10,140	..	1,830	55	2,534	105
56 Peru	2,250	1,560	2,210	750	47	2,274	97
57 Ivory Coast	23,280	15,220	2,920	2,370	19	2,517	105
58 Nicaragua	2,740	1,670	..	..	70	2,446	109
59 Colombia	2,400	1,970	3,740	1,250	64	2,364	102
60 Paraguay	2,300	2,160	..	2,260	13	2,824	122
61 Ecuador	2,600	1,570	2,280	..	42	2,104	92
62 Dominican Rep.	..	..	..	..	55	2,094	93
63 Guatemala	4,410	2,490	9,040	..	40	2,156	98
64 Syrian Arab Rep.	4,600	2,510	6,660	3,810	75	2,684	108
65 Tunisia	10,000	4,800	..	1,070	70	2,674	112
66 Jordan	5,900	1,940	1,650	950	56	2,107	62

	Population per:				Percentage of population with access to safe water 1975	Daily calorie supply per capita	
	Physicians ^a		Nursing persons ^a			Total 1977	As percentage of requirement 1977
	1960	1977	1960	1977			
67 Malaysia	6,940	4,350	1,780	1,080	62	2,610	117
68 Jamaica	2,600	3,520	..	550	86	2,660	119
69 Lebanon	..	..	..	..	..	2,495	101
70 Korea, Rep. of	3,000	1,960	..	510	62	2,785	119
71 Turkey	3,000	1,770	..	1,400	75	2,907	115
72 Algeria	..	5,360	..	1,490	77	2,372	99
73 Mexico	1,700	1,820	..	1,400	62	2,654	114
74 Panama	2,700	1,260	..	1,450	79	2,341	101
75 Taiwan	2,330	1,570	7,550	1,760	..	2,805	120
76 Chile	1,810	1,620	650	450	84	2,656	109
77 South Africa	2,090	..	540	..	..	2,831	116
78 Costa Rica	2,600	1,390	1,700	450	77	2,550	114
79 Brazil	3,600	1,700	..	..	77	2,562	107
80 Uruguay	960	710	..	..	98	3,036	114
81 Argentina	660	530	..	..	66	3,347	126
82 Portugal	1,200	710	1,430	500	65	3,076	126
83 Yugoslavia	1,620	760	1,350	410	..	3,445	136
84 Trinidad and Tobago	2,570	1,970	..	580	..	2,694	111
85 Venezuela	1,430	930	1,890	380	..	2,435	99
86 Hong Kong	2,990	1,280	2,950	970	..	2,883	126
87 Greece	790	450	2,080	600	..	3,400	136
88 Singapore	2,400	1,260	650	340	100	3,074	134
89 Spain	820	560	..	900	..	3,149	128
90 Israel	410	..	360	..	..	3,141	122
Industrialized countries	820 w	630 w	..	220 w	..	3,377 w	131 w
91 Ireland	950	830	180	200	..	3,541	141
92 Italy	640	490	920	330	..	3,428	136
93 New Zealand	690	740	..	200	..	3,345	127
94 United Kingdom	1,100	750	420	300	..	3,336	132
95 Finland	1,570	620	220	110	..	3,100	114
96 Austria	550	430	400	260	..	3,535	134
97 Japan	920	850	460	290	..	2,949	126
98 Australia	860	650	..	120	..	3,428	129
99 France	930	610	530	170	..	3,434	136
100 Netherlands	900	580	..	270	..	3,338	124
101 Belgium	780	470	..	250	..	3,583	136
102 Canada	910	560	300	130	..	3,374	127
103 Norway	850	540	330	100	..	3,175	118
104 Germany, Fed. Rep.	670	490	450	260	..	3,381	127
105 United States	760	580	340	150	..	3,576	135
106 Denmark	810	510	270	170	..	3,418	127
107 Sweden	1,150	560	..	130	..	3,221	120
108 Switzerland	740	500	390	220	..	3,485	130
Capital-surplus oil exporters	5,470 w	1,830 w	..	1,770 w	58 w	2,963 w	115 w
109 Iraq	5,600	2,230	6,680	2,860	62	2,134	89
110 Iran	3,800	..	..	..	51	3,138	130
111 Libya	5,800	900	2,390	290	100	2,985	126
112 Saudi Arabia	13,000	1,690	..	860	64	2,624	88
113 Kuwait	760	790	190	270	89	..	..
Centrally planned economies	640 w	390 w	410 w	240 w	..	2,752 w	114 w
114 China	..	..	..	..	..	2,467	105
115 Korea, Dem. Rep.	..	..	..	..	..	2,837	121
116 Albania	2,860	960	540	370	..	2,730	113
117 Cuba	1,200	1,100	910	..	..	2,720	118
118 Mongolia	1,010	480	290	250	..	2,523	104
119 Romania	780	730	620	640	..	3,444	130
120 Bulgaria	640	440	550	220	..	3,611	144
121 Hungary	640	430	440	200	..	3,521	134
122 Poland	940	610	490	260	..	3,656	140
123 USSR	520	300	340	210	..	3,460	135
124 Czechoslovakia	590	390	280	160	..	3,340	139
125 German Dem. Rep.	950	520	..	..	..	3,641	139

a. Figures in italics are for years other than those specified. See the technical notes.

Table 23. Education^a

	Number enrolled in primary school as percentage of age group						Number enrolled in secondary school as percentage of age group		Number enrolled in higher education as percentage of population aged 20-24		Adult literacy rate (percent)	
	Total		Male		Female		1960	1977	1960	1976	1960	1975
	1960	1977	1960	1977	1960	1977						
Low-income countries	54 w	77 w	72 w	90 w	37 w	64 w	14 w	24 w	2 w	4 w	29 w	38 w
1 Kampuchea, Dem.	64	..	82	..	46	..	3	..	(.)	..	36	..
2 Bangladesh	47	81	66	103	26	58	8	23	1	2	22	26
3 Lao PDR	25	92	34	99	16	84	1	14	(.)	(.)	28	..
4 Bhutan	3	11	5	16	(.)	7	..	1	..	..	..	..
5 Ethiopia	7	26	11	..	3	..	(.)	8	(.)	(.)	..	10
6 Mali	10	28	14	36	6	20	1	7	..	1	3	10
7 Nepal	10	71	19	108	1	32	6	14	1	2	9	19
8 Somalia	9	44	13	57	5	32	1	4	(.)	1	2	60
9 Burundi	18	23	27	28	9	18	1	3	(.)	(.)	14	25
10 Chad	16	41	29	61	4	21	(.)	3	..	(.)	..	15
11 Mozambique	48	..	60	..	36	..	2	..	..	(.)	8	..
12 Burma	56	80	61	83	52	78	10	22	1	2	60	67
13 Upper Volta	8	16	12	20	5	12	(.)	2	..	(.)	2	5
14 Viet Nam	..	141	..	140	..	142	..	51	..	3	..	87
15 India	61	80	80	95	40	64	20	28	3	6	28	36
16 Malawi	63	62	81	75	45	50	1	4	..	(.)	..	25
17 Rwanda	49	61	68	66	30	57	2	2	..	(.)	16	23
18 Sri Lanka	..	86	..	89	..	82	27	47	1	1	75	78
19 Guinea	30	..	44	..	16	..	2	..	..	..	7	..
20 Sierra Leone	23	37	30	45	15	29	2	11	(.)	1	..	15
21 Zaire	60	93	88	109	32	78	3	19	(.)	1	31	15
22 Niger	5	23	7	29	3	16	(.)	3	..	(.)	1	8
23 Benin	26	58	38	80	15	37	2	11	..	1	8	11
24 Pakistan	30	51	46	69	13	32	11	17	1	2	15	21
25 Tanzania	25	70	33	79	18	60	2	3	..	(.)	10	66
26 Afghanistan	9	20	15	33	2	6	1	7	(.)	1	8	12
27 Central African Rep.	32	81	53	106	12	57	1	9	..	1	7	..
28 Madagascar	52	92	58	98	45	86	4	12	(.)	2	..	50
29 Haiti	46	71	50	..	42	..	4	..	(.)	1	15	23
30 Mauritania	8	31	14	40	3	21	(.)	4	..	(.)	5	17
31 Lesotho	83	119	63	98	102	139	3	15	(.)	1	..	55
32 Uganda	49	53	65	63	32	44	3	7	(.)	1	35	..
33 Angola	21	..	28	..	13	..	2	..	(.)	..	5	..
34 Sudan	25	41	35	47	14	34	3	13	(.)	1	13	20
35 Togo	44	106	63	135	24	78	2	27	..	1	10	18
36 Kenya	47	104	64	110	30	98	2	17	(.)	1	20	40
37 Senegal	27	47	36	57	17	37	3	11	1	2	6	10
38 Indonesia	71	86	86	91	58	81	6	21	1	2	39	62
Middle-income countries	81 w	97 w	87 w	100 w	74 w	93 w	17 w	40 w	4 w	11 w	54 w	71 w
39 Egypt	66	72	80	87	52	56	16	46	5	14	26	44
40 Ghana	38	74	52	84	25	64	5	29	(.)	1	27	30
41 Yemen, PDR	13	77	20	99	5	54	5	26	..	1	..	27
42 Cameroon	65	119	87	132	43	106	2	17	..	1	19	..
43 Liberia	31	57	45	74	18	40	2	14	(.)	2	9	30
44 Honduras	67	89	68	90	67	88	8	13	1	6	45	57
45 Zambia	42	95	51	104	34	87	2	16	..	2	..	39
46 Zimbabwe	96	98	107	106	86	90	6	9	(.)	..	39	..
47 Thailand	83	83	88	86	79	79	13	27	2	5	68	84
48 Bolivia	64	80	78	88	50	72	12	26	4	10	39	63
49 Philippines	95	105	98	103	93	108	26	56	13	24	72	87
50 Yemen Arab Rep.	8	25	14	43	(.)	6	(.)	3	..	1	3	13
51 Congo, People's Rep.	78	155	103	166	53	143	4	52	1	3	16	50
52 Nigeria	36	..	46	..	27	..	4	..	(.)	1	15	..
53 Papua New Guinea	32	60	59	70	7	49	1	12	..	3	29	32
54 El Salvador	80	77	82	79	77	75	13	22	1	8	49	62
55 Morocco	47	68	67	86	27	50	5	17	1	4	14	28
56 Peru	83	110	95	115	71	106	15	52	4	16	61	72
57 Ivory Coast	46	92	68	115	24	69	2	17	(.)	2	5	20
58 Nicaragua	66	92	65	..	66	..	7	29	1	10	..	57
59 Colombia	77	103	77	100	77	105	12	39	2	9	63	81
60 Paraguay	98	102	105	106	90	98	11	25	2	6	75	81
61 Ecuador	83	101	87	101	79	100	12	44	3	28	68	74
62 Dominican Rep.	98	102	99	101	98	103	7	27	1	9	65	67
63 Guatemala	45	65	50	71	39	60	7	16	2	5	32	47
64 Syrian Arab Rep.	65	103	89	120	39	85	16	51	4	12	30	53
65 Tunisia	66	100	88	118	43	81	12	22	1	5	16	55
66 Jordan	77	83	94	87	59	79	25	53	1	7	32	70

	Number enrolled in primary school as percentage of age group						Number enrolled in secondary school as percentage of age group		Number enrolled in higher education as percentage of population aged 20-24		Adult literacy rate (percent)	
	Total		Male		Female		1960	1977	1960	1976	1960	1975
	1960	1977	1960	1977	1960	1977						
67 Malaysia	96	93	108	94	83	91	19	43	1	3	53	60
68 Jamaica	92	97	92	96	93	98	45	58	2	7	82	86
69 Lebanon	102	..	105	..	99	..	19	..	6	..	..	..
70 Korea, Rep. of	94	111	99	111	89	111	27	88	5	11	71	93
71 Turkey	75	98	90	106	58	90	14	43	3	8	38	60
72 Algeria	46	90	55	105	37	75	8	25	(.)	4	10	37
73 Mexico	80	116	82	120	77	114	11	39	3	10	65	76
74 Panama	96	86	98	88	94	84	29	115	5	22	73	78
75 Taiwan	95	100	..	..	..	..	33	76	4	12	54	82
76 Chile	109	117	111	119	107	116	24	50	4	13	84	88
77 South Africa	89	..	94	..	85	..	15	..	3	..	57	..
78 Costa Rica	96	111	97	111	95	110	21	44	5	18	..	90
79 Brazil	95	90	97	89	93	90	11	24	2	12	61	76
80 Uruguay	111	95	111	95	111	94	37	60	8	13	..	94
81 Argentina	98	110	98	110	99	111	23	41	11	29	91	94
82 Portugal	..	130	..	134	..	127	..	59	4	14	62	70
83 Yugoslavia	111	100	113	101	108	99	58	79	9	21	77	85
84 Trinidad and Tobago	88	81	89	81	87	81	24	38	1	5	93	95
85 Venezuela	100	104	100	105	100	103	21	38	4	21	63	82
86 Hong Kong	87	119	93	121	79	117	20	59	4	10	70	90
87 Greece	102	105	104	107	101	103	37	82	4	18	81	..
88 Singapore	111	110	121	114	101	107	32	55	6	9	..	75
89 Spain	110	114	106	114	116	115	23	76	4	22	87	..
90 Israel	98	97	99	97	97	98	48	68	10	24	84	88
Industrialized countries	114 <i>w</i>	98 <i>w</i>	109 <i>w</i>	102 <i>w</i>	108 <i>w</i>	102 <i>w</i>	68 <i>w</i>	87 <i>w</i>	17 <i>w</i>	36 <i>w</i>	..	99 <i>w</i>
91 Ireland	110	109	107	110	112	109	35	92	9	18	..	98
92 Italy	111	105	112	106	109	105	34	73	7	27	91	98
93 New Zealand	108	111	110	112	106	110	73	85	13	28	..	99
94 United Kingdom	92	105	92	105	92	105	66	82	9	19	..	99
95 Finland	97	88	100	89	95	88	74	95	7	20	99	100
96 Austria	105	100	106	100	104	100	50	73	8	21	..	99
97 Japan	103	100	103	100	102	99	74	93	10	29	98	99
98 Australia	103	92	103	92	103	92	51	73	13	24	..	100
99 France	144	108	144	106	143	110	46	83	10	24	..	99
100 Netherlands	105	102	105	101	104	102	58	94	13	29	..	99
101 Belgium	109	105	111	105	108	104	69	88	9	23	..	99
102 Canada	107	102	108	102	105	102	46	91	16	37	..	98
103 Norway	100	101	100	101	101	101	57	91	7	24	..	99
104 Germany, Fed. Rep.	133	90	..	..	..	..	..	84	6	25	..	99
105 United States	118	94	..	..	..	..	86	93	32	56	98	99
106 Denmark	103	103	103	103	103	103	65	77	10	30	..	99
107 Sweden	96	96	95	96	96	97	55	69	9	30	..	99
108 Switzerland	118	85	118	85	118	86	26	55	7	16	..	99
Capital-surplus oil exporters	43 <i>w</i>	94 <i>w</i>	61 <i>w</i>	113 <i>w</i>	26 <i>w</i>	74 <i>w</i>	12 <i>w</i>	45 <i>w</i>	1 <i>w</i>	6 <i>w</i>	15 <i>w</i>	50 <i>w</i>
109 Iraq	65	100	94	123	36	76	19	44	2	9	18	..
110 Iran	41	98	56	119	27	77	12	48	1	5	16	50
111 Libya	59	148	92	156	24	140	9	70	1	7	..	50
112 Saudi Arabia	12	47	22	59	2	35	2	19	(.)	4	3	..
113 Kuwait	117	93	131	99	102	87	37	68	..	13	47	60
Centrally planned economies	101 <i>w</i>	119 <i>w</i>	101 <i>w</i>	118 <i>w</i>	101 <i>w</i>	120 <i>w</i>	45 <i>w</i>	72 <i>w</i>	11 <i>w</i>	20 <i>w</i>	..	..
114 China	..	127	..	125	..	129	..	..	..	..	..	..
115 Korea, Dem. Rep.	..	113	..	115	..	112	..	..	..	..	..	..
116 Albania	94	..	102	..	86	..	20	..	5	..	..	..
117 Cuba	109	122	109	125	109	119	14	50	3	11	..	96
118 Mongolia	79	108	79	111	78	105	51	81	8	8	..	..
119 Romania	98	102	101	102	95	101	24	77	5	10	..	98
120 Bulgaria	93	96	94	97	92	96	55	88	11	21	..	..
121 Hungary	101	98	103	98	100	98	46	68	7	12	97	98
122 Poland	109	101	110	102	107	99	50	67	9	18	95	98
123 USSR	100	97	100	98	100	97	49	73	11	22	98	99
124 Czechoslovakia	93	96	93	96	93	97	25	38	11	15	95	..
125 German Dem. Rep.	112	94	111	92	113	95	39	93	16	29	..	..

a. Figures in italics are for years other than those specified. See the technical notes.

Table 24. Income Distribution

		Percentage share of household income, by percentile groups of households ^a						
Year		Lowest 20 percent	Second quintile	Third quintile	Fourth quintile	Highest 20 percent	Highest 10 percent	
Low-income countries								
1	Kampuchea, Dem.	..	..	..	..	..	..
2	Bangladesh	..	..	..	..	..	..
3	Lao PDR	..	..	..	..	..	..
4	Bhutan	..	..	..	..	..	..
5	Ethiopia	..	..	..	..	..	..
6	Mali	..	..	..	..	..	..
7	Nepal	..	..	..	..	..	..
8	Somalia	..	..	..	..	..	..
9	Burundi	..	..	..	..	..	..
10	Chad	..	..	..	..	..	..
11	Mozambique	..	..	..	..	..	..
12	Burma	..	..	..	..	..	..
13	Upper Volta	..	..	..	..	..	..
14	Viet Nam	..	..	..	..	..	..
15	India	1964-65	6.7	10.5	14.3	19.6	48.9	35.2
16	Malawi	..	..	..	..	..	..
17	Rwanda	..	..	..	..	..	..
18	Sri Lanka	1969-70	7.5	11.7	15.7	21.7	43.4	28.2
19	Guinea	..	..	..	..	..	..
20	Sierra Leone	..	..	..	..	..	..
21	Zaire	..	..	..	..	..	..
22	Niger	..	..	..	..	..	..
23	Benin	..	..	..	..	..	..
24	Pakistan	..	..	..	..	..	..
25	Tanzania	..	..	..	..	..	..
26	Afghanistan	..	..	..	..	..	..
27	Central African Rep.	..	..	..	..	..	..
28	Madagascar	..	..	..	..	..	..
29	Haiti	..	..	..	..	..	..
30	Mauritania	..	..	..	..	..	..
31	Lesotho	..	..	..	..	..	..
32	Uganda	..	..	..	..	..	..
33	Angola	..	..	..	..	..	..
34	Sudan	..	..	..	..	..	..
35	Togo	..	..	..	..	..	..
36	Kenya	..	..	..	..	..	..
37	Senegal	..	..	..	..	..	..
38	Indonesia	..	..	..	..	..	..
Middle-income countries								
39	Egypt	..	..	..	..	..	..
40	Ghana	..	..	..	..	..	..
41	Yemen, PDR	..	..	..	..	..	..
42	Cameroon	..	..	..	..	..	..
43	Liberia	..	..	..	..	..	..
44	Honduras	1967	2.3	5.0	8.0	16.9	67.8	50.0
45	Zambia	..	..	..	..	..	..
46	Zimbabwe	..	..	..	..	..	..
47	Thailand	..	..	..	..	..	..
48	Bolivia	..	..	..	..	..	..
49	Philippines	1970-71	3.7	8.2	13.2	21.0	53.9	..
50	Yemen Arab Rep.	..	..	..	..	..	..
51	Congo, People's Rep.	..	..	..	..	..	..
52	Nigeria	..	..	..	..	..	..
53	Papua New Guinea	..	..	..	..	..	..
54	El Salvador	..	..	..	..	..	..
55	Morocco	..	..	..	..	..	..
56	Peru	1972	1.9	5.1	11.0	21.0	61.0	42.9
57	Ivory Coast	..	..	..	..	..	..
58	Nicaragua	..	..	..	..	..	..
59	Colombia	..	..	..	..	..	..
60	Paraguay	..	..	..	..	..	..
61	Ecuador	..	..	..	..	..	..
62	Dominican Rep.	..	..	..	..	..	..
63	Guatemala	..	..	..	..	..	..
64	Syrian Arab Rep.	..	..	..	..	..	..
65	Tunisia	..	..	..	..	..	..
66	Jordan	..	..	..	..	..	..

Percentage share of household income, by percentile groups of households^a

	Year	Lowest 20 percent	Second quintile	Third quintile	Fourth quintile	Highest 20 percent	Highest 10 percent
67 Malaysia	1970	3.3	7.3	12.2	20.7	56.6	39.6
68 Jamaica		..	..	..	..	..	..
69 Lebanon		..	..	..	..	..	..
70 Korea, Rep. of	1976	5.7	11.2	15.4	22.4	45.3	27.5
71 Turkey	1973	3.4	8.0	12.5	19.5	56.5	40.7
72 Algeria		..	..	..	..	..	..
73 Mexico	1977	2.9	7.0	12.0	20.4	57.7	40.6
74 Panama		..	..	..	..	..	..
75 Taiwan	1971	8.7	13.2	16.6	22.3	39.2	24.7
76 Chile	1968	4.4	9.0	13.8	21.4	51.4	34.8
77 South Africa		..	..	..	..	..	..
78 Costa Rica	1971	3.3	8.7	13.3	19.9	54.8	39.5
79 Brazil	1972	2.0	5.0	9.4	17.0	66.6	50.6
80 Uruguay		..	..	..	..	..	..
81 Argentina	1970	4.4	9.7	14.1	21.5	50.3	35.2
82 Portugal		..	..	..	..	..	..
83 Yugoslavia	1973	6.5	11.9	17.6	24.0	40.0	22.5
84 Trinidad and Tobago		..	..	..	..	..	..
85 Venezuela	1970	3.0	7.3	12.9	22.8	54.0	35.7
86 Hong Kong		..	..	..	..	..	..
87 Greece		..	..	..	..	..	..
88 Singapore		..	..	..	..	..	..
89 Spain	1974	6.0	11.8	16.9	23.1	42.2	26.7
90 Israel		..	..	..	..	..	..
Industrialized countries							
91 Ireland		..	..	..	..	..	..
92 Italy	1969	5.1	10.5	16.2	21.7	46.5	30.9
93 New Zealand		..	..	..	..	..	..
94 United Kingdom	1973	6.3	12.6	18.4	23.9	38.8	23.5
95 Finland		..	..	..	..	..	..
96 Austria		..	..	..	..	..	..
97 Japan	1969	7.9	13.1	16.8	21.2	41.0	27.2
98 Australia	1966-67	6.6	13.5	17.8	23.4	38.8	23.7
99 France	1970	4.3	9.8	16.3	22.7	46.9	30.4
100 Netherlands	1967	6.5	11.6	16.4	22.7	42.9	27.7
101 Belgium		..	..	..	..	..	..
102 Canada	1969	5.0	11.8	17.9	24.3	41.0	25.1
103 Norway	1970	6.3	12.9	18.8	24.7	37.3	22.2
104 Germany, Fed. Rep.	1973	6.5	10.3	15.0	22.0	46.2	30.3
105 United States	1972	4.5	10.7	17.3	24.7	42.8	26.6
106 Denmark		..	..	..	..	..	..
107 Sweden	1972	6.6	13.1	18.5	24.8	37.0	21.3
108 Switzerland		..	..	..	..	..	..
Capital-surplus oil exporters							
109 Iraq		..	..	..	..	..	..
110 Iran		..	..	..	..	..	..
111 Libya		..	..	..	..	..	..
112 Saudi Arabia		..	..	..	..	..	..
113 Kuwait		..	..	..	..	..	..
Centrally planned economies							
114 China		..	..	..	..	..	..
115 Korea, Dem. Rep.		..	..	..	..	..	..
116 Albania		..	..	..	..	..	..
117 Cuba		..	..	..	..	..	..
118 Mongolia		..	..	..	..	..	..
119 Romania		..	..	..	..	..	..
120 Bulgaria		..	..	..	..	..	..
121 Hungary		..	..	..	..	..	..
122 Poland		..	..	..	..	..	..
123 USSR		..	..	..	..	..	..
124 Czechoslovakia		..	..	..	..	..	..
125 German Dem. Rep.		..	..	..	..	..	..

a. These estimates should be treated with caution. See the technical notes.

Technical Notes

Table 1. Basic Indicators

The estimates of *population* for mid-1978 are primarily from the UN Population Division. In some cases the UN population data were adjusted by using more recent data from the World Bank and the US Bureau of the Census.

The data on *area* are from the UN *Demographic Yearbook, 1977*.

Gross national product (GNP) measures the total domestic and foreign output claimed by residents of a country.¹ It comprises gross domestic product (see the technical notes for Table 2) and factor incomes (such as investment receipts and workers' remittances) accruing to residents from abroad, less the income earned in the domestic economy accruing to persons abroad. It is calculated without making deductions for depreciation.

The *GNP per capita* figures were calculated according to the *World Bank Atlas* method: GNP in national currency units was expressed first in weighted-average prices for the base period 1976-78, converted into dollars at the GNP-weighted average exchange rate for this period, and adjusted for US inflation. The resulting estimate of GNP was then divided by the population in mid-1978. This method reduces the effect of temporary undervaluations or overvaluations of a

1. GNP figures generally are for 1978. Exceptions are Iran, for which 1977 estimates are the most recent, and Democratic Kampuchea and Lebanon, for which 1974 estimates are the most recent.

particular currency and generally assures greater comparability of the estimates of GNP per capita among countries.

The GNP per capita figure of \$230 reported for China is based on the official estimate of "net material product" released by the Government, plus an allowance for depreciation and for services not covered by that concept. These data were received only recently, and analysis to assure that the data are reasonably comparable to those of other countries has not yet been possible.

The *average annual rate of inflation* was calculated from the "implicit gross domestic product (GDP) deflator," which is calculated by dividing, for each year of the period, the value of GDP in current market prices by the value of GDP in constant market prices, both in national currency. This measure of inflation has limitations, especially for the oil-producing countries in the light of the sharp increase in oil prices in late 1973.

The *adult literacy rate* is the percentage of persons aged 15 and over who can read and write. These rates are based primarily on information from the UN Educational, Scientific and Cultural Organization (UNESCO), supplemented by World Bank data. For some countries the estimates are for years other than, but generally not more than two years distant from, those specified. Thus the series are not strictly comparable for all countries.

Life expectancy at birth indicates

the number of years newborn children would live if subject to the mortality risks prevailing for the cross-section of population at the time of their birth. Data are from the UN Population Division, supplemented by World Bank estimates.

The *index of food production per capita* shows the average annual quantity of food produced per capita in 1976-78 in relation to that in 1969-71. The estimates were derived from those of the Food and Agriculture Organization (FAO), which are calculated by dividing indices of the quantity of food production by indices of total population. Food is considered to comprise cereals, starchy roots, sugar cane, sugar beet, pulses, edible oils, nuts, fruits, vegetables, livestock and livestock products. Quantities of food production are measured net of animal feed, seeds for use in agriculture, and food lost in processing and distribution.

The country-group averages in this table are weighted by country population.

The accompanying table shows basic indicators for 29 countries that have a population of less than a million and are members of the United Nations, the World Bank, or both.

Tables 2 and 3. Growth and Structure of Production

Most of the definitions used are those of the UN *System of National Accounts*.

Gross domestic product (GDP)

UN/World Bank members with a population of less than 1 million	Population (millions) Mid-1978	Area (thousands of square kilometers)	GNP per capita (dollars) 1978	Life ex- pectancy at birth (years) 1978	Average index of food production per capita (1969-71 = 100) 1976-78
Maldives	0.1	(.)	150	47	..
Cape Verde	0.3	4	160	60	..
Comoros	0.4	2	180	46	..
Gambia, The	0.6	11	230	41	82
Guinea-Bissau	0.6	36	290	41	105
Equatorial Guinea	0.3	28	..	46	..
Western Samoa	0.2	3	..	68	..
Solomon Islands	0.2	28	430	..	112
Djibouti	0.3	22	450	45	..
Sao Tome and Principe	0.1	1	490	..	..
Grenada	0.1	(.)	530	69	..
Guyana	0.8	215	560	67	95
Swaziland	0.5	17	590	46	109
Botswana	0.8	600	620	48	100
Mauritius	0.9	2	830	67	103
Seychelles	0.1	(.)	1,130	..	..
Fiji	0.6	18	1,420	71	90
Barbados	0.3	(.)	1,960	71	76
Suriname	0.4	163	2,110	68	108
Cyprus	0.7	9	2,120	72	98
Malta	0.3	(.)	2,170	71	121
Bahamas	0.2	14	2,520	69	..
Oman	0.8	212	2,570	47	..
Gabon	0.5	268	3,580	44	88
Bahrain	0.4	1	4,100	65	..
Iceland	0.2	103	8,390	75	114
Luxembourg	0.4	3	10,540	72	105
Qatar	0.2	11	12,740	48	..
United Arab Emirates	0.8	84	14,230	48	..

Note: Recent data on the adult literacy rate were available for only five of these countries: The Gambia, 10 percent in 1976; Botswana, 35 percent in 1978; Swaziland, 65 percent in 1978; Mauritius, 80 percent in 1972; and Barbados, 99 percent in 1976.

measures the total final output of goods and services produced by an economy—that is, within a country's territory by residents and nonresidents, regardless of its allocation to domestic and foreign claims. It is calculated without making deductions for depreciation. For most countries, GDP by industrial origin is measured at factor cost, but for some countries without complete national accounts series at factor cost, market price series were used. GDP at factor cost is equal to GDP at market prices, less indirect taxes net of subsidies.

The *agricultural sector* comprises agriculture, forestry, hunting and

fishing. The *industrial sector* comprises mining, *manufacturing*, construction, and electricity, water and gas. All other branches of economic activity are categorized as *services*.

National accounts series in national currency units were used to compute the indicators in these tables. The growth rates in Table 2 were calculated from constant price series, the shares of GDP in Table 3 from current price series.

The average growth rates for the country groups in Table 2 are weighted by country GDP in 1970 in dollars. The average sectoral shares in Table 3 are weighted by country GDP in current dollars.

Tables 4 and 5. Growth of Consumption and Investment; Structure of Demand

GDP is defined in the technical notes for Table 2.

Public consumption (or general government consumption) includes all current expenditure for purchases of goods and services by all levels of government. In addition, capital expenditure on national defense and security is regarded as consumption expenditure.

Private consumption is the market value of all goods and services purchased or received as income in kind by households and non-profit institutions. It includes imputed rent for owner-occupied dwellings.

Gross domestic investment consists of the outlays for additions to the fixed assets of the economy, plus the net value of inventory changes.

Gross domestic saving shows the amount of gross domestic investment financed from domestic output. Comprising public and private saving, it is the difference between gross domestic investment and the deficit on the current account of goods and nonfactor services, excluding net current transfers.

Exports of goods and nonfactor services represent the value of all goods and nonfactor services sold to the rest of the world; they include merchandise, freight, insurance, travel and other nonfactor services. The value of factor services, such as investment receipts and workers' remittances from abroad, is excluded.

The *resource balance* is the difference between exports and imports of goods and nonfactor services.

National accounts series in national currency units were used to compute the indicators in these tables. The growth rates in Table 4 were calculated from constant price series, the shares of GDP in Table 5 from current price series.

The country-group averages in Table 5 are weighted by country GDP in current dollars.

Table 6. Industrialization

The percentage *distribution of value added* among manufacturing industries was calculated from data obtained from the UN Industrial Development Organization (UNIDO), with the base values expressed in 1970 dollars.

The classification of manufacturing industries is in accord with the UN International Standard Industrial Classification of All Economic Activities (ISIC). *Food and agriculture* comprise ISIC Major Groups 311, 313 and 314; *Textiles and clothing* 321-24; *Machinery and transport equipment* 382-84; and *Chemicals* 351 and 352. *Other manufacturing* comprises ISIC Major Division 3, less all of the above.

The figures for *value added in manufacturing* are from the World Bank's national accounts series in national currencies, converted into 1970 dollars.

To calculate *gross manufacturing output per capita*, ratios of gross output to value added in manufacturing, derived from various issues of the UN *Yearbook of Industrial Statistics*, were applied to the World Bank's data on value added in manufacturing. Per capita values were then calculated by using mid-year estimates of country population.

Table 7. Energy

All data on energy are from UN sources. They refer to commercial forms of primary energy: coal and lignite, petroleum, natural gas and natural gas liquids, and hydroelectricity and nuclear power—all converted into coal equivalents. The use of firewood and other traditional fuels, though substantial in some developing countries, is

not taken into account because reliable and comprehensive data are not available.

The country-group averages of growth rates of *energy production* are weighted by volumes of country production in 1974; those of growth rates of *energy consumption*, by volumes of country consumption in 1974; those of *energy consumption per capita*, by country population.

Energy consumption per dollar of GDP refers to the ratio of total energy consumption to GDP in 1975 dollars. This indicator shows the intensity of energy use in an economy. The country-group averages are weighted by country GDP in 1975 dollars.

Energy imports refer to the dollar value of energy imports—Standard International Trade Classification (SITC) Revised Section 3—and are expressed as a percentage of earnings from merchandise exports. The country-group averages are weighted by country merchandise exports in current dollars.

Because data on energy imports do not permit a distinction between petroleum imports for fuel and for use in the petrochemicals industry, these percentages may be overestimates of the dependence on imported energy.

Table 8. Growth of Merchandise Trade

The statistics on merchandise trade are from UN publications and the UN trade data system, supplemented by statistics from the UN Conference on Trade and Development (UNCTAD) and from International Monetary Fund (IMF), *Direction of Trade and International Financial Statistics*.

Merchandise exports and imports cover, with some exceptions, all international changes in ownership of merchandise passing across the customs borders of the reporting

countries. Exports are valued f.o.b. (free on board), imports c.i.f. (cost, insurance and freight). These values are in current dollars.

The *growth rates of merchandise exports and imports* are in real terms and calculated from quantum (volume) indices of exports and imports. For the majority of developing countries these indices are from the UNCTAD *Handbook of International Trade and Development Statistics* and supplementary data that show revisions. For industrialized countries the indices are from the UN *Yearbook of International Trade Statistics* and UN *Monthly Bulletin of Statistics*.

The *terms of trade*, or the "net barter terms of trade," are calculated as the ratio of a country's index of export unit values to that of import unit values. The terms-of-trade index numbers shown for 1960 and 1978, with 1970 = 100, thus indicate changes in export prices in relation to import prices. The unit value indices are from the same sources cited above for the growth rates of exports and imports.

Tables 9 and 10. Structure of Merchandise Trade

The shares in these tables are derived from trade values in current dollars reported in UN trade tapes and the UN *Yearbook of International Trade Statistics*.

Merchandise exports and imports are defined in the technical notes for Table 8.

In the categorization of exports in Table 9, *fuels, minerals and metals* are the commodities in SITC Revised Section 3, Divisions 27 and 28, and the nonferrous metals of Division 68. *Other primary commodities* comprise SITC Sections 0, 1, 2 and 4 (food and live animals, beverages and tobacco, inedible crude materials, oils, fats and waxes) less Divisions 27 and

28 (minerals, crude fertilizers and metalliferous ores). *Textiles and clothing* represent SITC Divisions 65 and 84 (textiles, yarns, fabrics and clothing). *Machinery and transport equipment* are the commodities in SITC Section 7. *Other manufactures*, calculated as the residual from the total value of manufactured exports, represent SITC Sections 5 to 9 less Section 7 and Divisions 65, 68 and 84.

In the categorization of imports in Table 10, *food* commodities are those in SITC Revised Sections 0, 1 and 4 and in Division 22 (food and live animals, beverages and tobacco, oils and fats). *Fuels* are the commodities in SITC Section 3. *Other primary commodities* comprise SITC Section 2 (crude materials, less Division 22 (oilseeds and nuts) plus Division 68 (nonferrous metals). *Machinery and transport equipment* are the commodities in SITC Section 7. *Other manufactures*, calculated as the residual from the total value of manufactured imports, represent SITC Sections 5 to 9 less Section 7 and Division 68.

The country-group averages in Table 9 are weighted by country merchandise exports in current dollars; those in Table 10, by country merchandise imports in current dollars.

Table 11. Destination of Merchandise Exports

Merchandise exports are defined in the technical notes for Table 8. All trade shares in this table are based on statistics on the value of trade in current dollars in IMF, *Direction of Trade*. Unallocated exports are distributed among the country groups in proportion to their respective shares of allocable trade. The country groups in this table follow those in the data source and differ somewhat from those used elsewhere in the volume: *industrialized countries* also include

Gibraltar, Iceland and Luxembourg; *developing countries* also include Cuba, which in other tables is grouped with centrally planned economies; *capital-surplus oil exporters* also include Oman, Qatar and United Arab Emirates.

The country-group averages are weighted by country merchandise exports in current dollars.

Table 12. Trade in Manufactured Goods

The data in this table are from the United Nations and are among those used to compute Special Table B in the UN *Yearbook of International Trade Statistics*. *Manufactured goods* are the commodities in SITC Revised Sections 5 through 9 (chemicals and related products, manufactured articles, machinery and transport equipment) excluding Division 68 (nonferrous metals).

The country groups are the same as those in Table 11. The country-group averages are weighted by country manufactured exports in current dollars.

Table 13. Balance of Payments and Debt Service Ratios

The *current account balance* is the difference between (i) exports of goods and services plus inflows of unrequited official and private transfers and (ii) imports of goods and services plus unrequited transfers to the rest of the world. Excluded from this figure are all *interest payments on external public and publicly guaranteed debt*, which are shown separately. These interest payments represent those on the disbursed portion of outstanding public and publicly guaranteed debt plus commitment charges on undisbursed debt. The current account estimates are from IMF data files; estimates of interest payments are from the World Bank Debt Reporting System.

Debt service is the sum of interest payments and repayments of principal on external public and publicly guaranteed debt. Debt-service data are from the World Bank Debt Reporting System. The ratio of debt service to exports of goods and services is one of several rules of thumb commonly used to assess the ability to service debt. The debt-service ratios in the table do not cover unguaranteed private debt, which for some countries is substantial; the debt contracted for purchases of military equipment usually is not reported. The average ratios of debt service to GNP for the country groups are weighted by country GNP in current dollars. The average ratios of debt service to exports of goods and services are weighted by country exports of goods and services in current dollars.

The World Bank Debt Reporting System is concerned solely with developing countries and does not collect data on external debt for other groups of countries. Nor are comparable data for those countries available from other sources.

Table 14. Flow of External Capital

Data on the *gross inflow and repayment of principal* (amortization) of public and publicly guaranteed medium- and long-term loans are from the World Bank Debt Reporting System. The *net inflow* is the gross inflow less the repayment of principal.

Net direct private investment is the net amount invested or reinvested by nonresidents of the country in enterprises in which they or other nonresidents exercise significant managerial control; these net figures also take into account the value of direct investment abroad by residents. IMF data files were used in compiling these estimates.

Table 15. External Public Debt and International Reserves

External public debt outstanding represents the amount of public and publicly guaranteed loans that has been disbursed, net of canceled loan commitments and repayments of principal. The data refer to the end of the year indicated and are from the World Bank Debt Reporting System. In estimating external public debt as a percentage of GNP, GNP was converted from national currencies to dollars at the average official exchange rate for the year in question. The country-group averages are weighted by country GNP in current dollars.

Gross international reserves comprise the sum of a country's holdings of gold, special drawing rights (SDRs), the reserve position of IMF members in the Fund, and holdings of foreign exchange under the control of monetary authorities. The gold component of these reserves is valued throughout at year-end London prices: that is, \$37.37 an ounce in 1970 and \$226.00 an ounce in 1978. The data for holdings of international reserves are from IMF data files. The reserve levels for 1970 and 1978 refer to the end of the year indicated and are in current dollars. The reserve holdings at the end of 1978 are also expressed in the number of months of imports of goods and services they could pay for, with imports at the average level for 1977 or 1978. The country-group averages are weighted by country imports of goods and services in current dollars.

Table 16. Official Development Assistance from OECD and OPEC Members

Official development assistance (ODA) consists of net disbursements of loans and grants made

at concessional financial terms by official agencies of the members of the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) and members of the Organization of Petroleum Exporting Countries (OPEC) with the objective of promoting economic development and welfare. It includes the value of technical cooperation and assistance.

Amounts shown are net disbursements to developing countries and multilateral institutions. The disbursements to multilateral institutions are now reported for all DAC members on the basis of the date of issue of notes; some DAC members previously reported on the basis of the date of encashment. *Net bilateral flows to low-income countries* exclude unallocated bilateral flows and all disbursements to multilateral institutions.

Figures for 1978 and earlier years are actual figures published by the OECD; those for 1979 are preliminary estimates. All others are projections by World Bank staff, based on OECD and World Bank estimates of GNP growth, information on budget appropriations for aid, and statements on aid policy by governments. They are projections based on present plans rather than predictions of what will occur.

The nominal values shown in the summary for ODA from OECD countries were converted into 1978 prices using the dollar GNP deflator. This deflator is based on price increases in OECD countries (excluding Greece, Portugal, Spain and Turkey) measured in dollars. It takes into account the parity changes between the dollar and national currencies. For example, when the dollar depreciates, price increases measured in national currencies have to be adjusted upward by the amount of the depreciation to obtain price increases in dollars.

The table this year, in addition to showing totals for OPEC, shows totals for the Organization of Arab Petroleum Exporting Countries (OAPEC). The donor members of OAPEC are Algeria, Iraq, Kuwait, Libya, Qatar, Saudi Arabia and United Arab Emirates.

Table 17. Population Growth, Past and Projected, and Hypothetical Stationary Population

The *growth rates of population* are period averages calculated from mid-year country populations. The country-group averages are weighted by country population in 1970.

The *projections of population* for 1980 and 2000, and to the year in which it will eventually become stationary, were made for each country separately. Starting with information on total population, fertility rates, and mortality rates in the base year 1978, these parameters were projected to 1980 and thereafter for five-year intervals on the basis of generalized assumptions until the population became stationary. The base-year estimates are from UN, *World Population Trends and Prospects by Country, 1950-2000*, and from the World Bank, the Population Council and the US Bureau of the Census.

The *net reproduction rate* (NRR) indicates the number of daughters that a newborn girl will bear during her lifetime, assuming fixed age-specific fertility rates and a fixed set of mortality rates.

The NRR thus measures the extent to which a cohort of newborn girls will reproduce themselves under given schedules of fertility and mortality. An NRR of 1 indicates that fertility is at replacement level: at this rate child-bearing women, on the average, bear only enough daughters to replace themselves in the population. A population

continues to grow after replacement-level fertility has been reached because its past higher birth rates will have produced an age distribution with a relatively high proportion of women in, or still to enter, the reproductive ages. The time taken for a country's population to become stationary after reaching replacement-level fertility thus depends on its age structure and previous fertility patterns.

A *stationary population* is one in which age- and sex-specific mortality rates have not changed over a long period, while age-specific fertility rates have simultaneously remained at replacement level (NRR = 1). In such a population, the birth rate is constant and equal to the death rate, the age structure also is constant, and the growth rate is zero.

For all of the projections, it was assumed that international migration would have no effect.

The estimates of the hypothetical size of the stationary population, the assumed year of reaching replacement-level fertility and the year of reaching a stationary population are speculative. *They should not be regarded as predictions.* They are included to provide a summary indication of the long-run implications of recent trends on the basis of highly stylized assumptions. A fuller description of the methods and assumptions used to calculate the estimates is available from the Economic Analysis and Projections Department of the World Bank.

Table 18. Demographic and Fertility-related Indicators

The *crude birth and death rates* indicate the number of live births and deaths per thousand population in a year. They are from the same sources mentioned in the technical notes for Table 17.

The *total fertility rate* represents the number of children that would

be born per woman, if she were to live to the end of her child-bearing years and bear children at each age in accord with prevailing age-specific fertility rates. The rates given are from the same sources mentioned in the technical notes for Table 17.

The *percentage of women in the reproductive age group* refers to women of child-bearing age (15–44 years) as a percentage of the total female population. The estimates were derived from the population estimates in Table 1.

The *percentage of married women using contraceptives* refers only to married women of child-bearing age (15–44 years). These data are mainly derived from Dorothy Nortman and Ellen Hofstatter, *Population and Family Planning Programs: A Factbook* (New York: Population Council, various issues); Dorothy Nortman, "Changing Contraceptive Patterns: A Global Perspective," *Population Bulletin*, vol. 32, no. 3 (Washington, D.C.: Population Reference Bureau, August 1977); and Office of Population, *Family Planning Service Statistics, Annual Report, 1976* (Washington, D.C.: US Agency for International Development). The data refer to a variety of years, generally not more than two years distant from those specified.

All country-group averages are weighted by country population.

Table 19. Labor Force

The *population of working age* refers to the population between 15 and 64 years of age. The estimates for 1978 are based on the population estimates in Table 1; those for 1960 are from the UN Population Division. The country-group averages are weighted by country population.

The *labor force* comprises economically active persons, including the armed forces and the unem-

ployed, but excluding housewives, students and economically inactive groups. *Agriculture, industry and services* are defined in the same manner as in Table 2. The estimates of the sectoral distribution of the labor force in 1960 are from International Labour Office (ILO), *Labor Force Estimates and Projections, 1950–2000*; most of those for 1978 are geometric extrapolations of ILO estimates for 1960 and 1970 in the same source. The country-group averages are weighted by country labor force.

The *labor force growth rates* were derived from the Bank's population projections and ILO data on activity rates, again from the source cited above. The country-group averages for 1960–70 and 1970–80 are weighted by country labor force in 1970; those for 1980–2000, by projections of country labor force in 1980.

The application of ILO activity rates to the Bank's latest population estimates may be inappropriate for some countries in which there have been important changes in levels of unemployment and underemployment, in international and internal migration, or in both. The labor force projections for 1980–2000 should thus be treated with caution.

Table 20. Urbanization

The data on *urban population as a percentage of total population* are from unpublished estimates and projections by the UN Population Division, supplemented by data from the World Bank and from various issues of the UN *Demographic Yearbook*.

The *growth rates of urban population* were calculated from the World Bank's population estimates; the estimates of urban population shares were calculated from the sources cited above.

Data on urban agglomeration

are also from the United Nations.

Because the estimates in this table are based on the national definitions of what is "urban," cross-country comparisons should be interpreted with caution.

The country-group averages for urban population as a percentage of total population are weighted by country population; the other country-group averages in this table are weighted by country urban population.

Table 21. Indicators Related to Life Expectancy

Life expectancy at birth is defined in the technical notes for Table 1.

The *infant mortality rate* is the number of infants who die before reaching 1 year of age, per thousand live births in a given year. The data are from a variety of sources, including different issues of the UN *Demographic Yearbook* and the US Bureau of the Census publication, *World Population: 1977*; they refer to a variety of years, generally not more than two years distant from those specified.

The *child death rate* is the number of deaths of children aged 1–4 per thousand children in the same age group in a given year. For countries with reliable death registration, these rates are from different issues of the UN *Demographic Yearbook*; they refer to a variety of years, generally not more than two years distant from those specified. For other countries, the rates were derived from the appropriate Coale-Demeny Model life tables to correspond to the expectation of life at birth for 1960 and 1978.²

The country-group averages in this table are weighted by country population.

2. Ansley J. Coale and Paul Demeny, *Regional Model Life Tables and Stable Populations* (Princeton, N.J.: Princeton University Press, 1966).

Table 22. Health-related Indicators

The estimates of *population per physician and nursing person* were derived from World Health Organization (WHO) data, some of which have been revised to reflect new information supplied by reporting countries. They also take into account revised estimates of population, which are shown in Table 1. Nursing persons include graduate, practical and assistant nurses. Because country definitions of nursing personnel vary—and because the data shown are for a variety of years, generally not more than two years distant from those specified—the data for these two indicators are not strictly comparable between countries.

The *percentage of total population with access to safe water*, estimated by the WHO, is the proportion of persons with reasonable access to safe water, which is defined as including treated surface water and such untreated but uncontaminated water as that from boreholes, springs and sanitary wells.

The *daily calorie supply per capita* was calculated by dividing the calorie equivalent of the food supplies in a country by its population. Food supplies comprise domestic production, imports less exports, and changes in stocks; they exclude animal feed, seeds for use in agriculture, and food lost in processing and distribution. The *daily calorie requirement per capita* refers to the calories needed to sustain a person at normal levels of activity and health, taking into account age and sex distributions, average body weights, and environmental temperatures. Both sets of estimates are from the Food and Agriculture Organization.

The country-group averages in this table are weighted by country population.

Table 23. Education

The data in this table refer to a variety of years, generally not more than two years distant from those specified, and are mostly from UNESCO.

The data on *number enrolled in primary school* refer to estimates of total, male, and female enrollment of students of all ages in primary school; they are expressed as percentages of the total, male, or female populations of primary-school age to give "gross primary enrollment ratios." Although primary-school age is generally considered to be 6–11 years, the differences in country practices in the ages and duration of schooling are reflected in the ratios given. For countries with universal primary education, the gross enrollment ratios may exceed 100 percent because some pupils may be below or above the official primary-school age.

The data on *number enrolled in secondary school* were calculated in the same manner, with secondary-school age generally considered to be 12–17 years.

The data on *number enrolled in higher education* are from UNESCO.

The *adult literacy rate* is defined in the technical notes for Table 1.

The country-group averages in this table are weighted by country population.

Table 24. Income Distribution

The data in this table refer to the distribution of total disposable household income accruing to percentile groups of households ranked by total household income. The distributions cover rural and urban areas and refer to different years between 1965 and 1977.

The distributions for the industrialized countries are from Malcolm Sawyer, *Income Distribution in OECD Countries* (OECD Occasional Studies, July 1976); they refer to

posttax income and conceptually are roughly comparable with the distributions for developing countries. The estimates for Latin American countries other than Mexico come from the preliminary results of a joint project of the World Bank and the UN Economic Commission for Latin America (ECLA). Those for Mexico are the results from the 1977 Household Budget Survey. The estimates for most developing countries in Asia are from the preliminary results of a joint project of the World Bank and the Economic and Social Commission for Asia and the Pacific (ESCAP). The distributions for other developing countries are from data gathered by the World Bank from national sources.

Because the collection of data on income distribution has not been systematically organized and integrated into the official statis-

tical system in many countries, estimates were typically derived from surveys designed for other purposes, most often consumer expenditure surveys, which also collect some information on income. These surveys use a variety of income concepts and sample designs. With few exceptions the analysis of data does not take into account the differences in household size. Furthermore, the coverage of many of these surveys is too limited to provide reliable nationwide estimates of income distribution. Thus, although the estimates are considered the best available, they do not avoid all these problems and should be interpreted with extreme caution.

The scope of the indicator is similarly limited. Because households vary in size, a distribution in which households are ranked according to per capita household

income, not according to their total household income, is superior for many purposes. The distinction is important because households with low per capita incomes frequently are large households, whose total income may be relatively high. For this reason it is best to use the distribution of individuals ranked by per capita household income when comparing two distributions for welfare purposes—say, those of two countries or those of rural and urban areas in a country. Information on the distribution of per capita household income exists, however, for only a few countries. The World Bank recently launched the Living Standards Measurement Study to develop procedures and applications that can assist countries in improving their collection and analysis of data on income distribution.

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Note: Because the United Nations no longer reports data on Taiwan, most of the indicators for Taiwan come from its statistical publications.



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