Global Economic Prospects and the Developing Countries

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Preface

This edition of *Global Economic Prospects and the Developing Countries* is the second in an annual series of staff reports analyzing the global economic prospects for development. Like the first, it focuses on the main international economic linkages, with an emphasis on developing countries. *Global Economic Prospects* complements the *World Development Report* by presenting the analytical underpinning to the WDR's discussion of international economic trends and a more detailed exposition of the factors that define the global circumstances for developing countries. *Global Economic Prospects* pays more attention to the international economic environment than to the role of developing country policies, although it recognizes the primary importance of the latter.

Last year's report focused on international trade in primary commodities. This year's gives special emphasis to international trade in manufactures. Manufactures have quickly become an important component of developing countries' exports. In 1990, manufactures accounted for three-quarters of global merchandise trade, and almost half of all the merchandise exports of developing countries.

- Chapter 1 describes the outlook for the global economy over the decade and trends in the global trading and financial systems, and it examines the implications of these trends for developing countries' growth prospects.
- Chapter 2 takes stock of the international policy climate, particularly as it affects developing countries' exports of manufactures, and it discusses the gains from reductions in industrial countries' trade barriers.
- Chapter 3 analyses growing interlinkages in manufacturing and explores their implications for exporters in developing countries.

This report is a product of the staff of the International Economics Department.

Abbreviations, acronyms, and data notes

ACP	African, Caribbean, and Pacific
CAP	Common Agricultural Policy
CMEA	Council for Mutual Economic Assistance
COMTRADE	A UN trade database
DRS	Debtor reporting system
EC	European Community
ECSC	European Coal and Steel Community
EFTA	European Free Trade Association
GATT	General Agreement on Tariffs and Trade
GDP	Gross domestic product
GSP	Generalized System of Preferences
G-3	Germany, Japan, and United States
G-5	France, Germany, Japan, United Kingdom, and United States
G-7	Canada, France, Germany, Italy, Japan, United Kingdom, and United States
LIBOR	London Interbank Offered Rate
LMICs	Low- and middle- income countries or developing countries
MFA	Multifibre Arrangement
MFN	Most favored nation
MTO	Multilateral Trade Organization
MUV	Manufactures unit value index
NMP	Net material product
NTB	Nontariff barrier
ODA	Official development assistance
OECD	Organization for Economic Co-operation and Development
OPEC	Organization of Petroleum Exporting Countries
QR	Quantitative restriction
SIC	United States Standard Industrial Classification
SITC	Standard International Trade Classification
SMART	Software for Market Analysis and Restrictions on Trade
TFP	Total factor productivity
TRIMS	Trade related aspects of investment measures
TRIPS	Trade related aspects of intellectual property rights
UNCTAD	United Nations Conference on Trade and Development
UNIDO	United Nations Industrial Development Organization
VERs	Voluntary export restraints
WDR	World Development Report

The term "developing countries" as used in this study refers to all low- and middle-income economies.

Data notes

Appendix A classifies countries by income, region, export category, and indebtedness.

The following norms are used throughout:

- *Billion* is 1,000 million
- Data for periods through 1990 are actual; data for 1991 are estimated; and data for 1992–2000 are projected.
- All growth rates are based on constant price data unless otherwise indicated and have been computed with the use of the least squares method. See the technical note to the World Development Indicators for details of this method (World Bank 1991b).

Summary

The 1990s have started badly for developing countries. Aggregate real GDP per capita declined in the first two years. Wars and the transformation of Eastern Europe were the main reasons. Further, economic recession in some major industrial countries curtailed developing country export earnings.

For the remainder of the decade, however, developing country prospects still look good when compared with the 1980s. The key international variables offer a mixed outlook for developing countries, but improved policies in developing countries themselves hold out the promise of higher growth. Essential to this improvement will be better export performance, particularly in manufactures. In part, this will depend on a reduction of trade barriers in the high income economies that constitute three-quarters of their export markets. It will also depend on improved growth in the industrial countries. The developing countries, for their part, will need to strengthen international links to exploit opportunities in an increasingly integrated and competitive global business environment.

Significant risks remain. The current slow recovery of industrial economies could falter. Stalled Uruguay Round negotiations could mean a deterioration in the global trading system. Failure to become an integrated part of the international trade and production network could jeopardize the prospects of some poor developing countries.

The economic climate

An important influence on developing countries' prospects is the global economic climate, defined in most part by the industrial economies. The outlook for the 1990s is mixed:

- The major industrial countries are likely to grow on average at 2.6 percent per year, slightly more slowly than in the 1980s.
- Real interest rates will be lower than the record levels of the 1980s, but will still be high at around 3 percent.
- Commodity prices are expected to remain near present low levels in the short term but increase cumulatively by 15 percent in real terms during the second half of the 1990s.
- Concessional external finance will become even more scarce, with access to private capital markets restricted to countries with strong creditworthiness.

Offsetting these external factors is an improvement in domestic policies in several countries in Eastern Europe, Latin America, South Asia, and Sub-Saharan Africa. In the aggregate, World Bank economists expect the growth rate of per capita incomes in developing countries to rise from 1.2 percent in the 1980s to 2.9 percent in the 1990s, with acceleration of growth in all regions except Asia where growth is nevertheless expected to remain high (table 1).

Economic reforms in several Sub-Saharan African economies are expected to raise the region's GDP growth to 3.5 percent per year, significantly higher than the 2.2 percent of the previous decade, but still barely enough to keep pace with the rapid growth of population. Latin America's economic performance will improve sharply, based on a continued resolution of the debt crisis and a significant shift toward market-friendly policies. Structural reforms in the major South Asian economies will serve to keep aggregate GDP per capita growth at around 3 percent a year, near the rate achieved in the 1980s. East Asia is unlikely to repeat its impressive economic performance of the past decade; nevertheless, it will remain the fastest growing developing region, and per capita incomes are projected to rise at a rate of over 5 percent a year. Prospects for growth in Eastern Europe and the former Soviet Union in the years ahead are highly uncertain, but if commitment to economic

Per capita incomes in developing countries are expected to grow more rapidly in the 1990s

Table 1 Growth of real per capita income in high income and developing countries
(average annual percentage change of real per capita GDP)

	1960–70	*1970–80*	*1980–90*	*1990*	*1991*	*1990–2000*
All developing countries	3.3	3.0	1.2	–0.2	–0.2	2.9
Sub-Saharan Africa	0.6	0.9	–0.9	–2.0	–1.0	0.3
East Asia	3.6	4.6	6.3	4.6	5.6	5.7
South Asia	1.4	1.1	3.1	2.6	1.5	3.1
Latin America	2.5	3.1	–0.5	–2.4	0.6	2.2
Middle East and North Africa	6.0	3.1	–2.5	–1.9	–4.6	1.6
Eastern Europe	5.2	5.4	0.9	–8.3	–14.2	1.6
All high income countries	4.1	2.4	2.4	2.1	0.7	2.1
Memorandum						
All developing countries (weighted by population)	3.9	3.7	2.2	1.7	2.2	3.6

Note: The former Soviet Union is not included in the totals.
Source: World Bank data.

reforms remains steadfast, the economies of the region can be expected to stabilize in the near term, laying the basis for recovery and growth during the remainder of the decade.

East Asia and Latin America would gain the most from industrial country trade liberalization

Table 2 The estimated change in developing countries' exports with a 50 percent reduction in trade barriers in the EC, Japan, and the United States

	Projected export expansion with	
Regional group	*50 percent liberalization (US$ billion)*	*Share of total (percent)*
Sub-Saharan Africa	2.2	4.4
East Asia	27.1	54.2
South Asia	4.5	9.0
Latin America	9.6	19.2
Eastern Europe	3.8	7.6
Middle East and North Africa	2.6	5.2
Other Europe	0.2	0.4
All developing countries	50.0	100.0

Note: The above projections are based on 50 percent cuts in applied tariffs and available estimates of NTB ad valorem equivalents.
Source: World Bank estimates based on the SMART model and COMTRADE data.

Growth in developing countries has been linked closely to growth in exports of manufactures, which now account for about half of total merchandise exports. This link will be stronger in the future, because the relative scarcity of external financial resources in the coming decade means that developing countries in aggregate will need to run a trade surplus. The projected acceleration of export growth in the 1990s will require continued economic recovery in the industrial countries; an increase in OECD growth by one percentage point a year sustained over three years would raise developing country exports by US$60 billion a year. Developing countries will also need to sustain the momentum of market reforms, obtain greater access to external markets, construct better international communication links, and absorb and master new production and management techniques more rapidly to sharpen international competitiveness.

The policy climate

Industrial country protection imposes costs on developing countries. But it has not stopped them from acquiring a growing share of industrial country markets. In 1980, developing country exports of manufactures met 2.4 percent of consumption in the EC, North America, and Japan; by 1988, this had grown to 3.1 percent. If all developing countries experienced the same rapid export growth as did Korea from 1980 to 1988, they would have supplied only 3.7 percent of industrial country markets by 1988; for clothing, the import penetration ratio would have been

higher—28 percent in 1988 instead of 22 percent. Such increases in themselves are unlikely to trigger a protectionist response, especially if industrial countries support adjustment measures in the affected industries and regions. Furthermore, the "adding-up" problem does not constrain rapid growth in exports of manufactures, as it does in the case of primary commodities. Indeed, the greater the number of developing countries that expand exports of manufactures, the greater the benefits to them all—a result that follows from the fact that their own imports would expand as well.

A successful Uruguay Round would make a big difference. A 50 percent reduction in the trade barriers of the EC, United States, and Japan is estimated to raise developing country exports by over US$50 billion in 1991 prices—almost equal to the total net flow of official development assistance in 1991 (table 2). East Asia would reap over 50 percent of the total gain, and Latin America another 20 percent. Exports of labor intensive manufactures, such as clothing, footwear, and furniture, would register the largest increases.

If the Uruguay Round talks fail, the global economy would forego opportunities in trade; domestic pressures on governments to impose trade restrictions would be harder to resist; and the capacity of GATT to mediate trade relations between emerging regional free trade arrangements would be weakened.

Interest in regional free trade arrangements appears to have grown in recent years. The EC single market due in 1992 and the United States-Canada arrangement are two important examples. Already, 45 percent of world trade is within such regional arrangements, and this could rise to 50 percent if current talks on new ones are concluded successfully. Such arrangements could be beneficial to the countries involved and to world trade in general provided they lower their trade barriers with the rest of the world as well. But the risk that regional trade arrangements may turn hostile toward each other cannot be discounted. Not only would this be damaging to world trade, but countries outside the orbit of such blocs, especially small developing countries, would be hard hit.

The business climate

Lower transport and telecommunications costs have spurred the globalization of production and marketing of manufactures. This has meant more specialization between nations in different branches of manufacturing and even within different stages of production. With labor cost advantages, several developing countries seized the opportunity provided by new technologies to become low cost suppliers of manufactures. East Asia's share of industrial country imports of labor intensive manufactures rose from 1.4 percent in 1965 to 12.4 percent in 1989.

Remaining the low cost supplier requires more than cheap labor. Recent innovations in marketing and production of manufactures have made good telecommunications and international transport facilities even more important than before. The economic distance between producers and markets is becoming an increasingly important element in international competitiveness. New technologies permit more differentiated products that, in turn, require detailed market intelligence. "Just-in-time" inventory management techniques, made possible by computerization and the trend toward design for manufacture, require close coordination between producers, suppliers, designers, and retailers.

No country wants to depend on low wages to remain a low cost supplier. Raising living standards without losing international competitiveness means increasing productivity. One way of raising productivity is by learning from others. Foreign direct investment can help toward this; so can external partners in joint ventures. Governments that discourage the use of foreign managers, consultants, or workers, inhibit a potentially valuable source of technical information, expertise, and experience. Countries with a well educated labor force, and with open international trade and investment flows, are likely to absorb innovative production and management techniques rapidly. Countries that fail to develop information links or to emphasize human resource development will find it increasingly difficult to compete successfully in the global market for manufactures.

The global economic outlook and the developing countries

1

The 1990s have not started well for developing countries. Their aggregate GDP grew by 1.9 percent in 1991, the same as in 1990. Per capita incomes declined in both years, the only time this has happened since 1965, when the World Bank started collecting comprehensive data on developing countries. A number of factors combined to bring this about:

- Wars affected economic activity in many parts of the developing world, especially the Middle East and Yugoslavia.
- Eastern Europe and the former Soviet Union underwent fundamental political and economic change, dislocating their production, and adversely affecting trading partners. The collapse of the CMEA trading system contributed to a sharp decline in intra-CMEA trade despite reorientation of Eastern European trade toward Western Europe.
- Growth slowed in the industrial economies, and some major industrial countries entered recession. The growth rate of the G-7 fell from 2.6 percent in 1990 to 1.2 percent in 1991. Developing country export volume grew by only 1 percent in 1991, following a growth rate of 4.5 percent in 1990.
- Poor progress on economic reforms in a few developing countries (for example, Brazil and Zaire) hindered growth and structural adjustment.

There were some bright spots too. The East Asian economies continued to grow rapidly, averaging almost 7.0 percent in 1990–91. Thailand grew at 8.2 percent, and, after faltering in 1990, China's growth rate recovered to 7.0 percent in 1991. Latin America, too, did substantially better in 1991 than 1990. Policy reforms introduced earlier in some countries, including Argentina, Chile, Mexico, and Venezuela, were the basis for a GDP growth rate of 2.6 percent. Reflecting these developments, population-weighted GDP growth for the developing countries in aggregate is estimated to have climbed from 3.7 percent in 1990 to 4.2 percent in 1991.

Economic prospects for developing countries depend mainly on domestic economic policies. Recognition of the benefits of market friendly economic policies has led many developing countries to adopt wide ranging measures to stabilize their economies and restructure incentives to encourage private initiative and international trade.

Prospects for developing economies are affected also by the outlook for the world economy and trends in global trading and financial systems. The interdependence of economies has made the prospects of the developing world closely intertwined with those of the industrial world. The outlook for commodity prices is significant for primary commodity producers in Sub-Saharan Africa and Latin America. The future availability of external finance and prospects for international interest rates are of considerable significance to virtually all developing economies—particularly those with large external debts.

The outlook for industrial economies

In the 1990s, the seven largest industrial countries are expected to grow at slightly below their rates in the 1980s (table 1-1). In the first half of the decade, there will probably be a cyclical period of slower growth with a slower-than-average recovery in the United States, Canada, and the U.K. The pace of recovery is likely to be moderated by the wide budget deficit in the United States and the perceived need for cautious monetary policy in Germany. This, together with a rising demand for capital worldwide, is likely to limit the decline of real interest rates in the early 1990s. All of this would mean that investment growth will be weak in the first half of the 1990s. Expansion of investment (and growth of credit) over the next few years will be limited also by the recapitalization of the U.S. financial sector and the reduction of debt-to-

In the 1990's, industrial countries are likely on average to grow at a rate slower than in the 1980s

Table 1-1 Global indicators of external conditions affecting growth in the developing countries
(average annual percentage change except LIBOR)

Indicator	*1980–90*	*1990–95*	*1995–2000*	*1990–2000*
Real GDP in the G-7 countries	2.8	2.5	2.8	2.6
Inflation in the G-7 countries[a]	4.5	3.5	3.3	3.4
Real LIBOR[b]	5.0	2.8	3.2	3.0
Export price of manufactures (MUV)	3.3	3.3	3.8	3.5
Price of petroleum[c]	–6.6	–4.4	4.9	0.2
Nonoil commodity price[c]	–5.1	–1.0	2.1	0.5

a. Consumer price index in local currency, aggregated using 1988–90 GDP weights.
b. GDP-weighted average of six-month rates for Germany, Japan, and the United States.
c. Based on World Bank indexes and deflated by the export price of manufactures (MUV).
Source: Consensus Economics; World Bank staff estimates.

income ratios in the non-financial corporate and household sectors. As this structural change and recovery works itself through and as inflation and interest rates edge downward, the industrial countries are expected to achieve a growth rate of almost 2.8 percent in the second half of the 1990s.

Economic forecasters expect relatively weak growth in the United States in the first half of the 1990s, reflecting the slackness in aggregate domestic demand (table 1-2). During the second half, a lower budget deficit and moderating inflation will ease pressures on interest rates, reviving the growth rate of demand and hence of output.

Japan will grow at an annual rate of around 4 percent during the 1990s, somewhat weaker than the average for the late 1980s. The probable cause will be a decline in the growth of real investment. Japan's export growth in the 1990s is unlikely to be as buoyant as in the 1980s, so growth in output will need to be sustained by the expansion of domestic demand. These forecasts assume, however, that Japan's equity and real estate markets deflate smoothly. Yet there is a risk of a sudden decline in these markets provoking further consolidation in the banking system and restricting the extension of credit for investment.

Germany's GDP is expected to grow at about 3 percent a year in the 1990s. Drawn out tension in wage bargaining and high inflationary expectations could keep interest rates high and dampen growth in western Germany. However, this slowdown will tend to be offset by a revival of private sector activity in eastern Germany. Government spending on unification will support consumption there, but this may be replaced gradually by state investment in infrastructure and by private investment in housing and industrial projects.

France is expected to maintain its conservative fiscal stance and low inflation rate with a view to raising growth of output toward 3 percent a year by the second half of the 1990s. Growth in the United Kingdom is expected to remain below 2 percent in the first half, reflecting its poor start in 1991 and the difficulty of achieving lasting improvement in export competitiveness because of relatively high inflation and interest rates.

The outlook for international real interest rates

The outlook for real interest rates depends, in part, on the global savings-investment balance.Savings and investment must be equal in the final analysis, and this balance can be struck at higher real interest rates than normal, especially if there is a worldwide capital shortage.

Increments to the effective demand for capital that could be regarded as extraordinary are not expected to be large enough to exert much upward pressure on interest rates. In due course, investment levels can be expected to rise substantially in developing economies, especially in the former Soviet Union, Eastern Europe, the Middle East, and Latin America—as well as in Germany, Japan, and Taiwan, China. Although investment needs in Eastern Europe and the former Soviet Union are significant, commercial financial flows will be limited until these economies are considered creditworthy by lenders in international capital markets. At the global level, the incremental effective demand for capital could be between US$ 100 billion and US$ 200 billion per year, or from 2 to 4 percent above present levels (table 1-3).

Short term real interest rates in dollar terms are expected to average 3.3 percent during the 1990s, compared with 3.8 percent in the second half of the 1980s. But relative to recent cyclically depressed levels, U.S. interest rates are likely to rise over the next four years (as indicated by the nominal rate forecasts

The United States, Canada, and the United Kingdom are forecast to grow faster in the latter half of the 1990s

Table 1-2 G-7 growth rates
(average annual percentage change)

Country	1980–90 Actual	1991–95	1996–2001
United States (GNP)	3.0		
Consensus Economics		1.9	2.4
DRI [a]		2.2	2.6
NIESR [b]		1.8	2.3
WEFA		2.2	—
Japan (GNP)	4.0		
Consensus Economics		3.9	3.8
DRI [c]		3.7	—
NIESR [b]		3.7	4.2
WEFA		4.0	—
Germany, western (GNP)	2.0		
Consensus Economics		2.8	2.8
DRI [c]		2.8	—
NIESR [b]		3.1	2.9
WEFA (united Germany)		2.7	—
France (GDP)	2.3		
Consensus Economics		2.6	2.8
DRI [c]		2.5	—
NIESR [b]		2.2	3.0
WEFA		2.0	—
Italy (GDP)	2.3		
Consensus Economics		2.6	2.9
DRI [c]		2.2	—
WEFA		2.3	—
United Kingdom (GDP)	2.0		
Consensus Economics		1.6	2.5
DRI [c]		1.7	—
NIESR [b]		1.3	2.8
WEFA		1.6	—
Canada (GDP)	3.0		
Consensus Economics		2.2	2.8
DRI [c]		2.7	—
WEFA		2.1	—
Industrial countries	2.8		
Consensus Economics (G-7)		2.5	2.8
DRI (G-7)[c]		2.3	—
NIESR (G-7)[b]		2.4	3.0
WEFA		3.0	—

— Not available.
a. 1990–95 and 1995–2002.
b. 1990–95 and 1996–99.
c. 1990–94.
Sources: Data obtained from: Data Resources Incorporated/McGraw-Hill (DRI), Lexington Massachusetts, January 1992; National Institute of Economic and Social Research (NIESR), London, November 1991; The Wharton Econometric Forecasting Association Group (WEFA), Bala Cynwyd, Pennsylvania, January 1992; Consensus Economics Incorporated, London, April 1991; World Bank data.

Three quarters of the global effective demand for capital is in industrial countries

Table 1-3 Total gross domestic investment in 1989
(billions of U.S. dollars)

Region	Investment
World[a]	4,164
High-income	3,270
Industrial	3,202
United States	878
Japan	910
EC	1,023
Other industrial	391
Other high-income	68
Developing countries	894
Sub-Saharan Africa	45
East Asia	323
South Asia	77
Middle-East	58
Northern Africa	38
Developing Europe	145
Eastern Europe	102
Other Europe	43
Latin America	208

a. Excludes the former Soviet Union.
Source: World Bank data.

in table 1-4). The expected pattern for short term real deutsche mark rates is quite different; these rates, relatively high in 1991–92 (around 5 percent), are expected to come down only very gradually over the next few years, reflecting in part the surge of credit demand in eastern Germany as economic activity rebounds there. Differences in fiscal-monetary policy mix underlie these trends. The present monetary ease and fiscal tightness in the United States (compared especially with Europe) should be diminishing over the coming decade, tending to equalize real interest rates across Europe and the United States in the long run.

The projected decline in interest rates during the 1990s is of some importance to developing countries with large amounts of variable rate debt. Declines in interest rates during 1991 had a substantial effect on scheduled interest payments, especially for Latin America (box 1-1).

The outlook for external resource flows

Aggregate net resource flows to developing countries roughly halved in nominal terms between 1981 and 1987. They have recovered partly to reach US$85 billion by 1991 compared to US$100 billion a decade before. Whether this recovery continues depends

Short term rates are expected to rise in the U.S. but fall elsewhere

Table 1-4 Three-month interest rates
(percentage points)

Country	1991–95	1996–99
United States		
DRI a	5.8	6.5
NIESR a	5.9	7.0
WEFA a	5.4	—
Japan		
NIESR b	6.3	6.0
WEFA b	5.7	—
Germany		
NIESR c	8.2	6.5
WEFA a	7.8	—
France		
NIESR c	8.3	6.5
WEFA c	8.1	—
United Kingdom		
NIESR cd	9.6	6.6
WEFA c	8.3	—

— Not available.
a. Certificate of Deposit.
b Gensaki.
c. Interbank.
d. 1991–94 and 1995–99.
Sources: Data obtained from: Data Resources Incorporated/McGraw-Hill (DRI), Lexington Massachusetts, February 1992; National Institute of Economic and Social Research (NIESR), London, November 1991; The Wharton Econometric Forecasting Association Group (WEFA), Bala Cynwyd, Pennsylvania, January 1992.

much on economic policies in developing countries and how quickly they return to creditworthiness. In increasingly competitive and discriminating international capital markets, developing country policies will exert considerable leverage on the amount of external financing obtained.

Traditional sources of external finance for developing countries will be scarce in the 1990s. Grants and bilateral loans (concessional and nonconcessional) are expected to grow at roughly 4 percent a year over the next five years. Multilateral loans, based on the lending plans of international financial institutions for 1990–95, are expected to grow faster—at 9.4 percent per year.[1] New demands for concessional resources will arise in some of the poorer republics of the former Soviet Union and several other countries in Asia and Central America. Coupled with tighter supplies of such funds from the traditional donors, the demands for concessional resources will probably be scrutinized more closely, and additional effort will be required to secure the most effective distribution of these funds.

Could official support to Eastern Europe and the republics of the former Soviet Union divert resources away from traditional borrowers? Unlikely in the case of nonconcessional flows from multilateral and export credit agencies, which are not typically constrained by lending limits; the effective constraints are more likely to be the creditworthiness of the recipients. For concessional assistance, however, worries about the potential for diversion is valid. Although net disbursements of official development assistance to Eastern Europe in 1990 were small in relation to all developing countries, commitments to Eastern Europe (particularly to Hungary and Poland) are significant. Unless donors' aid budgets are increased, other developing countries may be affected adversely.

Developing economies implementing policies to resume growth and restore creditworthiness will have greater access to private commercial lending. In 1990 and, at an accelerated pace, in 1991, a few middle income developing economies—Chile, Mexico, and Venezuela—have been able to negotiate reductions in debt and renew access to international capital markets for portfolio and foreign direct investment. The experience of these countries demonstrated that a track record of reform is a prerequisite for successfully reaching debt reduction agreements with creditors and regaining a position of creditworthiness in international capital markets.

For countries that have regained access to commercial sources of finance, a growing range of financial instruments have become available to facilitate private flows—for example, debt-equity swaps, tailor-made bonds, structured project finance, and other commodity-linked financial instruments. These alternative forms of external finance may account for more than 30 percent of aggregate net resource flows in 1991—and roughly half of net flows to East Asia.

In general, however, projections of external financial flows to developing countries are sobering. For the 1990s, developing countries must finance their domestic investment requirements largely from their own savings. By mid-decade, their aggregate current account deficit is expected to reach 1.6 percent of GDP, compared with an annual average of 2.7 percent of GDP between 1970 and 1989. Given projected levels of interest payments and remitted profits on foreign direct investment, this implies that developing countries must collectively maintain a trade surplus, although individual countries would vary considerably in the extent to which they have access to external capital. This conclusion also underscores the importance of expanding exports, of which manufactures will be the most dynamic element.

Box 1-1 Interest rates and debt servicing

The substantial easing of monetary policy in the United States during 1991 served to lower dollar-based LIBOR from the 8.5 percent average level of 1990 to a rate below 5 percent by the end of 1991. An average measure of LIBOR for the G-5 countries of France, Germany, Japan, the United Kingdom, and the United States also declined over the course of 1991, but the drop was a more moderate 150–200 basis points, reflecting the mixed set of monetary positions adopted by the members of the group.

This general easing of international interest rates was beneficial for those developing countries that carry sizable amounts of debt at variable-rate terms. Countries with debt portfolios weighted toward the U.S. dollar in currency composition accrued more significant reductions in scheduled interest costs.

Lower interest rates meant that in 1991 developing countries saved about US$13 billion, or 2 percent of 1990 export earnings, in scheduled interest payments (box table 1-1). Latin America, which holds nearly half of the stock of dollar-denominated variable-rate liabilities, is likely to have benefited most by these developments, enjoying a potential reduction in interest cost of US$6 billion, equivalent to 3.5 percent of the region's export earnings. Interest costs for East Asia and for developing Europe may have eased by US$3 billion and US$1.7 billion respectively, the equivalent of 1.2 percent of exports. Over the longer term, however, U.S. interest rates are likely to rise with economic recovery. With the dollar remaining the dominant currency comprising the stock of variable rate debt, this would mean a rise in interest payments once again.

Box table 1-1 A simulation of the effect of interest rate changes on scheduled interest payments, 1991

[illegible]

Currency	[illegible] countries	Latin America	East Asia	Developing Europe	Sub-Saharan Africa
U.S. dollars	-12,580	-5,900	-2,770	-1,730	-850
Yen	-450	-90	-220	-90	
DM	90	30	10	30	10
Pounds	-130	-30		-30	-40
French franc	-60	-10		-20	-20
Total	-12,930	-6,030	-2,990	-1,820	-900
Percentage of 1990 exports	-2.0	-3.5	-1.2	-1.2	-1.9

[illegible]

Source: World Bank data.

The outlook for commodity prices

Commodity prices are expected to remain near present low levels in the short-term, but will increase in real terms in the second half of the 1990s (table 1-5). Nonfuel primary commodity prices are unlikely to change in aggregate in current dollar terms during 1992. Deflated by the World Bank's manufactured exports unit value index, the constant dollar nonfuel index would fall by 2.9 percent in 1992—continuing the decline seen since 1989. In real terms, nonfuel commodity prices were already at a postwar low in 1991, with the World Bank's constant dollar index declining from 71.1 in 1988 (1979–81=100) to 58.2 in 1991. Metals and minerals prices will continue to fall from a peak reached in 1989, under pressure from low levels of industrial activity in the OECD countries and increases in exports from the former Soviet Union (appendix D). Declines are also expected in the prices of agricultural raw materials and cereals.

Little change is expected in real nonfuel commodity prices in 1993–94. Increases in beverage prices, and in agricultural raw materials, will be offset by further declines in cereals.

Between 1994 and 2000, nonfuel commodity prices could increase cumulatively by about 15 percent in real terms. This increase would result from a forecast decline in real interest rates, a reduction of the budget deficit in the United States, and production-cycle recoveries of prices in beverages, agricultural raw materials, and metals and minerals. These markets have long cycles in prices because of the lengthy adjustment lags between price changes, investment, and production.

Market expectations for petroleum prices indicate a year-on-year decline in 1992 of around 7 percent—a 10 percent fall in constant dollar terms, reflecting depressed industrial activity this year. Between 1992 and 1995, constant dollar petroleum prices may climb back to average 1991 levels, based on the cycli-

Commodity prices will remain weak in the short term but strengthen during the second half of the 1990s

Table 1-5 Average annual change in real commodity prices, 1980–2000
(percent, deflated by MUV)

Commodities	*1980–90*	*1991*	*1992*	*1993–94*	*1994–2000*	*1990–2000*
Petroleum	-6.6	-20.3	-10.1	4.1	4.6	0.2
Non-petroleum primary commodities	-5.1	-6.7	-2.9	0.4	1.4	0.5
Agriculture	-6.4	-5.2	-1.6	1.4	1.6	1.1
Food, including beverages and cereals	-6.6	-4.9	-1.0	1.5	1.6	1.3
Raw materials	-5.6	-6.4	-3.2	0.7	1.4	0.6
Timber	-2.5	3.3	5.4	-0.8	1.0	1.7
Metals and minerals	-2.8	-11.3	-7.2	-1.2	1.3	-0.9

Source: World Bank data.

cal recovery in industrial country output. Over the longer term, between 1995 and 2000, petroleum prices could increase at almost 5 percent a year in real terms because of stronger industrial country growth, the rapid rise in energy consumption in many developing countries, and the slow-down in OPEC petroleum production.

Implications for developing country prospects

Any long-term projections of the growth prospects of developing countries during the 1990s need to be interpreted with considerable caution. Here, they are based on a single set of global conditions—one among many. The outcome is certain to be different, and could be conditioned by factors not even envisioned. Furthermore, built into the following projections is the belief that the improvement in domestic economic policies of developing countries, evident over the past few years, will be sustained in the 1990s.

The aggregate GDP of developing countries is expected to grow at 4.9 percent per year during the 1990s, significantly higher than the 3.2 percent achieved in the 1980s (table 1-6). Reforms in trade and macroeconomic policies initiated in the late 1980s are expected to continue into the 1990s, leading to increased savings and investment, and greater efficiency in resource use. Export growth is expected to rise from 6 percent a year in the decade from 1980 to 1990 to 7.0 percent a year between 1990 and 2000. These differ only slightly from those presented in the previous *Global Economic Prospects* (World Bank 1991a) because the broad parameters governing the long term outlook have changed little over the past year. The only significant change is in the time profile of growth. Longer-than-expected recession in major industrial countries and slower recovery projected for the OECD during the first half of this decade will dampen the growth prospects of developing countries; but the recovery in these markets is expected to set the stage for a stronger performance in the second half of the 1990s.

Growth in Sub-Saharan Africa is expected to increase to 3.5 percent a year during this decade compared with 2.2 percent in the 1980s. The growth of countries implementing strong adjustment pro-

Aggregate GDP of developing countries is expected to grow more rapidly in the 1990s

Table 1-6 Real GDP growth rates of developing countries, 1980–2000
(average annual percentage change)

Region	*1980–90*	*1991*	*1992*	*1990–2000*
All developing countries	3.2	1.9	3.9	4.9
Sub-Saharan Africa	2.1	2.3	3.4	3.5
East Asia	7.9	7.1	7.1	7.1
South Asia	5.4	3.6	2.8	5.0
Eastern Europe	1.4	-14.2	-1.5	1.9
Middle East and North Africa	0.5	-1.9	4.9	4.5
Latin America	1.6	2.6	2.6	4.2

Note: Former Soviet Union not included in totals. 1987 prices and exchange rates.
Source: World Bank staff estimates.

grams is expected to be in the range of 4 to 5 percent per year. Nevertheless, by 2000, per capita gains in real income will be minimal for the region as a whole, and may be negative in some countries. Although relief can be expected from real increases in commodity prices and debt and debt service reduction measures, Sub-Saharan Africa's limited stock of capital in equipment, infrastructure, and human resources precludes any sharp improvements in living standards.

East Asia could remain the fastest growing developing region in this decade, although it may not match its growth in the 1980s. China is expected to continue its steady approach to reform, resolve the difficulties of its public enterprise sector, and grow at around 7 percent per year. The Philippines economy should stabilize and resume a growth rate more in line with its neighbors, while Indonesia, Korea, Malaysia, and Thailand, should maintain their momentum.

India is expected to continue its reform efforts, and restore growth momentum in the latter half of the decade for an average growth rate of nearly 5 percent a year. Sri Lanka and Pakistan should respond to improvements in incentives and macroeconomic stability over the decade, and achieve growth rates higher than the recent past.

After the dismal performance of the 1980s, there are high expectations for progress in Latin America. This is based on continued resolution of the debt problem in most countries in the region, political reforms, and an acceptance of market friendly policies. Mexico is expected to continue its progress, and receive a further stimulus upon the completion of negotiations of the North American Free Trade Association. Argentina has introduced a broad range of structural reforms, and Chile will continue to benefit from its early implementation of difficult reforms. The net negative transfer of financial resources from the region should slow, and both exports and imports are expected to recover as these economies raise investment levels and resume growth.

Growth in the developing countries of the Middle East and North Africa is expected to average 4.5 percent a year (compared with 0.5 percent a year in the previous decade); most of this growth will be concentrated in the second half of the decade. These expectations are based on the following: the recent initiation of economic reforms in Egypt and Iran; debt and debt-service reduction in Egypt; deepening of reforms in Morocco and Tunisia; reconstruction of Iraq and Lebanon; and the continuing peace process in the Middle East. Real exports are expected to grow at almost 5 percent a year, which compares with a real decline in the 1980s. Manufactures are expected to be the most dynamic element, expanding as a share of total exports from 5 percent to 15 percent.

A key uncertainty in the years ahead is the performance of Eastern Europe and the former Soviet Union (appendix D). The economies of Eastern Europe are expected to move beyond stabilization to growth recovery. In Russia, present policy seeks to stabilize the economy by curbing the government deficit and reducing the inflationary growth of credit. Other republics of the former Soviet Union face similar challenges. In the near term, there are good prospects for exports of petroleum and natural gas as the move toward market prices and a depressed economy compress domestic demand. But significant grain imports will continue, although with the implementation of reforms, these imports are likely to decline over time and may even be eliminated. In the medium term, success in implementing reforms will lead to increased domestic demand for petroleum products, making it vital that production is stepped up in order to maintain export revenues.

The more moderate average GDP growth in the G-7, and slightly lower international real interest rates are likely to have offsetting effects on developing country performance. Slower growth in G-7 GDP growth means slower growing markets for developing country exports; lower interest rates mean smaller interest payments on existing variable rate debt and on debt committed during the 1990s. The impact of these changes differ for individual developing countries, depending partly on trade orientation and external debt profile over the decade.

Last year's *Global Economic Prospects* included a set of multipliers that measured the effects of changes in external parameters on the growth performance of developing countries (World Bank 1991a, box 4-3). Applying these multipliers to revisions in the G-7 forecast provides an estimate of the changes in the projected growth rate of the developing countries for this decade that result from changes in the global economic environment (table 1-7). Only in Latin America are the effects of changes in the external environment expected to be positive. Its large stock of variable rate debt makes its growth performance sensitive to changes in real interest rates.

Export performance of developing countries

For recovery in developing country performance during the 1990s, a revival in export growth is needed. Overall, real export growth is expected to reach 7 percent per year, higher than in the past (table 1-8). East Asia will find it difficult to exceed its 10 percent per year performance in the 1980s, although

The combined effect of lower growth and interest rates in the G-7 is likely to be negative for all developing regions except Latin America

Table 1-7 Revisions in the G-7 projections and their estimated effect on the average growth rate of developing countries, 1990–2000

	1990–2000		
	G-7 GDP [a]	Real LIBOR [b]	Total effect
Revisions in G-7 projections	–0.3	–0.7	n.a.
Effect on GDP projections for the developing countries[a]			
All developing countries	–0.21	0.14	–0.07
Sub-Saharan Africa	–0.15	0.14	–0.01
East Asia	–0.30	0.14	–0.16
South Asia	–0.21	0.00	–0.21
Europe, Middle East, and North Africa	–0.24	0.07	–0.17
Latin America	–0.15	0.28	0.13

n.a. Not applicable.
a. Average growth rate.
b. Percentage points.
Note: The key revisions in the outlook for the G-7 countries relative to the projections in *Global Economic Prospects 1991* (World Bank 1991a) are: average GDP growth rates, which have been lowered by 0.3 percentage points for the 1990s as a whole; and real interest rates which are expected to be 0.7 percentage points lower. According to the multipliers presented in that study (on page 50, Box 4.3), a one percent fall in the G-7 GDP growth rate leads to a decrease of 0.7 percent in developing countries' average growth rate. On the other hand, a decrease of one percentage point in the real interest rate has a positive effect on developing countries' GDP of 0.2 percentage points, since debt service payments are lower. Regions where variable-rate debt as a share of GDP is small, such as South Asia, are less affected by changes in international real interest rates. These multipliers were calculated for each developing region and used to calculate the effects on developing countries' average GDP growth rates from the revisions in the G-7 projections.
Source: World Bank staff estimates.

export growth will remain the highest in the developing world and the growth of trade within the region offers significant potential. Despite the collapse of the CMEA, Eastern Europe is expected to recover as an exporter (largely to Western Europe) during the second half of the decade. The remaining developing regions should improve on their export performance of the 1980s. South Asia, in particular, is expected to emerge as a strong competitor in international markets, provided the reform programs in the region are pursued to completion. Latin America is also expected to stage a significant recovery in

Higher export growth will need to be a cornerstone of higher GDP growth in developing countries during the 1990s

Table 1-8 Growth of real exports from developing countries, 1965–2000
(annual average percentage change)

	Actual		Projected
Region	*1965–80*	*1980–90*	*1990–2000*
All developing countries	5.6	5.8	7.0
East Asia	9.2	10.2	9.8
South Asia	4.0	6.4	7.8
Latin America	5.1	5.5	6.8
Sub-Saharan Africa	5.2	2.0	3.6
Eastern Europe	7.9	2.1	2.4
Middle East and North Africa	6.9	–6.4[a]	4.9
Memo items:			
Exports of manufactures from all developing countries	8.0	7.8	—

— Not available.
Note: Exports comprise goods and nonfactor services.
a. 1980–89.
Source: World Bank data.

export performance, as other countries follow Mexico and Chile in attracting foreign investment.

The projected acceleration of export growth in developing countries will require a continued recovery in the major industrial economies. An increase in OECD growth of one percentage point per year sustained over three years would raise developing country exports by US$60 billion a year. Expectations of a better export performance from the developing world also reflect, in part, sweeping market reforms and a renewed recognition of the importance of increased integration with the world economy. Over the past decades, the trend in developing countries has clearly been toward less restrictive trade policies (figure 1-1), with sixty developing nations lowering barriers to imports as follows:

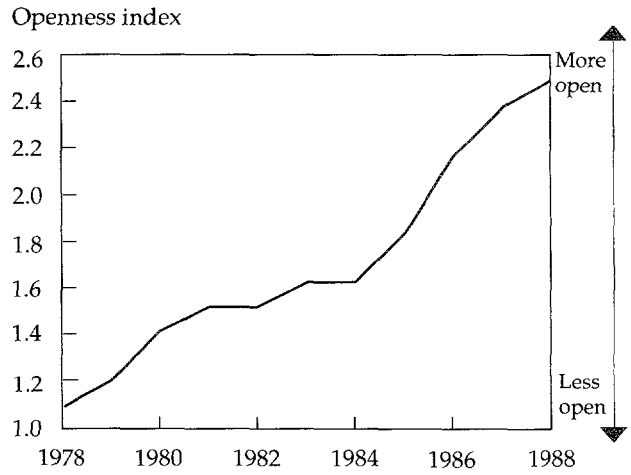
- ***East Asia.*** Korea eliminated its quantitative restrictions (QRs) on imported manufactures and raw materials by 1991 and introduced a phased reduction of tariffs that will see them averaging 7.9 percent by 1993. Malaysia began replacing its QRs with tariffs in 1986, and reduced its average tariff levels on manufactures and nonagricultural raw materials to 10 percent. In programs beginning in the first half of the 1980s, Indonesia, the Philippines, and Thailand, also reduced the number of nontariff barriers on imports of manufactures, simplified their tariff structures, and reduced the average tariff level.
- ***Latin America.*** This region has seen a complete turnaround in trade policy. Argentina, Bolivia, Brazil, Colombia, Costa Rica, Ecuador, Honduras, Mexico, Peru, and Venezuela have either eliminated most QRs or abolished them. Indeed, Chile constitutionally prohibited QRs. Recently, these economies have also lowered average tariff levels—some sharply.
- ***North Africa.*** Egypt abolished many QRs, liberalized its foreign exchange market, and reduced the average tariff rate to 15 percent; Morocco cut its top rate from 400 percent in April 1984 to 45 percent by February 1986; and Tunisia reduced its maximum tariff rate from 220 percent to 43 percent over 1988 and 1989.
- ***Sub-Saharan Africa.*** The Gambia, Ghana, Kenya, and Zaire have virtually eliminated QRs, while Cameroon, Nigeria, Senegal, and Tanzania have introduced reforms that are gradually removing nontariff barriers and replacing them with tariffs.
- ***South Asia.*** Sri Lanka has been gradually eliminating most remaining QRs since 1987, while Pakistan and Bangladesh reduced the number of QRs and replaced them with tariffs during the second half of the 1980s.
- ***Eastern Europe.*** Trade policies have undergone a fundamental overhaul. Czechoslovakia, Hungary, and Poland have removed virtually all QRs and have entered into an agreement with the EC to reduce tariffs over seven to ten years.

Despite reforms in trade policies, only a few developing countries have relatively open trade regimes with few QRs and low tariffs: Argentina, Bolivia, Chile, Costa Rica, The Gambia, Ghana, Korea, Mexico, and Uruguay. Others in South Asia (Bangladesh, India, Nepal, and Pakistan) and Sub-Saharan Africa (Cameroon, Nigeria, Tanzania, and Zambia) either use QRs extensively or apply high and dispersed tariffs. Nevertheless, ongoing reform programs in some countries are likely to have an effect on their international competitiveness and export performance.

Improving export growth in manufactures will be crucial if developing countries are to raise overall export earnings. Manufactures account for three-

Trade has steadily become more open in developing countries

Figure 1-1 Trends in trade openness for 30 developing countries



Note: Index of trade openness goes from least open (1) to most open (5).
Source: WDR 1991 database.

quarters of all merchandise trade in the world, and almost half of developing countries' merchandise exports (table 1-9). Moreover, world trade in manufactures (which grew at 6.4 percent a year between 1965 and 1990, three times as fast as trade in raw materials and more than two-thirds as fast as trade in food) should continue to expand at a fast pace. Developing countries that contribute to this dynamism can be expected to raise per capita incomes rapidly.

Rapid growth in exports of manufactures does not only require implementing the right policy framework. It also depends on continued access to external markets, constructing trade and investment links with other countries, and absorbing and mastering new production and management techniques to improve international competitiveness. These challenges require serious attention. How they are addressed, both at the international level and at the individual country level, will have an important effect on the outcome for trade and growth in this decade. What does the international trade policy environment hold for developing countries? And how do changes in the international business environment pose challenges to developing country exporters of manufactures?

The share of manufactures in developing country exports has grown

Table 1-9 Manufactures as share of total exports
(percent)

Region	*1965*	*1990*
World	59	75
Developing countries	27	49
East Asia	34	69
South Asia	36	69
Latin America	7	34
Middle East and North Africa	5	15
Eastern Europe	72	76
Sub-Saharan Africa	14	19
Other Europe	31	71

Source: World Bank staff estimates based on COMTRADE data.

Note

1. This rapid growth is due largely to planned expansions in lending by the European Bank for Reconstruction and Development and the Asian Development Bank.

Global conditions for international trade

2

The previous chapter concluded that developing countries would need to accelerate their rate of export growth, particularly of manufactures. This chapter notes that significant reductions in industrial country protectionism would be a major stimulus to exporters in developing countries. Still, in the 1990s, as in the 1980s, industrial country trade barriers should not prove to be insurmountable. In general, developing countries could accelerate overseas trade without running into market constraints in major industrial countries. In specific products, however, there will always be the risk of provoking protectionist reactions or seeing a decline in export prices. Current trends toward the formation of regional free trade arrangements could be beneficial to developing countries, although a significant move away from multilateralism carries its own risks and may hurt some developing countries.

Industrial country trade barriers

Developing countries need open access to industrial country markets because these markets dominate world trade in manufactures. The EC, Japan, and the United States account for almost 60 percent of global imports of manufactures and more than two-thirds of the world's exports of manufactures. Trade among the EC countries alone is half as much again as the total trade in manufactures for all developing countries. High income countries accounted for nearly 80 percent of all imports and 88 percent of all exports of manufactures in 1990 (table 2-1). For developing countries, markets in industrial countries have become more important. In 1965, they took 41 percent of developing country exports of manufactures; by 1990 this had grown to 75 percent. In 1990, only 3 percent of world trade in manufactures was between developing countries.

As a result, restrictive trade policies in industrial countries affect prospects for developing country exports of manufactures. The elimination of industrial country protection would stimulate exports by developing countries, although the initial gains would be largely for already successful exporters. The experience of the 1980s suggests that developing countries could considerably increase their exports in the 1990s even if industrial countries maintain their current levels of protection. But were protection to rise, it would hurt export prospects of developing country manufactures, especially for successful East Asian exporters.

Administrative protection

Although trade barriers in industrial country markets are low (compared with those in developing countries), there has been little progress generally toward dismantling them. True, Australia and New Zealand, two industrial countries with high levels of

High income countries dominate world trade in manufactures

Table 2-1 The distribution of global trade in manufactures, 1990
(percent)

	Importer		
Exporter	*High income countries*	*Developing countries*	*All*
All countries	79.7	20.1	100.0
High income	70.4	17.2	87.6
Developing	9.3	3.1	12.4
East Asia	5.3	0.9	6.2
South Asia	0.6	0.2	0.8
Latin America	1.2	0.6	1.8
Other regions	2.2	1.4	3.6

Source: World Bank staff estimates based on COMTRADE data.

protection in the early 1980s, have recently lowered tariff and nontariff barriers significantly, and other less protectionist economies (for example, Canada, Sweden, and Switzerland) have reduced further already low tariff and nontariff barriers. But elsewhere, there is little evidence, if any, of unilateral liberalization. Any lowering of trade barriers has usually been on a preferential basis or in the context of a bilateral or regional trading arrangement. Since successive GATT agreements have moved industrial countries' tariffs to low levels, nontariff measures have become a principal means of protection—for example, new forms of trade restriction including antidumping and countervailing duty actions, voluntary export restraints, and direct budgetary subsidies to protect domestic industries against import competition.

Antidumping measures and countervailing duties. These measures have been introduced to counter alleged unfair trade by trading partners. Since the Antidumping Code was agreed in the GATT in 1979, the number of antidumping actions has grown rapidly. Not only are such actions discriminatory in their treatment of individual countries, they also produce a chilling effect on aspiring exporters. The United States, EC, Canada, and Australia account for virtually all the antidumping investigations in industrial countries (table 2-2). Outstanding cases declined for the first time in Canada in 1989 and in the EC and the United States in 1990. Australia became less active in introducing antidumping cases after 1986, and the number of outstanding cases fell to 11 in 1990. Countervailing actions against developing country exporters were initiated almost exclusively by the United States.

Voluntary export restraints (VERs). VERs cover virtually all manufactures of interest to developing countries (table 2-3), and have often been imposed following investigations of unfair trade. Under the umbrella of the Multifibre Arrangement (MFA), industrial countries have reached export restraint agreements on textiles and clothing with many developing countries. VERs also affect developing country exports of electronics, steel, and footwear. European countries have entered into the most VER agreements, although it is unclear how many will survive the EC reforms of 1992.

Domestic subsidies. Domestic subsidies in industrial countries increased steadily in the 1970s and in the first half of the 1980s, but have since declined or leveled off. Government subsidies as a share of GDP fell in Japan, New Zealand, and the U.K. during the 1980s (Ford and Suyker 1990), are high in Italy, the Netherlands, Norway, and Sweden, and low in New Zealand and the United States. But government budgetary transfers may underestimate subsidies; governments increasingly use guarantee schemes to reduce the cost of capital to selected industries while accumulating contingent liabilities themselves. In France, guarantees as a share of net transfers rose from 14 percent in 1986 to nearly 40 percent in 1989, although this was partly because growth of net trans-

Antidumping and countervailing measures are used frequently against developing countries

Table 2-2 Antidumping and countervailing actions taken by selected countries: number of actions against industrial and developing countries compared, 1981–90

	Actions					
	Provisional measures		*Definitive duties*		*Price obligations*	
Country	*Industrial*	*Developing*	*Industrial*	*Developing*	*Industrial*	*Developing*
Anti-dumping actions						
United States	165	167	169	128	3	2
EC	42	53	39	39	46	81
Canada	155	83	125	88	13	3
Australia[a]	79	79	77	45	25	9
Countervailing actions						
United States	73	154	43	100	1	9
EC[b]	1	0	1	2	0	0
Canada	11	6	8	2	1	0
Australia[a]	27	3	2	0	9	1

a. For 1983–90 only.
b. No countervailing duty investigations took place after 1985.
Source: GATT, Basic Instruments and Selected Documents (various issues).

VERs with developing countries are mostly for labor intensive manufactures

Table 2-3 Export restraint arrangements imposed by industrial countries, 1989
(number of arrangements)

	Actions by importing countries				Total actions against	
Sector	EC	Japan	U.S.	Other	Developing countries	Industrial countries
Textiles[a]	27	6	13	20	61	5
Agriculture	36	5	2	7	35	15
Steel	14	0	35	1	31	19
Electronics	25	0	3	0	11	17
Footwear	15	0	1	2	11	7
Machine tools	4	0	10	0	6	8
Automobiles	17	0	1	2	2	18
Other products	35	2	4	1	14	28
Total	173	13	69	33	171	117

a. Excludes MFA.
Source: GATT (1989).

fers slowed during this period. Similarly, in Germany, guarantees as a share of net transfers climbed from 7.5 percent to 12.8 percent.

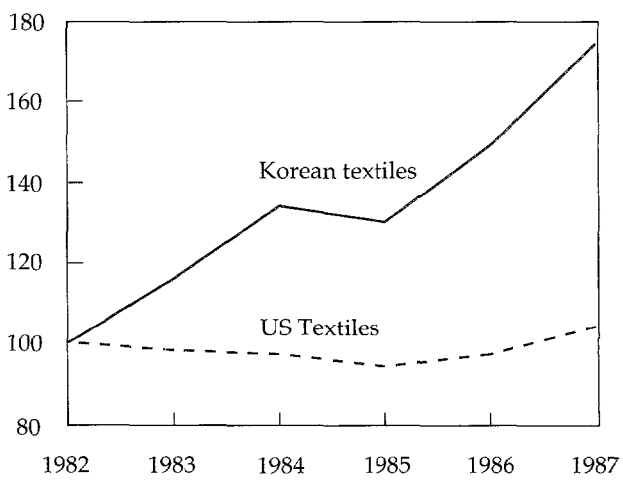
The Multifibre Arrangement (MFA)

The MFA is a set of "voluntary" export restraints on textiles and clothing exports from developing countries to most industrial markets.[1] Hong Kong, India, Korea, and Taiwan, China reached most quota ceilings in the early 1980s.[2] Others, such as Thailand, reached their limits a few years later.[3] The MFA has grown more restrictive for countries with such binding quotas, so they have steadily increased the quality of their exports and expanded into unrestricted lines of production. Higher prices for textile exports under the MFA reflect a transfer of part of the rent generated by the quota from industrial economies to exporting firms. Take Korea. The trade coverage ratio on U.S. and EC imports of textiles and clothing imports from Korea has grown steadily between MFA II and MFA IV (Hamilton and Kim 1990). An indicator of the growing restrictiveness of the MFA has been the rapid increase in the unit value of textiles from Korea into the United States compared with that of textiles produced in the United States (figure 2-1). The experience of other developing countries has been similar. The unit value of textile imports to the United States, EC, Canada, and Sweden is much larger when shipped from developing country suppliers under binding quotas than it is when obtained from countries where the quotas are not yet binding (table 2-4).[4]

Thus, the MFA's effect on suppliers from constrained developing countries is partly offset by increases in export unit values, which helps their continued increases in import penetration of industrial country markets. However, the developing countries constrained by the MFA absorbed costs in upgrading the quality of output and lost significant export revenues (table 2-5); but suppliers from unconstrained developing countries benefited significantly. Their incremental exports, small as a share of

The quality differential between U.S. and Korean textiles has widened

Figure 2-1 Unit value index of Korean textile exports to the United States compared with the unit value of U.S. textiles
(1982=100)



Source: Hamilton and Kim (1990).

The price of imports under binding quotas rose faster than under nonbinding quotas

Table 2-4 Imports of textile products from developing countries to the EC, United States, Canada, and Sweden, 1981–87
(average annual percentage change)

Change	EC	U.S.	Canada	Sweden
Change in volume:				
Under binding quotas	5.4	2.4	2.8	3.1
Under nonbinding quotas	6.7	13.6	24.4	3.2
Change in unit value:				
Under binding quotas	1.9	9.1	11.6	8.3
Under nonbinding quotas	0.8	3.4	2.7	4.1

Note: Binding quotas are defined as where quota utilization rates exceeded 90 percent in 1981, 1982, or 1983.
Source: Erzan, Goto, and Holmes (1990).

the global market, were a large part of their total exports. For some of the smaller textile producers, especially in Sub-Saharan Africa (Mauritius, for example), the gains were substantial. But the largest beneficiaries of the MFA were industrial country textile producers; because of MFA protectionism, they raised production above what would otherwise have been possible and charged prices to industrial country consumers in excess of the international level.

Despite the MFA, developing countries have achieved significant rates of growth in textile exports. Industrial countries, in turn, have had to adjust, often by exiting competing lines of production. As a result, political support for the MFA has weakened. Today, those who favor retaining the MFA are not the traditional textile firms in the U.K. and France, but the protected exporters of Italy and Portugal.

Present barriers not prohibitive

The MFA may have slowed developing countries from acquiring a growing share of the textile market in industrial countries but it has not stopped them. This is also the case in other subsectors of manufacturing. Therefore, considerable care needs to be taken in assessing and interpreting the protective effects of nontariff barriers.

One measure of the extent of such protection in industrial countries is the trade coverage ratio, that is, the share of imports affected by any nontariff barrier.[5] The share of OECD imports from developing countries subject to nontariff barriers climbed marginally from 20.5 percent in 1981 to 21.8 percent in 1990 (table 2-6). In chemicals it rose rapidly, albeit from low levels. The most extensive coverage of nontariff barriers is in labor intensive manufactures, such as textiles and clothing, iron and steel products, and food.

However, the trade coverage ratio of nontariff barriers is at best an imperfect guide to the level and pattern of protection. Weighting nontariff barriers by import values when aggregating coverage across a range of products or a group of countries may systematically underestimate or overestimate their severity. Even more seriously, trade coverage ratios do not indicate the extent to which nontariff barriers raise the domestic price of a product in relation to its international price. Even so, the evidence shows that nontariff measures tend to add to the level of total protection afforded by tariffs (figure 2-2).

Estimates of import penetration (imports as a fraction of total domestic demand) tell a different story from the creeping expansion of nontariff barriers. Trends in these ratios show that, despite persistent protection in the industrial countries, developing economies increased their share of industrial country markets in the 1980s.

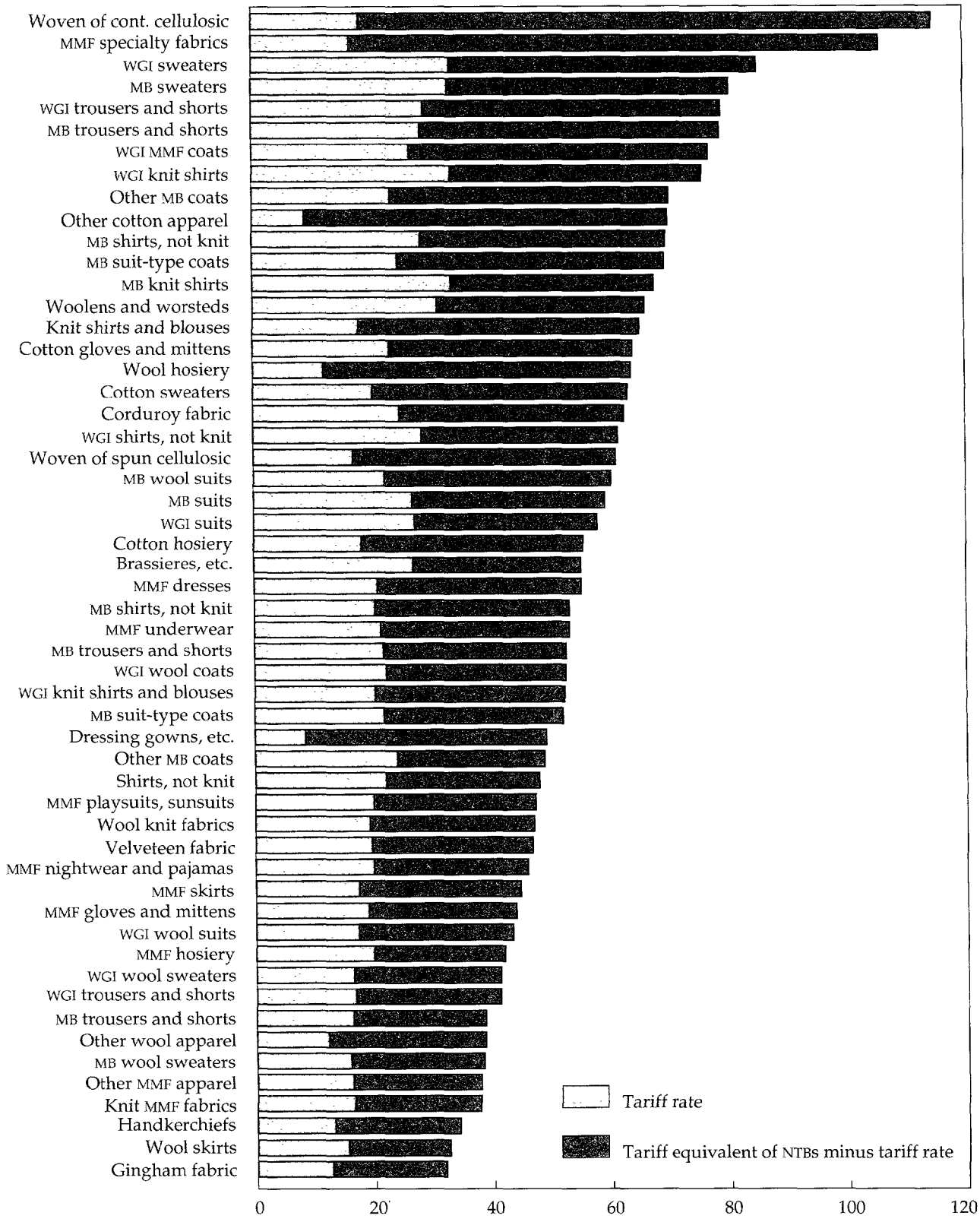
The biggest beneficiaries of the MFA are the producers in the protected market

Table 2-5 Estimate of the revenue effect of the MFA on selected apparel products marketed in the United States, 1986
(As a percentage of 1986 shipments)

Effect	Domestic U.S. suppliers	Developing country suppliers	
		Constrained	Unconstrained
Total effect	10.0	–4.3	–14.1
Effect when valued at nonquota price[a]	5.9	–18.8	9.2

Note: Selected apparel products include knit shirts and blouses, men's and boys' shirts, women's and girls' shirts and blouses (unknit), sweaters, trousers, slacks, shorts, and underwear.
a. Price before quotas were introduced.
Source: Erzan, Goto, and Holmes (1990).

Figure 2-2 The estimated total effect of tariff and nontariff protection for textiles in the U.S. market, 1988



Note: MMF means manmade fiber; WGI means women's, girls', and infants'; MB means men's and boys'.
Source: USITC 1989.

The trade-coverage ratio of nontariff barriers climbed marginally in the 1980s

Table 2-6 Trade coverage ratios of industrial country NTBs facing developing countries, 1981–90
(percent)

Product	*1981*	*1985*	*1990*
All products (except fuels)	20.5	20.8	21.8
Agriculture	20.8	21.8	21.8
All food items	25.7	26.7	26.7
Food and live animals	27.6	28.8	28.8
Oil seed and nuts	6.2	6.0	6.0
Animal and vegetable oils	8.8	8.8	8.2
Agricultural raw materials	3.2	4.4	4.5
Manufactures	26.5	26.4	28.0
Iron and steel	41.5	52.7	54.7
Chemicals	4.5	6.4	9.2
Leather	18.9	18.9	18.9
Textiles	53.5	54.9	56.9
Clothing	61.0	65.2	65.5
Footwear	82.9	21.3	20.9

Note: Canada not included. Ratios use 1986 import trade weights.
Source: World Bank staff estimates based on the UNCTAD Trade Control Measures System and the harmonized system for commodity classification.

Developing countries increased their share of the EC, U.S. and Japanese domestic markets from 2.4 percent in 1980 to 3.1 percent in 1988 (table 2-7). The biggest advances were made in North America, where the import penetration ratio rose from 2.4 percent in 1980 to 4.1 percent in 1988. Moreover, developing countries made the most gains in industrial country markets in clothing (table 2-8) where the ratio rose from 1.9 percent in 1968 to 22.1 percent in 1988.

These advances were mainly the result of rapid export growth by a few developing countries, most of them in East Asia. Nontariff barriers have hurt these exporters the most and dampened the enthusiasm of others. Some developing countries that reached quota limits for tightly controlled products continued to expand market share by moving into unrestricted lines of production or exporting higher quality products and raising the average price of exports. But these adjustments came with a price. Witness Korea. In its exports of footwear to the United States, the rent transfer from higher prices in the U.S. market was not sufficient to cover the losses associated with slower growth in sales and the costs of shifting production to unrestricted categories (Hamilton, de Melo, and Winters 1992).

Export gains from reduced industrial country protection

A lowering of import barriers in industrial countries would significantly improve the export performance

Developing countries have raised their share of industrial country markets for manufactures

Table 2-7 Imports from developing countries as a share of apparent consumption: all manufactures, 1968–88
(percent)

Country	*1968*	*1974*	*1980*	*1984*	*1988*
EC [a]	1.1	1.7	2.7	2.9	2.9
North America	0.8	1.8	2.4	3.1	4.1
Japan	0.9	1.7	1.7	1.7	1.8
Total	0.9	1.7	2.4	2.9	3.1

a. Membership of the EC grew from 6 to 12 during this period.
Source: UNCTAD (1991 and previous years).

of some developing countries (as well as increase industrial country welfare, see box 2-1). Although the outcome of the Uruguay Round remains uncertain, current proposals (discussed on page 28) could lead to a 30 percent to 50 percent reduction in industrial country tariffs on manufactures and agricultural products. Reductions in nontariff barriers, if any, are less certain. However, assuming that the protective effect of nontariff barriers are reduced in the same proportion as tariffs, estimates were made of the likely impact on the exports of developing countries.

If protection levels in the EC, the United States, and Japan were to be reduced by 50 percent, developing

Developing countries have been most competitive in clothing

Table 2-8 Imports from developing countries as a share of apparent consumption, 1988
(percent)

Manufacture	*EC*	*North America*	*Japan*	*All*
All manufactures	2.9	4.1	1.8	3.1
Clothing	19.1	27.9	13.1	22.1
Textiles	4.9	3.6	2.3	3.8
Wood products	1.6	1.5	1.3	1.5
Rubber	1.9	3.0	0.4	2.0
Chemicals	1.5	1.0	1.1	1.2
Nonmetallic mineral products	0.7	2.1	0.8	1.2
Ferrous and non-ferrous metals	1.8	1.8	2.1	1.9
Transport equipment	0.9	1.7	0.1	1.1
Machinery and other manufactures	4.4	8.0	1.3	5.0

Source: UNCTAD (1991).

Box 2-1 Studies on the costs of protection

Studies related to manufacturing

Trela and Whalley. This study shows that the elimination of the MFA and a removal of import tariffs on textiles and clothing imported into industrial countries raises global welfare by an amount equivalent to US$23 billion at 1985 prices. Of this, the bulk of the benefits accrues to industrial countries (US$15 billion). The remainder accrues to the developing world (US$8 billion), but more than half of this is captured by four economies; these are Brazil, China, Korea, and Taiwan, China. (Trela and Whalley 1990)

Consumers Association of the United Kingdom. This study concluded that the Multifibre Arrangement had increased prices of 60 percent of all British clothing imports by between 15 and 40 percent and had created shortages for many lower priced items. A similar investigation for the European Communities estimated that the MFA raised clothing prices by some 30 to 40 percent. (Consumers Association 1979)

North-South Institute, Canada. This study placed the annual cost to consumers of bilateral quotas on clothing applied in 1979 at Can$ 198 million, while the cost of tariffs and quotas was put at Can$ 467 million. The study estimated that only 6000 man/years employment was created by this protectionist policy at an annual cost to the Canadian consumer of Can$ 33,000 per job. (Glen P. Jenkins 1980)

Australian Industries Assistance Commission. This study estimated that the total annual cost of protectionism in the clothing sector was $A 235 per household. At the retail level consumers pay $A 1.1 billion more per year for clothing, drapery, and footwear than they would if all assistance to industries was withdrawn. (Australian Industries Assistance Commission 1980)

Studies related to agriculture

OECD. This study shows that for the OECD countries as a whole, the average producer subsidy equivalent in agriculture rose from 32 percent in 1979–81 to 50 percent in 1986–87, before ebbing to an estimated 45 percent in 1988. The overall transfers from consumers and taxpayers associated with agricultural support to the major OECD countries have more than quadrupled in the 1980s, from US$61 billion per year in 1979–81 to US$270 billion in 1988. (Burniaux and others 1990)

Anderson and Tyers. In this study, the weighted average of the producer-to-border price ratio of various agricultural commodities in 1990 was estimated at 2.0 in the EC, 4.3 in Japan, and 1.3 in the United States. A 50 percent reduction in agricultural protection was estimated to raise consumer welfare in the EC by US$25 billion by 1995 (in 1985 U.S. dollars). For Japan, the estimate was US$17 billion and for the United States, US$2 billion. (Anderson and Tyers 1992)

World Bank. The World Development Report, 1986 reported that in Japan, consumers and taxpayers lost US$2.58 for every $1.00 transferred to producers, not including the efficiency losses caused by taxes to pay farm subsidies. In EC, the equivalent amount was US$1.50 and in the United States, US$1.38. Rice protection alone was estimated to have cost Japan US$2.9 billion in 1980. The costs of the Common Agricultural Policy (CAP) to the EC in 1980 were estimated at US$15.4 billion. (World Bank 1986)

International Food Policy Research Institute. This study estimated that the agricultural exports of fifty-six developing countries would increase by US$3 billion annually if the OECD countries would lower agricultural trade barriers by 50 percent. The largest sectoral gains were projected for sugar (US$1.1 billion), oilseeds and products (US$378 million), and meat (US$336 million). (Valdes and Zietz 1980)

World Bank. The World Development Report, 1981 analysed the effects of international trade restraints facing eight processed agricultural products and concluded that their removal could increase total value added in developing country processing activity by 20 percent or more. Such a liberalization would increase developing countries' export revenues by more than the GSP had done. (World Bank 1981)

countries could increase exports by 15 percent, or US$50 billion in 1988 prices (table 2-9).[6] This amounts to US$54 billion in 1991 prices, almost equivalent to the aggregate net resource flows from official sources to developing countries in 1991.[7] The present value of these increased export earnings (discounted at 5 percent per year) amounts to almost US$1 trillion, equivalent to the total stock of public and publicly-guaranteed external debt owed by all developing countries.

Exports expected to rise the most are miscellaneous manufactured articles, including clothing, footwear, and furniture—all labor intensive manufactures produced competitively in developing countries. These manufactures account for over 70 percent of the total projected increase in exports; clothing alone accounts for over 55 percent. Much of this projected increase is explained by the discriminatory pattern of protection against developing country exports, even when output from developed countries is traded freely. Elsewhere, the big increases in exports are expected to come in foodstuffs and materials-based products, such as yarn, fabric, steel products, and building materials.

As major exporting regions, East Asia would reap over 50 percent of the total gain and Latin America another 20 percent (table 2-10). Sixty percent of the rise in East Asia's exports would be in textiles and clothing. Clothing also accounts for the largest share in Latin America (42 percent). But a high proportion of the increase for Latin America—almost a third—is in food and feeds. These include sugar, grains, and animal feed (including soyabean)—products that are now affected by nontariff barriers with ad valorem equivalents ranging from 50 percent to over 200 percent.

The expansion of exports in other developing regions is relatively modest, accounting for only 4 to 5 percent of the developing country total. Their exports tend to be concentrated in energy products and raw materials that normally encounter low (or no) trade barriers in industrial country markets because exports from these regions of agricultural products and manufactures receive important trade preferences under the Lomé Convention, or Generalized System of Preferences (GSP) schemes, or under regional arrangements.

The export gains of developing countries from trade liberalization would appear to be large. On the other hand, the welfare gains from expanded trade, as conventionally measured by economists, are invariably small—usually less than 1 percent of GDP. But such measures may be a significant underestimate. Recent studies show that trade and growth are

A 50 percent liberalization of industrial country trade barriers would raise developing country exports by US$50 billion

Table 2-9 Estimated effect of a 50 percent liberalization in trade barriers by the EC, United States, and Japan on imports from developing countries

Product	EC, U.S. and Japanese 1988 imports from developing countries (billions of U.S. dollars)	Projected increase in developing country exports		
		Value (US$b)	Increase (percent)	Share of increase (percent)
Food and livestock	46.7	5.1	10.9	10.2
Beverages and tobacco	2.6	0.2	7.8	0.4
Crude materials, except fuels	31.8	0.2	0.6	0.4
Mineral fuels	87.7	2.1	2.4	4.2
Animal and vegetable oils	2.2	0.1	4.5	0.2
Chemicals	11.6	0.2	1.8	0.4
Materials based products[a]	56.2	4.8	8.5	9.6
Machinery and transport	44.2	1.5	3.4	3.0
Miscellaneous manufactures	57.9	35.8	61.8	71.6
Clothing	28.2	28.9	102.3	57.6
Footwear	6.8	2.1	31.5	4.3
Other	22.9	4.8	20.9	9.7
Total	340.8	50.0	14.7	100.0

a. Manufactures classified by material (SITC 6), which includes yarn, fabric, building materials, and steel products.
Source: World Bank staff estimates based on data from SMART and the COMTRADE database.

East Asia and Latin America would gain the most from industrial country trade liberalization

Table 2-10 The estimated change in developing countries' exports under a 50 percent reduction in trade barriers in the EC, Japan, and the United States

	Projected export expansion	
Region	*Amount (billions of U.S. dollars)*	*Share of total (percent)*
East Asia	27.1	54.2
Eastern Europe	3.8	7.6
Latin America and Caribbean	9.6	19.2
Middle East and North Africa	2.6	5.2
Other Europe	0.2	0.4
South Asia	4.5	9.0
Sub-Saharan Africa	2.2	4.4
All developing countries	50.0	100.0

Note: The above projections are based on 50 percent cuts in applied tariffs and available estimates of NTB ad valorem equivalents.
Source: World Bank staff estimates based on SMART and COMTRADE data.

positively associated (box 2-2). Higher shares of exports in GDP have a close association with higher productivity growth (World Bank 1991b), although the causal direction of this association is unclear.

It is true that industrial country protection imposes significant costs on industrial country consumers and serves as an unnecessary impediment to developing country progress. Yet the prospects for most developing countries have been limited more by their own domestic policies than by constraints in industrial country markets. Many developing countries have initiated policy reforms. Continuation of these reforms remains a priority even without major reductions in industrial countries' protectionist barriers.

The "adding-up" problem

What would happen if all developing countries increased exports of manufactures at the same time, perhaps as a result of their own trade reforms without simultaneous action by industrial countries to reduce trade barriers? Some would argue that this would lead to two possible alternatives, both bad. Either developing economies would suffer terms of trade losses because (as with primary commodities) the relative price of their manufactures exports would decline or it would strengthen further the forces of protectionism in industrial countries. According to this view, the benefits of export-oriented growth, although attractive in each individual case, may be less so when applied in concert.

Exports of manufactures from developing countries are not a large share of the world market for manufactures. (All of Sub-Saharan Africa's exports of manufactures are about one half of one percent of global trade in manufactures.) Let's assume all developing countries experienced the same rapid growth rate of exports as did Korea from 1980 to 1988. Exporters of manufactures from developing countries would have supplied 3.7 percent of manufactures in all industrial country markets by 1988, instead of the 3.1 percent that they achieved—an imperceptible increase (table 2-11).

The increase in the import penetration ratio for clothing would have been more perceptible—about 26 percent in 1988 instead of 22 percent, assuming the share in total manufactures exports remained unchanged. But it is difficult to argue that this alone would trigger strong additional protectionist forces in the industrial countries, especially if industrial countries support adjustment measures in the affected industries or regions. Moreover, as the advanced developing countries increase competitiveness in sophisticated products, they vacate markets for labor intensive manufactures that can be filled by other developing countries. And, as East Asia has demonstrated, when diversification of the export base in developing countries approaches that of industrial

Import penetration ratios would show modest increase even if exports from developing countries were to rise fast

Table 2-11 Import penetration ratio of developing countries in EC, North America, and Japan: comparisons with an alternative scenario, 1988
(imports as a share of domestic consumption)

Manufacture	EC	*North America*	*Japan*	*All*
Actual				
All manufactures	2.9	4.1	1.8	3.1
Clothing	19.1	27.9	13.1	22.1
Alternative[a]				
All manufactures	3.3	4.8	2.1	3.7
Clothing[b]	22.4	32.7	15.3	25.9

a. Assumes that the export growth rate of manufactures from all developing countries matched that of Korea's between 1980 and 1988.
b. Assumes no change in the composition of exports.
Source: World Bank staff estimates using UNCTAD data.

Box 2-2 Evidence on the relationship between trade and GDP growth

	Measure	*Number of economies*	*Period*	*Effect*	*Source*
I.	Correlation and multicountry studies measure associations between exports as a share of GDP (or GNP) and per capita growth.				
	Exports/GNP	39	1960–73	positive and significant	Balassa (1978)
	Exports/GDP	23	1950–73	positive and significant	Michaely (1976)
II.	Studies that measure the association of export growth and GDP growth, controlling for labor and capital inputs.				
	Export growth	55	1966–67	Significant > 0	Tyler (1981)
	Export growth	31	1964–73	Significant > 0	Feder (1983)
	Export growth	73	1960–73	Significant > 0	Kavoussi (1984)
	Manufactured export growth	73	1960–73	Significant > 0	Kavoussi (1984)
	Export growth	73	1960–77	Significant > 0	Ram (1985)
	Export growth	78	1960–80	Significant > 0	Fosu (1990)
	Changes in trade shares	19	1960–85	Significant > 0	Heliwell and Chung (1990)
	Export share	81	1960–85	Weakly significant > 0	Quah and Rauch (1990)
	Changes in export shares	68	1960–87	Significant > 0	World Bank (1991b)
III.	Studies that attempt to measure the association between trade policies and economic performance.				
	Domestic price of investment goods relative to international prices	98	1960–65	Raises GDP growth per capita	Barro (1990)
	Relative price of traded goods	95	1960–85	Raises GDP growth per capita	Dollar (1990)
	Effective rate of protection in manufacturing	47	1950–80	Lower protection raises GDP growth	Heitger (1986)
	Trade liberalization index	20	1964–84	Weak evidence of increased productivity	Phillips and Havrylyshyn (1990)
	Trade liberalization index	35	1975–85	Export incentives positively affect GDP per capita growth, insignificant impact of import restrictiveness	Thomas and others (1991)
IV.	Micro and productivity studies that analyze the relation between total factor productivity growth and export growth.				
	Export growth	6	1955–78	Positive	Nishimizu and Robinson(1984)
	Export growth	17	1950–80	Positive	Nishimizu and Page (1990)
	Export growth	4	1976–88	Positive	Tybout (1990)
V.	Studies that measure the direction of causation for the observed association between export growth and GDP growth.				
	Methodology			*Does higher export growth raise GDP growth?*	
	Granger tests	37	1950–81	For only 4 countries	Jung and Marshall (1985)
	White specification test	73	1960–77	Yes	Ram (1985)
	Granger, Sims tests	4		Sometimes	Hsiao (1987)

Source: Harrison (1991).

Despite terms of trade losses, an increase in exports of manufactures yields developing countries significant welfare gains

Table 2-12 Welfare gains from an improvement in manufactures exports sufficient to raise real GDP by one percent
(percentage of domestic absorption)

Increase in exports from:	*East Asia*	*South Asia*	*Latin America*	*Sub-Saharan Africa*
Region alone	0.73	0.88	0.78	0.79
All developing countries	0.74	0.99	0.88	0.93

Note: Based on an increase in productivity in the production of manufactures exports. The simulation uses a global general equilibrium model of manufactures trade. Welfare gains are measured as an increase in domestic absorption.
Source: World Bank staff estimates.

countries, intra-industry trade can be expected to grow in importance.

According to the second argument, more rapid export growth of manufactures exports from developing countries would lead to a decline in their price (just as with primary commodities). This argument implies that exports of manufactures from developing countries are imperfect substitutes for manufactures produced in industrial countries. Evidence is scarce, but one study of Hong Kong's exports of manufactures shows that it faces infinitely elastic demand in world markets, so that increases in export volumes translate into proportional increases in export earnings (Riedel 1988). And exports of manufactures from Hong Kong are not small; they exceeded the combined total of the exports of manufactures from South Asia and Sub-Saharan Africa in 1990.

Higher export growth in developing countries is usually accompanied by higher import growth. This leads to increased domestic absorption and improved welfare in both developing and industrial countries (Havrylyshyn 1990). Taking this into account, an analysis of an East Asian style growth of exports by all developing countries reveals that the gains in welfare (measured as an increase in domestic absorption) are usually less than the gains in output, but not by a significant amount (table 2-12). The analysis assumes that improved technology and higher investment raise manufactures exports in developing countries by enough to increase GDP by one percentage point. When this occurs in a single developing region, a decline in the relative price of manufactures exports leads to a terms of trade loss. But when all developing regions expand exports of manufactures, the price of manufactures imports falls as well, offsetting some of the initial loss in the terms of trade. This offset is greatest for South Asia, where imports of manufactures are much greater than exports, and least for East Asia where imports and exports of manufactures are roughly the same.

These results suggest that were developing countries to expand their exports of manufactures in unison, their combined effect might work in favor of developing countries rather than against them. But in the absence of adequate adjustments in the industrial countries, increases in developing country exports of manufactures could lead to protectionist pressures and rising trade barriers. Such adjustments are difficult, especially in a climate of slow growth and when ailing industries are concentrated geographically. But they are critical if industrial countries are to maintain international competitiveness, and if global trade in manufactures is to grow rapidly in the future.

Stalled multilateral trade negotiations

Imperfect as the GATT has been in protecting poor country interests, the most-favored-nation (MFN) clause has allowed developing countries to gain from concessions negotiated between the major countries. Every new protective measure using discriminatory or administrative devices weakens the MFN principle. Without the support of stronger nations for nondiscriminatory rules, poorer developing economies with little negotiating muscle will find it difficult to reach equitable trading relations with their stronger trading partners.

After the failure to complete the Uruguay Round of multilateral trade negotiations on schedule in December, 1990, efforts have continued to bring the Round to a successful conclusion. The outcome of these efforts, however, remains in doubt. To add to the uncertainty, any agreements reached at the negotiating table have to be approved by the respective governments.

The director general of GATT, Arthur Dunkel, presented a draft set of agreements on December 20, 1991 (box 2-3). The main area that continues to be controversial is the extent of trade liberalization in agriculture. Other proposals in the draft agreements on which reservations have been expressed concern intellectual property rights, standards, antidumping actions, countervailing duties, subsidies, and textiles and clothing.

Failure to reach a successful conclusion to the Uruguay Round will mean foregone opportunities to liberalize trade and, probably, a deterioration in the global trading system. The major industrial powers

Box 2-3 Proposals in a draft agreement of the Uruguay Round of multilateral trade negotiations

The draft put forward by Arthur Dunkel, director general of GATT on December 20, 1991 contains the following proposals:

The draft textiles and clothing agreement would eliminate the Multifibre Arrangement (MFA) in three stages over ten years. It stipulates minimum quota growth rates during the phaseout such that half of the quotas need not be eliminated until the end of the tenth year. The text also allows governments the option to introduce a discriminatory safeguard mechanism during the transition to full fledged MFN treatment.

The proposed agreement in agriculture commits governments to specific reductions in levels of barriers to market access (a simple average reduction of 36 percent, with a 15 percent minimum reduction on all tariff lines), in domestic support measures (a 20 percent reduction on support measures affecting prices and production decisions), and in export subsidies (a reduction of 36 percent on subsidies and 24 percent on subsidized quantities). It also commits them to replace nontariff barriers with tariffs, but introduces a safeguard mechanism that would adjust for changes in world product prices and exchange rates up to a specified level.

The sections related to antidumping, subsidies and countervailing duties, and safeguards are considered very contentious. The antidumping text seeks to make antidumping procedures less susceptible to protectionist abuse. The text on subsidies and countervailing duties defines different categories of subsidies as prohibited, actionable, and nonactionable, and creates a presumption that subsidies are seriously prejudicial to trade if they exceed a certain limit. The safeguards text attempts to impose additional constraints upon the use of safeguards, while at the same time extracting a commitment from countries to eliminate voluntary export restraint agreements.

The new areas where texts have been drawn up cover trade-related investment measures (TRIMS), intellectual property rights (TRIPS), and trade in services. In TRIMS, the proposed text affirms that domestic content requirements and the linking of the authorization to import with an export commitment are inconsistent with the GATT. The TRIPS agreement seeks to protect intellectual property rights with respect to copyright, trademarks, geographical indications, industrial designs, patents, integrated circuit designs the protection of undisclosed information and the control of uncompetitive behavior in contractual licenses The agreement also establishes mechanisms for the enforcement of these rights and for dispute settlement

The agreement on trade in services includes a number of sector-specific annexes (on the cross-border movement of persons, financial services, telecommunications, and air transport), and will eventually include national market access commitments. A major point of dispute in the services negotiations has been whether the most-favored-nation (MFN) principle should apply across the board. The current text establishes that MFN should apply in principle, but at the same time allows a more or less open-ended exemption.

Finally, the draft agreement is concerned with dispute settlement, various aspects of the functioning of the GATT system, and a section on the establishment of a new Multilateral Trade Organization (MTO). The text on dispute settlement contains improvements to procedures, to speed them up, make them more automatic and predictable, and to improve the level of compliance with dispute panel findings. The text also states that unilateral determinations of illegitimate trade behavior shall not be made, nor remedial actions taken. Multilateral due process should prevail. An additional dispute settlement text proposes the creation of a dispute settlement body, under which all disputes in the post-Uruguay Round trading system will be dealt with in a single forum.

The text on the functioning of the GATT system deals with making the trade policy review mechanism permanent. It also addresses how GATT can contribute toward greater coherence in the making of global economic policy. The MTO is conceived as a formal legal entity that will encapsulate all the Uruguay Round agreements—in short, the entire multilateral trading system under a common system of membership (except for the agreement on government procurement and three other minor agreements).

have restrained protectionism while the discussions have progressed, but this restraint may dissipate as trade disputes accumulate. Difficult adjustment measures to ensure international competitiveness will probably be postponed. Governments will be more likely to manage trade and share markets on the basis of ad hoc, discriminatory arrangements. Small countries could be hurt the most from a weakening of the multilateral trading system. Moreover, the capacity of the multilateral trading system to deal with new challenges, including the mediation of trade relations between emerging regional free trading arrangements, would be impaired.

Coalescing regional free trade arrangements

The effect on developing countries of the creation of the EC single market in 1992 will probably not be

severe except, perhaps, on the larger exporters of manufactures in East Asia. Other regional agreements may offer opportunities, not dangers, for most developing countries. However, a world of hostile trade blocs, while an unlikely outcome, could create serious difficulties for countries left out of the orbit of a major regional agreement.

EC 1992

The creation of a single market for goods and services in the European Community this year will be watched closely by nonmembers, particularly developing countries. The key reforms being introduced are: the removal of legal barriers to the internal movement of goods, including border controls; the abolition of quotas on transport between members and the liberalization of quotas within members; free trade in other services, including legal, medical, and educational; liberalization of public procurement; and mutual recognition of standards, including educational qualifications. Moreover, under the European Economic Area Treaties, all six members of EFTA would become nonvoting members of the EC. Association agreements between the EC and three Eastern European nations—Czechoslovakia, Hungary, and Poland—were signed in December 1991 (box 2-4).

The effect of EC 1992 on developing countries will depend on how much prices fall and incomes rise within the EC, the level of trade between the EC and individual developing countries as a share of their

Box 2-4 Key features of the EC's association agreements with Czechoslovakia, Hungary, and Poland

The association agreements between the EC and three Eastern European countries—Czechoslovakia, Hungary, and Poland—were signed in December 1991. These agreements provide for the establishment of a free trade area between the EC and each of these three countries. This would mean no duties or nontariff barriers for all industrial products, including textiles and steel. It would also mean enhanced access for all agricultural products, particularly if the proposed reform of the EC's Common Agricultural Policy (CAP) is implemented. The agreement also includes free entry and national treatment in services at the end of the transition period political cooperation at a high ministerial level financial assistance and a gradual harmonization of Eastern European laws with those of the Community. The transition period, which begins in March 1992, will last from two to five years for the EC, seven years for Poland and Czechoslovakia, and ten years for Hungary. Similar treaties are to be negotiated in 1992 with Bulgaria and Romania, and later with the Baltic states.

These association agreements accept asymetry as a principle. The EC is expected to reduce its trade barriers faster than its new East European partners. Its transition period is to last from March 1992 to January 1996; tariffs will be reduced by 20 percent each year, and duty free EC quotas will be increased by 20 percent each year. Poland, on the other hand, will eliminate tariffs on about 30 percent of its imports from the EC in 1992, the rest will be eliminated over the next seven years. Czechoslovakia will also take seven years, but the elimination of tariffs will proceed more evenly over the period. And Hungary will liberalize 12 to 13 percent of its imports over three years, another 20 percent between 1995 and 1997, and the remainder before January 1, 2001.

Textiles. The agreement on textiles is different. The length of the transition period is set at one-half the time taken to dismantle the MFA under an agreement yet to be reached as part of the Uruguay Round. But the minimum period for transition will be five years. In the interim, bilateral agreements on trade in textiles will remain in effect. Outward processing trade in textiles (under which EC manufacturers typically send pre-cut fabrics for assembly into garments) will be liberalized immediately and is expected to become a major source of increased trade, production, and employment in Eastern Europe.

Coal and steel. Full MFN treatment for coal and steel products will enter into force in early 1992. This will be achieved through protocols with the European Coal and Steel Community (ECSC). The agreements also provide for some support for steel industry restructuring in Eastern Europe.

Agriculture. The advantage for Eastern Europe of access to EC markets for its agricultural products will depend on how rapidly the CAP will be reformed. If the CAP is not reformed, the agreement will prove valuable for the three Eastern European countries and costly for the EC. On the other hand, if the CAP shifts from price supports to trade-neutral measures, access to EC markets will be of less significance. The CAP proposals envision a reduction of support prices to long run world market prices, reducing levies to perhaps the 10–20 percent range. EC farmers will obtain per-hectare subsidies combined with mandatory set asides for large farms. The value of preferential access for Eastern European countries would consequently be limited.

total trade, and the relevant price and income elasticities of this trade. One estimate suggests that EC 1992 will raise the level of EC income by about 5 percent over five years (Cecchini 1988). The income elasticity of EC imports of developing country manufactures ranges from 4.0 to 5.5 (Langhammer 1990; Goldsborough and Zaidi 1986); and it is estimated to range between 0.3 and 2.8 for primary commodities (Bond 1987). So the trade creation effects can vary considerably, with the largest gains among developing countries going to exporters of manufactures (for example, some East Asian countries, Mexico, and India) and the smallest to commodity exporters (Sub-Saharan Africa, for example). If developing country exporters of manufactures are constrained by voluntary export restraints, income growth in the EC will tighten these constraints and transfer larger rents abroad (Hamilton 1990).

At the same time, the additional trade generated within the EC as a result of reforms will reduce imports. This trade diversion will be lowest for nonfuel primary commodities and specialized high value goods and it would be highest for services and technology intensive manufactures with potential for scale economies. Somewhere in between would be relatively labor intensive sectors, such as textiles, clothing, footwear, leather goods, and electronic components. EC's estimates suggest that imports would fall by about 10 percent as a result of the reforms—2.5 percent from removing internal barriers to trade and a further 7.5 percent from removing cost-raising regulatory barriers (Hughes Hallett 1991). Most developing countries exporting manufactures would be affected, especially those in East Asia with strong market links to the EC.

Most studies conclude that for developing countries as a group, the overall trade creating and diverting effects are likely to be positive and small.[8] A recent study estimates that commodity dependent economies such as the African, Caribbean, and Pacific region (ACP) and oil exporting economies will gain; EC income elasticities for their exports, although low, would outweigh even lower price elasticities. And exporters of manufactures, such as East Asia, can be expected to lose; trade creation in the EC post-92, although high, would be eclipsed by even higher trade diversion (Page, Davenport, and Hewitt 1991).

Regional free trade arrangements could be beneficial if ....

Free trade arrangements have already achieved a scale greater than many realize. If intra-EC trade is included, almost 45 percent of trade in manufactures is within existing arrangements. And this could rise by another 5 percentage points if ongoing talks on potential new arrangements are concluded successfully (table 2-13).

The United States-Canada free trade arrangement came into being in 1988. This may be extended to Mexico and other Latin American countries. In East Asia, however, the region appears far from formalizing its existing trade and investment links.

If the formation of regional free trade arrangements includes higher trade barriers with the rest of the world, it would be harmful for global welfare and inflict a severe setback to multilateral trade liberalization. The GATT accommodates free trade arrangements provided three conditions are met: that duties and other restrictive regulations are eliminated on "substantially all" trade between partner countries; that the general incidence of duties and regulations affecting third parties is no higher after than it was before the signing of the agreement; and that the agreement contains a plan and schedule for its complete formation within a reasonable time.

There are three reasons why regional trade arrangements could be beneficial. First, existing and proposed arrangements include economies that trade disproportionately and in high volumes with one another. The efficiency gains from economies of scale and increased specialization could be substantial, especially if the blocs include both industrial and developing countries.

Second, the removal of obstacles to the flow of goods and (often) capital between economies within a free trade arrangement puts a premium on macroeconomic stability and regulatory reform. Spain, for example, introduced reforms in tax, investment, financial, and trade policies as a precursor to its accession to the EC in 1986. Regional free trade arrangements generate other types of externalities. For example, one important feature of EC 1992 is the degree to which competition policies are being improved and made more consistent across borders. Often, such policy reforms have greater economic advantages than the gains from trade.

Third, regional trading arrangements could promote progress on multilateral trade issues. It is easier to negotiate between three parties where each benefits greatly, than among many where each benefits little. The Uruguay Round started six years ago and progress has been slow. In contrast, the United States-Canada free trade arrangement was negotiated in 18 months, and the Mexico-Chile agreement in less than a year. They were concluded quickly because a small number of parties were involved, relatively few but important issues were negotiated,

A large share of world trade is already covered by regional free trade arrangements

Table 2-13 The share of world trade occurring under regional trading arrangements
(percentage of 1988 world trade)

	Excluding intra-EC trade		*Including intra-EC trade*	
Arrangement	*All trade*	*Manufactures*	*All trade*	*Manufactures*
Total world exports	100.0	100.0	100.0	100.0
Existing arrangements	24.8	26.9	41.4	44.7
OECD centered	20.7	22.7	38.2	41.5
EC	n.a.	n.a.	22.1	24.4
EC-EFTA	9.5	11.3	7.4	8.5
EFTA	1.1	1.3	0.9	1.0
United States-Canada	6.8	6.9	5.3	5.2
EC regional arrangements	2.6	2.6	2.0	2.0
Others[a]	0.7	0.6	0.5	0.4
Developing country arrangements	4.1	4.2	3.2	3.2
Hong Kong-China	1.6	2.2	1.3	1.7
ASEAN	1.5	1.3	1.2	0.9
LAIA (Latin American Integration Association)	0.4	0.4	0.4	0.3
Others[b]	0.6	0.3	0.3	0.3
Potential new arrangements	6.3	6.1	4.9	4.6
EC-Eastern Europe	3.6	3.3	2.8	2.5
United States-Mexico	2.0	2.1	1.5	1.6
EFTA-Turkey	0.6	0.7	0.5	0.5
Canada-Mexico	0.1	0.0	0.1	0.0

n.a. Not applicable.
a. Includes U.S.-Israel, U.S.-Caribbean Basin, Australia-New Zealand, Australia-Papua New Guinea, Canada-Caribbean Basin.
b. Includes CACM (Central American Common Market), CARICOM (Caribbean Common Market), ECOWAS (Economic Community of West African States), GCC (Gulf Cooperation Council), Mahgreb, SADCC (South African Development), and UDEAC (Economic and Customs Union in Central Africa).
Source: World Bank staff estimates based on COMTRADE data.

special administrative arrangements for dispute settlement could be established easily, and the problem of "free riders" could be eliminated.

A few areas of concern remain. First, trade diversion arising from bloc formation could prove costly for individual countries outside these blocs, especially when trade barriers against such countries are high. For example, the gains from a free trade arrangement in sugar between the United States and Mexico would be large and positive for both countries; but it would impose significant costs on other sugar exporters. This would contrast with a multilateral, nondiscriminatory liberalization, in which the United States, Mexico, and other countries would gain (Borrell and Coleman 1991). Second, although the formation of regional free trade arrangements could mean more efficiency in reaching global agreements, the negotiations would probably be driven by the concerns of more powerful members. Unlike the EC, most blocs are unlikely to have mechanisms to compensate losing members that are hurt by such arrangements. Furthermore, once a country joins a regional free trade arrangement, it inevitably loses some independence in formulating its external trade policies. Finally, regional free trade arrangements could turn hostile towards each other and the consequences for the world economy could be serious.

The perception in the United States that European and Japanese firms enjoy government subsidies for research and development and the production of high technology products has fueled support for further managed trade initiatives. The recent agreement by Japan to "voluntarily" import more automobiles and auto parts from the United States is an extension of the managed trade approach from export restraint to import expansion. Continued friction between the EC and the United States on agriculture could also degenerate into trade warfare unless resolved quickly. Were regional arrangements to turn hostile, developing countries outside them would not only lose access to important export markets, but would also find their links with the

global trading network weakened or severed. But were these arrangements to lower their common protective barriers, or at least not raise them, the consolidation of these arrangements could prove to be a useful first step in improving the global trading system.

Notes

1. Japan is the only industrial country covered by MFA quotas and the United States is the only country that imposes textile quotas on Japan.

2. India reached its quota limits for all years in the 1980s for nearly all its markets in the five most important garment categories (accounting for 75 percent of its total garment exports). Its quota to the EC remained unfilled because other garment categories for which it receives a quota are of little interest to Indian exporters—for example, jackets, blazers, parkas, anoraks, pyjamas, and bathrobes—see Kumar and Khanna (1990).

3. It should be noted, however, that the MFA initially encouraged exports of textile products from Thailand because it curtailed the exports of the three major exporting countries—Hong Kong, Korea, and Taiwan, China. But by 1985, Thailand had filled its MFA quotas in most markets, and indeed, exceeded them in the case of the United States (Suphachalsai 1991).

4. Quotas are defined as binding when the quota utilization rate exceeds 90 percent.

5. Nontariff barriers include import prohibitions, quantitative restrictions, voluntary export restraints, variable levies, MFA restrictions, nonautomatic licensing, and countervailing and antidumping measures.

6. This estimate is based on a partial equilibrium analysis measuring the static gains from trade liberalization, and it is sensitive to assumptions on elasticities. For details about the analysis, see appendix C.

7. The aggregate net resource flows from official sources to developing countries in 1991 was US$57 billion.

8. It should be noted here that developing countries face the added concern of investment diversion. Increased production in the EC necessary to replace lower imports would require additional installed capacity, and this could mean risk capital diverted from countries to the EC.

Interlinkages, human capital, and export competitiveness

3

Falling costs of moving goods and information has spurred the globalization of manufactures production and made it more profitable for developing countries to export labor intensive manufactures on the strength of their labor cost advantages. Building international links through better transport and telecommunications infrastructure to complement policies on trade and foreign investment will be crucial to their future export performance. Innovations in marketing, as well as changes in management and production techniques, has made this even more critical, and will require an increasingly skilled and adaptable labor force.

Manufacturing has become increasingly globalized

Reductions in the cost of moving goods, and especially information, have encouraged the shipment of semi-manufactures between production sites. The production of labor intensive goods is increasingly mobile, with low fixed costs, easily separable production steps (for example, manufacture, assembly, testing, packaging) and high value-to-weight ratios. Stores in the United States buy plastic toys from Hong Kong produced in China based on raw materials shipped from Malaysia. Integrated chips are fabricated and etched in the United States, assembled in Mexico and re-exported to the United States for final sale. This international division of labor lay at the heart of East Asia's success in exporting manufactures.

The search for cost advantage extends to individual segments of the production process. Footwear design and assembly is still done predominantly in industrial countries, while labor intensive stitching is often done in developing countries. Producers constantly search for low cost suppliers. India was the largest supplier of unfinished shoes to the United States but has now been displaced by the Dominican Republic. In Europe, stitching has shifted to Spain and Portugal. Japan has relied principally on South Korea and Taiwan, China. The search for low labor costs is now affecting the maturing economies of East Asia. Firms from Taiwan, China have moved into the Fujian and Guandong provinces of China to take advantage of lower labor costs, especially for the stitching stage of footwear production.

This globalization of production, helped by lower transport costs has meant more specialization between nations in different branches of manufacturing, and even within different stages of production. Low labor costs are a key factor in developing countries' international competitiveness. Exports may be classified by labor intensity—using the average share of labor in value added in U.S. industries (appendix B). By this measure, 41 percent of all manufactures exported by developing countries are labor intensive, compared with just 25 percent from industrial countries. A recent study calculated the changes in "revealed comparative advantage"[1] for 129 product groups between 1966–68 and 1986–88. Eighty percent (thirty-four of forty-five) of the products in which developing countries gained (some extensively) were labor intensive manufactures that included textiles, clothing, and footwear (table 3-1). Growth was especially striking in clothing. Over the two decades, the number of high income countries possessing a revealed comparative advantage in clothing fell from 11 to 5 and the import penetration of industrial country markets rose dramatically from 2 percent to 22 percent.

Moreover, developing countries' share of industrial country imports of labor intensive manufactures has shown a steady increase, almost doubling between 1965 and 1989—from 9.8 percent to 18.8 percent (figure 3-1). This is due entirely to East Asia as its share grew from 1.4 percent in 1965 to 12.4 percent in 1989, and now constitutes two-thirds of the developing country total.

Increased global specialization is also reflected in the rising importance of technology intensive pro-

Several developing countries gained comparative advantage in labor intensive industries

Table 3-1 Proportion of countries for which revealed comparative advantage was gained or lost in broad product groups, 1966–68 to 1986–88
(percent)

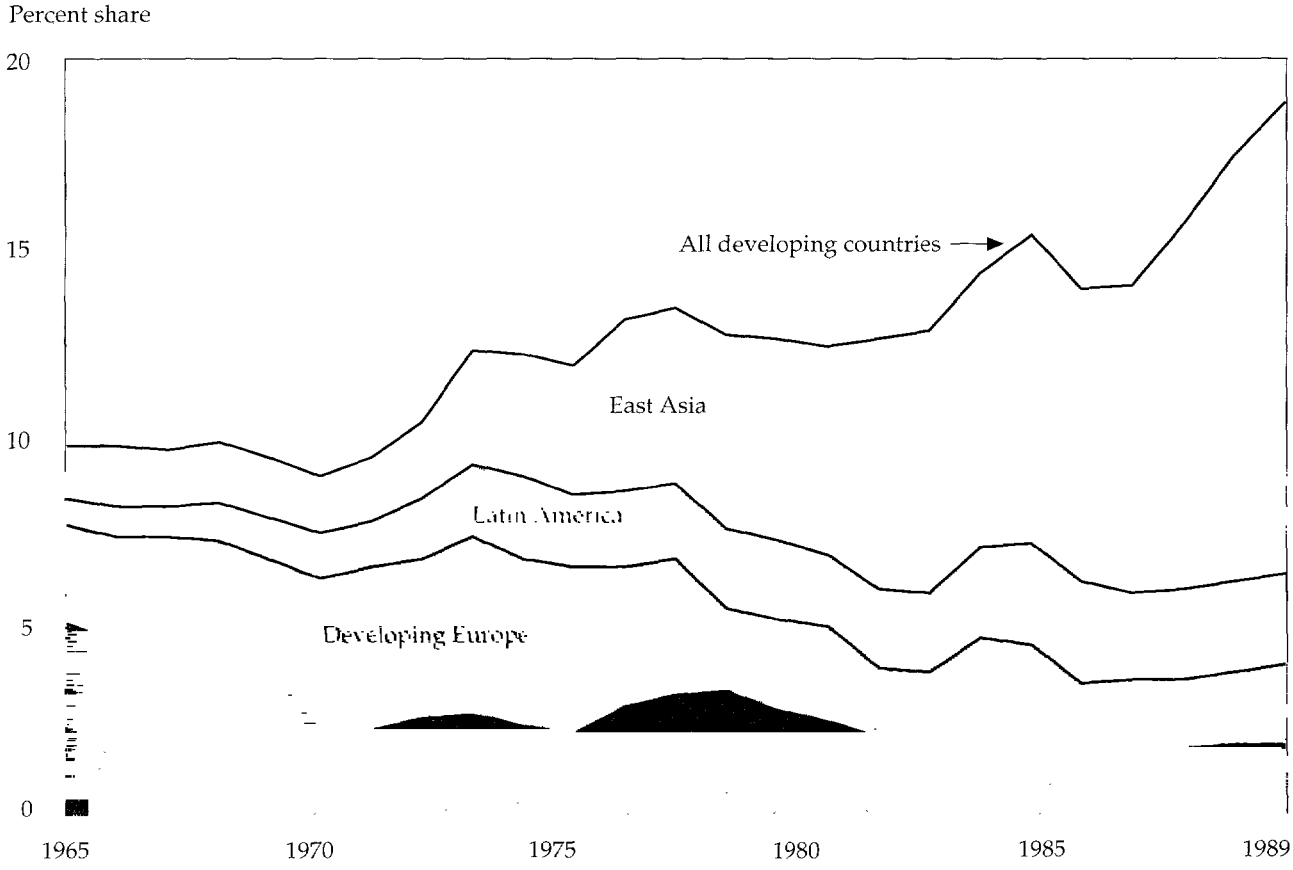
	OECD		Developing countries	
Product group	*Gained*	*Lost*	*Gained*	*Lost*
Chemicals	15	6	9	4
Textiles	12	12	12	7
Clothing	6	20	19	3
Footwear	9	17	10	6
Iron and steel	16	7	12	5
Machinery and transport	9	9	6	2

Source: Yeats (1991).

duction in industrial countries. Between 1965 and 1980, the share of technology intensive output in Japan's total manufacturing value added climbed by 10 percentage points and the share in the United States rose by 5 percentage points. Moreover, the global share of technology intensive exports jumped from 21.5 percent in 1978 to 28.6 percent by 1988. The largest exporters and importers were industrial countries, although some developing countries emerged in the line up. Malaysia, for example, barely exported US$3 million of technology intensive manufactures in 1968, or 0.2 percent of its total exports; by 1988, it exported US$1.4 billion at 1968 constant prices (table 3-2). This rapid growth was mainly the result of decisions by Japanese firms, pressured by the appreciation of the yen, to relocate more labor intensive activities in developing countries. By 1989, Thailand and Malaysia accounted for almost three-

The developing country share of industrial country imports of labor intensive manufactures has grown steadily

Figure 3-1 Developing countries' share of labor intensive manufactures imported by industrial countries



Source: World Bank staff estimates from COMTRADE.

Exports of technology intensive manufactures have grown rapidly

Table 3-2 Share of world exports of technology intensive manufactures, 1968–88
(percent)

Country	*1968*	*1978*	*1988*
Five largest industrial countries			
United States	29.2	21.2	18.5
Japan	8.5	13.7	17.5
Germany	14.9	14.0	10.8
France	6.6	6.9	6.6
United Kingdom	9.5	7.8	6.3
Five largest developing countries			
Korea	0.1	1.0	2.9
Mexico	0.4	0.9	1.4
Malaysia	..	0.6	1.2
China	0.2	0.2	1.1
Brazil	0.1	0.5	0.6
Memo:			
World exports of technology-intensive manufactures ($ billion)	25.3	150.6	511.9

.. Negligible.
Source: World Bank staff estimates based on COMTRADE data.

quarters of the Japanese foreign direct investment in Asia. The rapid growth of technology intensive exports from Mexico reflects U.S. foreign direct investment in the labor intensive stages of production.

Global integration of manufacturing has also been driven by the rising importance of export flows related to foreign direct investment. In the 1950s and 1960s, most flows of foreign direct investment to developing countries were to the manufacturing sector with well-protected markets and adequate supplies of raw materials. A recent analysis showed that apart from relatively open trade policies, investors attached much importance to the quality of physical, human, and institutional infrastructure (Mody and Wheeler 1991). Another study noted that U.S.-owned affiliates tended to locate in countries with large internal markets and high propensities to trade; labor cost was not an influential factor (Kravis and Lipsey 1982). Another analysis showed that access to fast growing markets were of major importance to foreign investors (Jenkins 1984).

By the early 1980s, intrafirm trade within the largest 350 transnational corporations (TNCs) contributed about 40 percent of global trade (Oman 1991). More than a third of U.S trade is between foreign affiliates and their U.S. based parents. Similarly, East Asian affiliates of Japanese firms ship a quarter of their exports to parent companies in Japan and buy from them more than a third of their imports. In 1982, 47 percent of Singapore's exports were by U.S.-owned firms. Fifty two percent of Malaysia's exports to the United States were from U.S. affiliates; and Taiwan, China's five leading electronics exporters are U.S. firms (Julius 1991). Similarly, exports of electrical goods by Japanese producers in Korea had much to do with the rise of Korea in world electronics (Grunwald and Flamm 1985).

The pace of global integration in manufacturing production, however, appears to be slowing (table 3-3) partly as a result of protectionism. In addition, the rate of decline in transport and telecommunications costs reveals a slowdown in recent decades (table 3-4).

The growing importance of interlinkages

Distances between nations also influence patterns of trade strongly, particularly in the case of manufactures, because they impose transaction costs on production and trade. Studies suggest that if distance doubles, then trade between countries of equal size declines by two-thirds. A common land border between countries increases trade by a factor of two and a half. A common language also leads to more trade, as do past political and commercial ties (Pohl and Sorsa 1992).

The economic distance between nations—influenced by geographical location, culture, and history—is an important factor in assessing the export prospects of developing countries. This distance from major markets can be shrunk by better infrastructure for international transport and telecommunications and by more open policies for trade in goods and services, foreign direct investment, and movement of people. Such links permit close interaction with buyers and suppliers in the quest for inter-

Integration of the global market for manufactures is declining

Table 3-3 The growth of global trade in manufactures and manufacturing value added
(average annual percentage change)

	1965–73	*1973–80*	*1980–90*
Trade	10.0	6.2	4.9
Output	4.6	2.2	3.9
Difference	5.4	4.0	1.0

Note: The difference between growth of trade and growth of value-added has been declining in the last three decades.
Source: World Bank estimates based on UNIDO and COMTRADE data.

The rate of decline in transport and communications cost has slowed

Table 3-4 Long-term trends in transport and communications costs
(in 1990 U.S. dollars)

Year	*Average ocean freight and port charges per short ton of import and export cargo*	*Average air transport revenue per passenger mile*	*Average 3-minute telephone call—New York to London*
1920	$95	—	—
1930	$60	$0.68	$244.65
1940	$63	$0.46	$188.51
1950	$34	$0.30	$53.20
1960	$27	$0.24	$45.86
1970	$27	$0.16	$31.58
1980	$24	$0.10	$4.80
1990	$29	$0.10	$3.32

— Not available.
Source: Hufbauer (1991).

national competitiveness, and they help translate low labor costs into low production costs.

Recent trends in technology have made these international linkages even more important for international competitiveness. New technologies permit more differentiated products, and sale of a wider range of products requires more detailed market intelligence. "Just-in-time" inventory management techniques, and the trend toward design for manufacture, require close coordination between producers and suppliers, designers and component manufacturers. The growing interaction between markets, consumers, producers, and suppliers requires more efficient communications.

Interlinkages and innovations in marketing

Two recent trends in the marketing of manufactures has made interlinkages between exporters and importers of manufactures of growing importance. The first is the proliferation of product variety, which brings with it the necessity of precise market information. The second is more sophisticated management of inventory costs, which requires close coordination between sales, production, and procurement.

Rising incomes in the industrial and advanced developing economies has brought with it growing consumer demand for product variety and product quality. Meeting this demand is now a central element in the competitive strategy of many firms in, for example, automobiles, footwear, consumer electronics, and garments. New technologies permit more differentiated products and shorter product cycles. With computer-based techniques, new designs replace obsolescent ones with increasing rapidity and at low cost. Automobiles, which took ten years from drawing board to market, now take three years (Kaplinsky 1991). In 1955, the number of products sold in the U.S. market for automobiles, vans and light trucks was 30; by 1989, it had grown to 142 (Womack, Jones, and Roos 1991).[2] In retailing, the average American supermarket now carries more than 12,000 product lines.

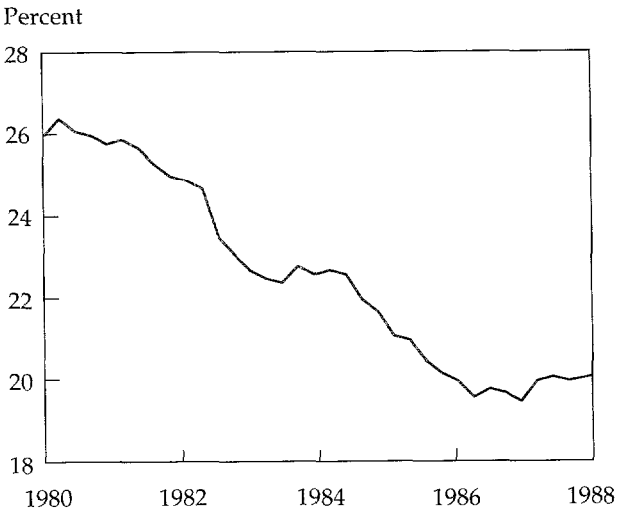
Increased product variety requires constant contact with markets, detailed knowledge of the pattern of consumer demand, and a deep understanding of consumer needs. To this end, some developing country exporters have established close links with buyers from industrial countries, who are important sources of information on market trends, legal product standards and market requirements in the purchasing country (Rhee, Ross-Larson, and Pursell 1984), as well as information on better production and management techniques.

A recent study of export oriented firms in Sub-Saharan Africa showed that foreign partners tend to provide much needed technology and managerial skills, as well as marketing infrastructure in export markets (World Bank/USAID, 1991). Similarly, a study of 167 Polish enterprises during transition revealed that those with exposure to Western markets tended to have a stronger export performance; earlier earnings of hard currency permitted them to upgrade technology periodically. They were also able to keep in touch with market demands in industrial countries, particularly Western Europe (Mueller 1991).

The use of cheaper and more powerful information processing technologies, married to new organizational practices, has helped improve quality control, reduce waste, and cut inventories. Comput-

Inventory-to-sales ratio have fallen...

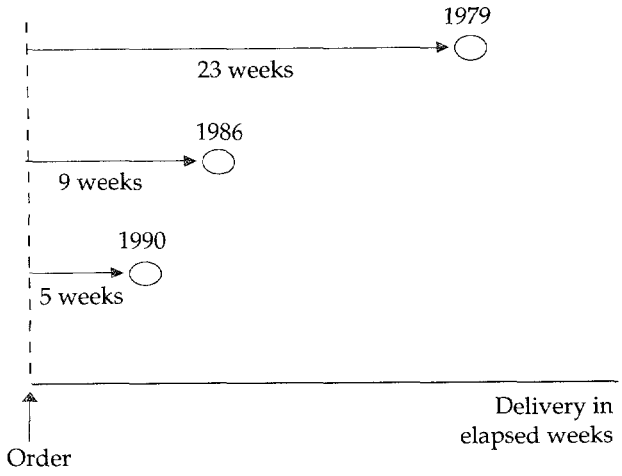
Figure 3-2 Ratio of business inventory to final sales in the United States, 1980–89



Source: Peters (1991).

...as order cycles have shortend

Figure 3-3 Order cycle elapsed time in the U.S. electrical and electronics industry



Source: Peters (1991).

ers and advanced telecommunications permit just-in-time management of inventories eliminating the need for buffer stocks as suppliers deliver directly to production lines. For example, the inventory-to-sales ratio in the United States fell significantly during the 1980s, partly to minimize risks from changes in consumer tastes, but also to reduce working capital costs (figure 3-2). These techniques have also spread to the retail and wholesale sector, with order cycle times (that is, the time between an order and the delivery of the goods) having fallen sharply (figure 3-3). Indeed, more than 60 percent of production and sales in OECD markets is now processed directly to order (Peters 1991).

The use of new technology by one of Europe's largest garment firms shows well how strong links between production and marketing help increase efficiency. Each cash register in the firm's 3,200 sales outlets in fifty-seven countries is linked by satellite to its Italian headquarters. Daily information on sales provides instant feedback to the firm's subcontractors, and production is adjusted accordingly. The firm's success is based on flexible production and detailed information of consumer tastes (Elson 1988).

In industries where product design is changing rapidly, competitive pressures demand the shortest possible lead times between design and manufacture. The spreading practice of design-for-manufacture is intended to reduce these lead times still further. Close integration of design and development must involve the participation of component suppliers, placing a premium on well-established links between them.

Human capital development and innovation in production and management

Firms in developing countries starting new areas of production usually find it cheaper to acquire technology from abroad. However, the market for technological and managerial expertise is complicated, and these skills cannot be purchased off-the-shelf. The economic benefits from the acquisition of a new technology is generally less than the cumulative benefits from gradual improvements made after its introduction (Dahlman and Westphal 1982).

Even in a mature, labor-intensive industry, such as footwear, advantages arising from relatively low cost labor could easily be outweighed by inefficiencies arising from inadequate management techniques or outmoded technology. Apart from stitching, a process that remains relatively unchanged by new technology, all other aspects of shoe manufacturing have been automated and computerized.

Using carefully constructed benchmark models of footwear production in different countries, a recent study shows that developing countries can still produce shoes more cheaply than industrial countries (Mody and others 1991, and see table 3-5). But the most efficient producers of footwear tend to be in the

Labor costs are less important in footwear production than material costs

Table 3-5 Comparison of footwear production cost

Cost[a]	Developing countries	Asian NIEs[b]	Industrial countries
Cost per pair of shoes (US$)	22.0	19.0	26.9
Cost breakdown (percent)			
Material[c]	86.8	81.8	67.6
Labor[d]	8.4	12.8	27.4
Equipment	2.5	2.5	2.6
Overheads[e]	2.3	2.7	2.3

a. Cost estimates based on a benchmark factory model.
b. Hong Kong, Korea, Singapore, and Taiwan, China
c. Includes raw material inputs, work in progress, and valued scrap.
d. Includes direct and indirect labor.
e. Cost of land, buildings, and administrative overheads.
Source: Mody and others (1991).

newly industrializing economies of East Asia, and some firms in industrial countries are closing in the face of this competition. Indeed, firms in newly industrializing economies are now locating production in China, making it the world's largest exporter of shoes.

A key feature of the cost breakdown in footwear production is the large share of material costs. If footwear firms in developing countries adopt best practice techniques in production and management, they could become more competitive than their rivals in the newly industrializing economies (table 3-6), but they are hamstrung by relatively low labor and management skills. Firms that improve these skills, and raise the quality of their design, engineering, and finance staff could better absorb new technologies. One way is to establish links with external partners. In the case of China's Fujian province, the new center of footwear production in East Asia, production is managed and workers are trained by residents of Taiwan, China, who bring with them years of experience and a strong record of success. Governments that discourage the use of foreign managers, consultants, or workers inhibit a potentially valuable source of technical information, expertise, and experience. Firms also need an economic environment that encourages training in new skills.

Two other recent studies analyze the production cost structures of bicycles and printed circuit boards (both labor intensive products) in different countries. The studies then compared these performances with the hypothetical outcome should developing countries adopt best practice management techniques (table 3-7). Again, newly industrializing economies have the lowest unit costs—significantly lower than industrial countries, but only just lower than developing countries. However, if developing country firms improve process efficiency, reduce inventories, and raise management standards to levels in the

With improved technology, developing countries can become even more competitive in footwear

Table 3-6 Cost of producing a shoe with alternative technologies
(U.S. dollars per pair of shoes)

Technology	Developing countries	Asian NIEs[a]	Industrial countries
Current technology	22.0	19.0	26.9
After introducing best production and management practices	18.0	19.0	23.2
future best practice	16.5	17.3	20.7

a. Newly industrializing economies—Hong Kong, Korea, Singapore, and Taiwan, China.
Source: Mody and others (1991).

Using best practice techniques, developing countries can become competitive in several labor intensive products

Table 3-7 Comparisons of international competitiveness between current practice and best practice[a]
(Best practice = 100)

Practice	Developing countries	Asian NIEs	Industrial countries
Shoes			
current practice	116	100	142
best practice	95	100	122
PCBs[b]			
current practice	125	100	144
best practice	101	100	130
Bicycles			
current practice	110	100	160
best practice	96	100	150

a. Comparisons are of production costs in U.S. dollars in relation to production costs in the best practice firm. In the three examples given here, the best practice firm was located in one of the Asian NIEs.
b. Printed circuit boards.
Source: Mody and others (1991).

newly industrializing economies, then their products become competitive internationally.

Conclusion

The central challenge for developing country exporters will be in translating their labor cost advantage into export competitiveness. Efficient international transport and communications links will be needed to complement open trade and investment policies. A slowdown in the rate of decline of transport and telecommunications costs will place an added premium on forging such linkages with major markets, to obtain the latest information on consumer tastes and market trends and to exploit cost advantages at every stage of production. Innovations in marketing require producers to maintain low inventory levels and meet ever more stringent production and delivery schedules.

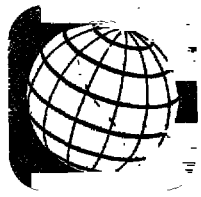
Furthermore, developing countries would be ill-advised to depend solely on low labor costs to compete internationally as changes in managerial and production techniques require a longer run focus on the upgrading of skills. The case studies cited in this chapter showed that absorbing and adjusting rapidly to changes in technology, product mix, and work practices requires continuing improvements in the education and skill level of the labor force. Even labor intensive industries can be more competitive internationally with better educated labor. The more sophisticated the technology, the more advanced the skills required. So success in penetrating global markets in manufactures requires the development of skills through education and training programs. This can be accelerated by building information and technology links with other countries and focusing on producing manufactures in which the country is most competitive internationally. But, in the absence of a skilled labor force, the effect of these policies on exports and economic growth will be less powerful. Countries that fail to develop information technology links or emphasize human resource development will find it increasingly difficult to compete successfully in the global market for manufactures at any acceptable wage.

Notes

1. An economy is defined as having a revealed comparative advantage in a product if its export of that item as a share of total exports exceeds the global exports of the item as a share of global trade.

2. A product in the U.S. automobile industry is defined as a vehicle selling more than a 1,000 units annually that shares no external panels with and has a different wheelbase from any other vehicle in a producer's range (Womack, Jones, and Roos 1991, p. 125).

Appendix A: Classification of economies



Global Economic Prospects classifies economies according to income level, region, and analytical category. The groups are defined in the accompanying tables.

Table 1

- *Income group.* Economies are divided according to 1990 GNP per capita (calculated using the *World Bank Atlas* method) into low-income, $610 or less; lower-middle-income, $611–2,465; upper-middle-income, $2,466–$7,619; and high-income, $7,620 or more.
- *Subgroup.* Low income economies are further divided by size, and high income by membership of OECD.
- *Region.* Economies are divided into five major geographical groupings. Four of these are subdivided into two subregions each.

Table 2

- *Major export category.* Major exports are those that account for 50 percent or more of an economy's total exports from one category in the period 1987–89. These categories are: nonfuel primary (SITC 0, 1, 2, and 4, plus 68), fuels (SITC 3), manufactures (SITC 5 to 9, minus 68) and services (factor and nonfactor service receipts plus workers' remittances). If no single category accounts for 50 percent or more of an economy's total exports, that economy is classified as *diversified.*
- *Indebtedness.* Using standard World Bank definitions, economies are classified according to their degree of indebtedness (averaged over 1988–90). *Severely-indebted* means three of four key ratios are above critical levels: debt to GNP (50 percent), debt to exports of goods and services (275 percent), accrued debt service to exports (30 percent), and accrued interest to exports (20 percent). *Moderately indebted* means three of the four key ratios exceed 60 percent of, but do not reach, the critical levels. *Less indebted economies* and those not covered in the World Bank Debtor Reporting System are also listed.

Appendix A: Information on classification of economies

Appendix table A1 Classification of economies by income and region

Income group	Subgroup	Sub-Saharan Africa		Asia		Europe and Central Asia		Middle East and North Africa		Americas
		East and Southern Africa	West Africa	East Asia and Pacific	South Asia	Eastern Europe and Central Asia	Rest of Europe	Middle East	North Africa	
Low-income	*Large*			China	India					
	Small	Burundi Comoros Ethiopia Kenya Lesotho Madagascar Malawi Mozambique Rwanda Somalia Sudan Tanzania Uganda Zaire Zambia	Benin Burkina Faso Central African Rep. Chad Equatorial Guinea Gambia, The Ghana Guinea Guinea-Bissau Liberia Mali Mauritania Niger Nigeria São Tomé and Principe Sierra Leone Togo	Cambodia Indonesia Lao PDR Solomon Islands Viet Nam	Bangladesh Bhutan Maldives Myanmar Nepal Pakistan Sri Lanka			Afghanistan	Egypt, Arab Rep.	Guyana Haiti Honduras
Middle-income	*Lower*	Angola Botswana Djibouti Mauritius Namibia Swaziland Zimbabwe	Cameroon Cape Verde Congo, Rep. Côte d'Ivoire Senegal	Fiji Kiribati Korea, Dem. Rep.[a] Malaysia Mongolia Papua New Guinea Philippines Thailand Tonga Vanuatu Western Samoa		Albania[a] Bulgaria Poland Romania	Turkey	Iran, Islamic Rep. Jordan Lebanon Syrian Arab Rep. Yemen, Rep.	Algeria Morocco Tunisia	Argentina Belize Bolivia Chile Colombia Costa Rica Cuba[a] Dominica Dominican Rep. Ecuador El Salvador Grenada Guatemala Jamaica Nicaragua Panama Paraguay Peru St. Lucia St. Vincent and Grenadines
	Upper	Reunion Seychelles South Africa	Gabon	American Samoa Guam Korea, Rep. Macao New Caledonia Pacific Islands, Trust Territory		Czechoslovakia Hungary Former USSR[a] Yugoslavia	Gibraltar Greece Isle of Man Malta Portugal	Bahrain Iraq Oman Saudi Arabia	Libya	Antigua and Barbuda Barbados Brazil French Guiana Guadeloupe Martinique Mexico Netherlands Antilles Puerto Rico St. Kitts and Nevis Suriname Trinidad and Tobago Uruguay Venezuela
No. of low- & middle-income economies 145		25	23	23	8	8	6	10	5	37

Table continues on the following page.

Appendix table A1 *(continued)*

Income group	Subgroup	Sub-Saharan Africa		Asia		Europe and Central Asia		Middle East and North Africa		Americas
		East and Southern Africa	West Africa	East Asia and Pacific	South Asia	Eastern Europe and Central Asia	Rest of Europe	Middle East	North Africa	
High-income	*OECD countries*			Australia Japan New Zealand			Austria Belgium Denmark Finland France Germany Iceland Ireland Italy Luxembourg Netherlands Norway Spain Sweden Switzerland United Kingdom			Canada United States
	NonOECD countries	Mayotte		Brunei French Polynesia Hong Kong Singapore OAE[b]			Andorra Channel Islands Cyprus Faeroe Islands Greenland	Israel Kuwait Qatar United Arab Emirates		Aruba Bahamas Bermuda Virgin Islands (US)

Note: Economies with populations of less than 30,000 are not included.
a. Not included in regional measures because of data limitations.
b. Other Asian economies—Taiwan, China.

Appendix table A2 Classification of economies by major export category and indebtedness

Group	Low- and middle-income						High-income nonOECD	High-income OECD
	More indebted economies				Less indebted economies	Not included in World Bank Debtor Reporting System		
	Low-income		Middle-income					
	Severely indebted	Moderately indebted	Severely indebted	Moderately indebted				
Exporters of manufactures			Bulgaria Poland	Hungary	China Czechoslovakia Korea, Rep. Lebanon Romania	Korea, Dem. Rep.[a] Macao New Caledonia	French Polynesia Hong Kong Israel Singapore OAE[b]	Canada Finland Germany Ireland Italy Japan Sweden Switzerland
Exporters of nonfuel primary products	Burundi Equatorial Guinea Ethiopia Ghana Guinea Guinea-Bissau Guyana Honduras Liberia Madagascar Malawi Mauritania Myanmar Niger São Tomé and Principe Somalia Sudan Tanzania Uganda Zaire Zambia	Rwanda Togo	Argentina Côte d'Ivoire Nicaragua	Chile Costa Rica Guatemala	Bhutan Botswana Chad Papua New Guinea Paraguay Solomon Islands St. Vincent and Grenadines Swaziland Zimbabwe	Afghanistan Albania[a] American Samoa Cuba[a] French Guiana Guadeloupe Guam Mongolia Namibia Reunion Suriname Viet Nam	Faeroe Islands Greenland	Iceland New Zealand
Exporters of fuels (mainly oil)	Nigeria		Algeria Congo, Rep. Venezuela	Angola Gabon	Iran, Islamic Rep. Oman Trinidad and Tobago	Gibraltar Iraq Libya Saudi Arabia Former USSR[a]	Brunei Qatar United Arab Emirates	
Exporters of services	Egypt, Arab Rep.	Benin		Dominican Republic Jamaica Jordan Yemen, Rep.	Burkina Faso Cape Verde Djibouti Fiji Grenada Haiti Lesotho Maldives Malta Nepal Panama Seychelles St. Kitts and Nevis St. Lucia Tonga Vanuatu Western Samoa	Antigua and Barbuda Barbados Cambodia Greece Kiribati Martinique Netherlands Antilles	Bahamas Bermuda Cyprus Aruba	United Kingdom
Diversified exporters[c]	Kenya Mozambique Sierra Leone	Bangladesh Central African Rep. Comoros India Indonesia Mali Pakistan Sri Lanka	Bolivia Brazil Ecuador Mexico Morocco Peru Syrian Arab Rep.	Cameroon Colombia El Salvador Philippines Senegal Turkey Uruguay	Belize Dominica Gambia, The Lao PDR Malaysia Mauritius Portugal Thailand Tunisia Yugoslavia	Bahrain South Africa	Kuwait	Australia Austria Belgium Denmark France Luxembourg Netherlands Norway Spain United States
No. of economies 178	26	11	15	17	44	29	15	21

Appendix B: Some definitional issues

What is a manufacture?

The distinction between broad classes of goods like manufactures and commodities appears relatively straightforward, conceptually. Manufactures are generally defined as "items that experience considerable change in shape, value, production characteristics, or end use as a result of some (human controlled) physical or chemical transformation process."[1] In contrast, commodities consist of agricultural or mineral goods that are sold in, or close to, the raw form in which they occur naturally. Commodities consist of unprocessed agricultural goods classified in Standard International Trade Classification (SITC) categories 0, 1 and 2 (i.e., items like cocoa and coffee beans, tobacco leaf, logs, and natural rubber), or ores and minerals like phosphate rock, iron ore, or sulphur (all are in SITC 2).

This distinction between manufactures and commodities would seem clear enough were it not for the fact that certain consumables are excluded from the former. The items in question are those whose nature is to lose their physical identity or "disappear" in the process of normal use. Two important examples are human consumables like processed beverages, tobacco, foods, and feeds (SITC 0 and 1), and refined petroleum products (SITC 3). Many individual products in these one-digit SITC groups, such as jet aviation fuels, gasoline, alcoholic beverages, and cigarettes, etc., have undergone a high degree of processing, often in very capital intensive production processes, and their exclusion from the category of manufactures appears arbitrary.[2]

What are the implications of these conceptual points for the different statistical series on manufactures production and trade? The degree of processing that an item has received should be a key factor in determining whether a product is classified as a commodity or manufacture; the greater the degree of processing the greater the case for classifying an item in the latter group. However, since there is no completely objective standard for determining exactly when a product has passed the threshold between commodities and manufactures, reasonable disagreements may exist as to how some items should be classified. These disagreements might be expected to center on lightly processed items falling in SITC 2 and 68. However, the exclusion of "disappearing consumables" from definitions of manufactures is a conceptually questionable practice that could have important consequences for classification. Many items in the excluded groups experience a high degree of processing and also have very similar counterpart products that are included in every definition of manufactures used by international organizations.[3] Appendix table B1 compares differences in some of the definitions of manufactures used by international organizations. Throughout this report definition 1 has been employed (SITC groups 5 through 8 less 68) for identifying manufactured goods.

Differentiating labor and capital intensive manufactures

This report distinguishes between labor intensive and capital intensive manufactures. It uses an approach developed by the U.S. National Bureau of Economic Research for identification of labor and capital intensive products. This analysis uses the criteria of relative value added per employee, both in the United States and other countries, to identify the degree to which products are capital or labor intensive in production. Products whose value added per employee falls below the national average for all U.S. manufacturing activity are classified as labor intensive. Capital intensive goods consist of products whose value added per employee is above the United States average.[4] Appendix table B2 shows the distribution of labor intensive industries within broad

Appendix table B1 An analysis of alternative definitions of manufactured products used by national and international organization

Originating institution	*SITC groups included*	*Notable omissions and/or inclusions* [a]
United Nations (UNCTAD), General Agreement on Tariffs and Trade (GATT), and World Bank.	5 through 8 less 68	Includes all goods classified as chemicals (5), manufactured goods classified by material (6) excluding nonferrous metals (68), machinery and transport equipment (7), and miscellaneous manufactured articles (8). Exclusion of SITC 68 means that some highly fabricated nonferrous metals products (i.e., copper, aluminum, nickle, tin plates, shapes, bars and tubes, etc.) are not included as manufactures. Also excluded are highly processed food products in SITC 0, distilled and fermented alcoholic beverages and tobacco manufactures in SITC 1[b], sawn lumber and wood pulp in SITC (2), and refined vegetable oils in SITC 4.
UNCTAD (2)	5 through 8 less 67 and 68	Similar to the UNCTAD-GATT definition except that both iron and steel (67) and nonferrous metals (68) are excluded.
World Bank in *World Development Report*, 1987	5 through 8 less 68, 651, 652, 654, 655, and 667	Similar to the UNCTAD-GATT definition except five three-digit SITC products are also excluded from manufactures: textile yarn and thread (651), cotton fabrics[c] (652), tulle, lace, embroidery, and ribbons (654), special textile fabrics (655), and pearls, and precious stones (667).
UNIDO [d]	5 through 8 less 68 and several minor products. Major items from SITC 0, 1, 2, and 4 are included.	Pearls and precious stones (667), developed cinematographic film (893), and works of art and antiques (896) are excluded. Included are major prepared food products, beverages, tobacco manufactures, petroleum products, and animal and vegetable fats and oils.
National Bureau of Economic Research (NBER)[e]	5 through 8 less 68 plus several processed food products, animal and vegetable oils, and tobacco manufactures.	Includes a more limited range of processed food products than the UNIDO definition. Also excluded are refined petroleum products (332) and many processed agricultural materials products in UNCTAD (2). Full range of products classified as manufactures may be understated.

a. Standard International Trade Classification (SITC) numbers are shown in parenthesis.
b. Although consumable alcoholic beverages (SITC 112) are excluded, nonconsumable alcohols (SITC 512.2) are included in the definition of manufactures.
c. Although cotton fabrics (SITC 652) are excluded silk, wool, linen, jute, and hemp fabrics (SITC 653) are included in the definition of manufactures.
d. As elaborated in UNIDO (1982) among others.
e. As elaborated in Lary (1968, Table C-1, pp. 191–213). Since this table is based primarily on labor intensive manufactures it is possible that it understates the full range of products that the NBER would classify as manufactures.
Source: World Bank.

aggregate groups. As indicated, textile and apparel products are almost exclusively produced with labor intensive processes, and chemicals and petroleum refining are almost exclusively capital intensive.

Identifying high-tech products

Technology intensive manufactures are usually defined as products for which investments in the creation of knowledge are a substantial share of production costs. However, such a definition does not allow one to discriminate between industries characterized by different rates of technological diffusion. Factor inputs such as the relative intensity of research and development (R&D) investments, or the proportion of scientists and engineers in the labor force are static indicators and reflect the prevailing situation at a given point in time. They may provide a distorted picture as time goes by and some industries become less active in technological terms, while new high-tech sectors evolve.

Most of the relevant literature, however, uses some variation of the input criteria in defining high-tech industries. This report employs a definition that estimates the technology intensity for any given industry in terms of the R&D expenditure required to produce a certain manufactured good. This methodology takes into account not only the direct R&D investments made by final producers, but also the indirect R&D expenditure made by suppliers of intermediate goods used in the production of the final good. The indirect R&D contribution was estimated using input-output techniques. Using classifications based on the United States Standard Industrial Clas-

Appendix table B2 Analysis of the relative importance of labor and capital intensive industries within broad standard industrial classification (SIC) product groups

		Share of component four-digit industries that are labor and capital intensive (%)				
		Labor intensive[a]				*Capital*
SIC	*Description*	*Very high*	*High*	*Moderate*	*Total*	*intensive*
20	Food products	9.5	1.2	0.0	10.7	89.3
21	Tobacco products	0.0	8.8	14.3	23.1	76.9
22	Textile mill products	70.2	17.5	0.0	87.6	12.4
2211	Cotton mills	100.0	0.0	0.0	100.0	0.0
2221	Artificial fiber mills	100.0	0.0	0.0	100.0	0.0
225	Knitting mills	73.5	24.5	0.0	100.0	0.0
226	Nonwool textile finishing	20.0	79.9	0.0	99.9	0.1
228	Yarn and thread mills	100.0	0.0	0.0	100.0	0.0
23	Apparel and textiles	78.7	18.9	0.3	97.9	2.1
2311	Men's suits	100.0	0.0	0.0	100.0	0.0
232	Men's clothing	67.3	32.7	0.0	100.0	0.0
233	Women's outerwear	80.1	19.9	0.0	100.0	0.0
234	Women's undergarments	83.1	16.9	0.0	100.0	0.0
236	Children's outerwear	91.6	0.0	0.0	91.6	8.4
24	Wood products	42.7	51.5	5.8	100.6	0.0
25	Furniture and fixtures	48.3	22.6	20.9	91.8	8.2
26	Paper and products	1.8	7.2	6.1	15.1	84.9
27	Printing and publishing	2.0	14.1	25.4	41.4	58.6
28	Chemicals	0.0	1.6	0.0	1.6	98.4
29	Petroleum and coal products	0.0	0.0	0.0	0.0	100.0
30	Rubber and plastic products	2.6	0.0	83.4	86.0	14.0
31	Leather and products	82.2	17.8	0.0	100.0	0.0
32	Stone, clay, and glass	2.5	3.5	18.4	24.4	75.6
33	Primary metal industries	0.3	2.7	28.4	31.4	68.6
34	Fabricated metal products	0.0	11.2	29.3	40.5	59.5
35	Nonelectrical machinery	0.0	1.4	19.6	21.0	79.0
36	Electrical equipment	2.7	3.5	6.2	12.4	87.6
37	Transport equipment	0.0	5.3	10.4	15.7	84.3
38	Instruments	0.0	2.7	14.8	17.5	82.5
39	Misc. manufactures	1.9	34.7	25.5	62.0	38.0

a. Products with very high labor intensities are those where the factor proportions ratio is at least 40 points below the average for all U.S. manufacturing. Products with high labor intensities are those whose factor proportions ratios fall between 0.60 and 0.74 while the moderately labor intensive products have factor proportions ratios between 0.75 and 1.00. See Yeats (1989)(1991) for detailed information on how the labor intensive industries were identified and an analysis of trade trends in these products.
Source: World Bank staff estimates.

sification (SIC), industries were ranked according to their R&D intensity and the first ten SIC groups (three-digit classification) were designated as high-tech industries. The industry ranked as number ten had an R&D index 30 percent greater than the industry in eleventh place and more than 100 percent above the average for the manufacturing sector as a whole. In other words, the methodology imposes much higher standards of R&D intensity than the "above average level" criteria often adopted in the literature.

In order to translate the United States SIC industry classification into a definition of high-tech trade, a concordance between SIC grouping and SITC Revision 1 was used. Given the imperfect match between SIC and SITC codes, high-tech weights (the proportion of U.S. high-tech imports and exports in each given SITC group, based on U.S. trade data from 1975 to 1977) were estimated as a way to highlight the relative importance of high-tech products in any given SITC grouping. In preparing data on high-tech trade, only those SITC groups (at four-digit level) that presented a high-tech weight greater than or equal to 50 percent were considered. Appendix table B3 identifies the high-tech products by SITC number and description and also shows the value of trade in these products for various years between 1968 and 1988.

The appropriateness of this methodology relies on the assumption that the use of United States input-

Appendix table B3 The identity and relative importance of individual products in international trade

SITC	Description	Share in all high-tech product exports (percent) 1968	1988	Value of exports in millions of U.S. dollars 1968	1973	1978	1983	1987	1988
714	Office machinery	8.6	18.4	2,279	7,235	15,071	34,408	77,857	93,168
724	Telecommunications apparatus	12.3	11.5	3,246	9,568	22,741	30,972	53,094	58,363
861	Scientific instruments	9.0	9.4	2,393	6,112	14,754	20,773	35,859	47,673
729.3	Transistors, photocell, etc.	3.1	8.7	819	3,987	8,458	17,838	33,997	44,288
734	Aircraft	13.5	7.9	3,558	6,298	14,079	24,831	32,633	39,967
581.2	Products of polymerization	5.9	7.6	1,549	4,814	10,706	16,594	20,600	38,742
711.5	Internal combustion engines	7.4	5.6	1,963	4,661	11,367	15,119	24,028	28,425
541	Medicinal products excluding pharmaceuticals	7.1	5.5	1,888	4,698	10,526	15,030	24,950	27,993
729.9	Electrical machinery and apparatus	3.2	3.5	847	2,590	6,421	8,323	15,165	17,836
891.1	Tape recorders	2.8	3.1	743	1,983	3,843	9,995	16,742	15,768
581.1	Plastics and products of condensation	3.2	2.4	840	2,210	4,710	7,063	13,549	12,303
513	Inorganic elements	3.8	2.3	1,000	2,585	5,823	8,596	10,435	11,468
711.4	Aircraft engines	4.1	2.2	1,082	1,898	3,036	4,912	9,603	11,226
862	Photographic supplies	2.4	2.1	625	1,532	3,840	5,933	9,600	10,516
891.2	Recorders of sound	0.8	1.9	206	642	1,756	4,168	8,716	9,794
651.6	Synthetic fibers	4.7	1.7	1,231	3,559	4,884	5,973	9,387	8,800
514	Other inorganic chemicals	2.5	1.3	649	1,324	3,014	4,249	6,043	6,730
515	Radioactive materials	0.3	1.0	85	489	3,005	3,971	5,348	5,192
711.6	Gas turbines	0.5	0.5	139	417	2,240	3,805	4,307	5,002
533.1	Coloring materials	0.6	0.5	162	387	742	1,016	2,265	2,620
541.9	Pharmaceutical goods	0.3	0.4	85	215	564	884	1,754	2,268
651.7	Yarn and artificial fibers	1.0	0.4	258	607	941	1,113	1,706	2,238
899.6	Orthopedic appliances	0.2	0.4	43	148	532	811	1,349	1,998
561.3	Potassic fertilizers	1.1	0.3	292	432	861	1,204	1,220	1,647
711.8	Engines, nes	0.4	0.3	113	274	540	815	1,198	1,468
711.3	Steam engines	0.9	0.2	231	486	1,206	1,267	1,229	1,201
894.3	Nonmilitary arms	0.2	0.1	61	158	239	241	323	333
571.4	Hunting and sporting ammunition	0.1	..	32	74	155	145	358	237
571.2	Fuses and detonators	..	..	18	34	95	88	151	153
729.7	Electron accelerators	..	..	12	15	37	52	77	84
	Memo item								
	High-tech as a share of all manufactures exports (percent)			21.0	21.4	21.5	25.6	27.2	28.6

.. Negligible.

Source: Braga and Yeats (1992).

output relations and trade patterns for high-tech production does not introduce a perverse bias in the classification.

Defining hard core nontariff measures

Although measures showing the frequency of nontariff barrier use, or the value of trade they cover, do not provide information that can be used for simulating economic effects of nontariff barriers, these indices are useful for identifying sectors that are subject to these measures. However, a problem that must be resolved before these indices are derived is to determine which specific nontariff measures will be included in their calculation. One potential approach is to utilize all entries that are included in an inventory (such as that maintained by UNCTAD and used in this report), but there are acknowledged problems with such a line of analysis. One difficulty is that it would include measures like health and sanitary requirements or automatic import authorization systems that often have no, or relatively unimportant, trade effects. That being so, indexes of nontariff barrier frequency or trade coverage that included such measures could well overstate the importance of nontariff barriers.

In recognition of the potential problems, a more selective approach has been employed in this report. This approach recognizes that measures of certain types , like quotas or variable import levies, are normally imposed with the specific intent of modifying or restricting international trade. These hard core nontariff measures are frequently defined to include the following: variable import levies and other similar product-specific charges; nonautomatic import authorization requirements such as restrictive licensing regulations; "voluntary" export restraints for both prices and quantities; trade restrictions negotiated under the Multi Fibre Arrangement (MFA); prohibitions; and various quantitative restrictions such as global and bilateral quotas. Since the present report is primarily concerned with trade effects, the empirical analyses focuses on these hard core restrictions. Measures like health and sanitary regulations, packaging and labelling requirements, or technical standards, all of which can be applied in ways that restrict trade, are excluded from the analysis.[5]

Notes

1. The lack of precision in the term "considerable change" is apparently a reason why lightly processed agricultural and mineral products in SITC 2 (shaped wood, hides and skins, woodpulp, etc.) are excluded from some definitions of manufactures. These items are subjectively judged not to have undergone sufficient processing (transformation) to differentiate them from their raw form. Similarly, some products classified in SITC 68 (nonferrous metals) are only lightly processed above their raw ore form and this caused the whole two-digit group to be dropped from some definitions of manufactures. The degree of processing is a crucial element in distinguishing commodities from manufactures, but various defects in SITC based product classification make it difficult to apply this standard objectively.

2. This report focuses on the distinction between manufactures and other types of physical goods, but it should be noted that the distinction between some manufactures and service industry outputs may be equally blurred. For example, some manufactures that are often made to order (like many machine tools or specialized semiconductors) could be considered services as a large part of the final purchase price resides in the specialized design. Indeed, if the design is carried out separately it is a service; only if it is carried out by the same enterprise that produces the final good is it a manufacture.

3. For example, (human) consumable alcoholic beverages falling in SITC 112 are excluded from World Bank and UNCTAD definitions of manufactures (appendix table B1) while industrial alcohols are included. Refined petroleum products (gasoline, lubricants, jet aviation fuels and kerosene) in SITC 332 are excluded while mineral tars and crude petroleum based chemicals (SITC 52) are included. Tobacco manufactures (SITC 12) along with petroleum refining, which are among the most capital intensive sectors in the United States, are also excluded. Yeats (1991) provides empirical evidence on the influence of these different definitions for tabulations of international trade in manufactured goods.

4. The factor intensity index for industry j (L_j) is defined as follows:

$$L_j = (V_j \div N_j)/(V_t \div N_t) \times 100$$

where V_j *and* V_t represent value added in industry j and all United States manufacturing respectively, while N_j and N_t represent the number of workers in the industry and in all manufacturing activity. There is an inverse relation between the numeric value of the index and the labor intensity of a given product. That is, the lower the numeric value of the index the higher the labor intensity of the product. It also follows that products with very high index values are capital intensive in production. The selection of items based on value added per employee in the United States was supplemented by detailed examination of manufactures imported by developed countries from their trading countries to see if additional products needed to be taken into account. On this basis, several items such as batteries,

lamps and miscellaneous manufactures were added to the labor intensive list since relative value added in other countries appeared below the United States average.

5. There is obviously an important element of judgment in defining hard core restrictions, and in some studies measure like tariff quotas, seasonal tariffs, and minimum import price regulations have been added to the group. Also, for some policy purposes inventory studies of measures not included in the hard core group may be important. For example, during the Kennedy and Tokyo Round Negotiations, efforts were made to achieve uniformity in national produce standards, technical regulations and certification systems for domestic and traded goods. Data drawn from GATT and UNCTAD nontariff measure inventories played a key role in negotiating a code of conduct for these measures in the Tokyo Round.

Appendix C: Description of the SMART *trade projection model used to simulate the effects of a 30 and 50 percent liberalization of nontariff barriers and tariffs*

A reduction in tariff barriers discussed in this report could improve the export performance of developing countries. The model described here looks at the likely effect of a reduction in both tariff and nontariff barriers. The results are set out in appendix tables C1 and C2.

The model

The model used for this report's trade liberalization projections is described in UNCTAD/World Bank (1989). It is a partial equilibrium model of the same type as that used by Cline (1978) in evaluating the Tokyo Round.[1] Two reduced form equations are estimated to calculate trade creation and trade diversion separately for each market at the most detailed tariff-line level.

Trade creation is the increase in imports due to lower prices as a consequence of reduced protection. Trade diversion, on the other hand, does not increase total trade, but leads to substitution among suppliers. The summation of trade creation and trade diversion gives the total trade expansion effect.

In the MFN-based liberalization analyzed in this report, exporters who previously enjoyed preferences suffer an erosion in them, while those who had no preferential access make a gain. In other words, trade is diverted toward those suppliers experiencing only MFN treatment. The preference margins of developing countries—for example, the African Caribbean, and Pacific (ACP) countries of the Lomé Convention, the Generalized System of Preferences (GSP) and other special schemes—are eroded on products where they are applied and this may dampen the gains connected with the overall MFN liberalization.

Elasticities

The key inputs to the model—besides trade flows, tariffs, preferences and the existence of nontariff barriers—are the three elasticities used. These are as follows: (a) import (price) demand elasticities, (b) supply elasticities, and (c) the cross (price) elasticities of substitution.

Import demand elasticities. For these, the best available estimates were used.[2] This was not a consistent series in terms of estimation methods and the market and specific years they pertained to. Despite these shortcomings, they broadly reflect the differences across products and are a better alternative than the use of simple assumptions.

Supply elasticities. These were assumed to be infinite in the projections across the board. As long as increases in exports are incremental, this is a valid assumption. For large increases, especially in the case of small countries, this is obviously not realistic.

Cross-elasticity of substition. This is a critical input that determines the scope of trade diversion. This elasticity was assumed to be 1.5 for all products. Estimates of this elasticity are extremely sparse, and in any case, as any estimate is specific to the product and the pairs of countries (or groups of countries) in question, there are a large number of combinations. This value was based on a survey by Cline (1978).

The treatment of nontariff barriers

Various technical problems prevent direct estimation of nominal equivalents for many nontariff barriers that are applied in developed country markets. This report used several compendia, including IMF (1984) and Laird and Yeats (1990), to compile as much information as possible on the ad-valorem equivalence of these measures, and these data were employed in the projections. Two points should be noted. The liberalization simulations understate the effects of nontariff barriers because only partial information on their incidence is available. Also, some of the estimates that were available may have fairly wide margins of error due to technical difficulties in deriving these data.

Time horizon

A static model measures the effect of an exogenous change—in this case a preferential liberalization—resulting from shorter term adjustments. These adjustments typically exclude installments of new capacity and x-efficiency gains. It is customary to assume that the time horizon for these shorter term adjustments is not much longer than one to three years.

Shortcomings of the simulation

The following shortcomings of the simulation model used should be borne in mind while interpreting the results:

- The model is a partial equilibrium model, omitting economy-wide interactions through production factors.
- It is a static framework, excluding investment, capital accumulation, technological changes.
- Because it is a static model, it provides a shorter term analysis.
- The crucial elasticities used are rough estimates.

In spite of these limitations, national and international organizations have widely used such models for analyzing the first round effects of a trade liberalization. The World Bank and UNCTAD have worked jointly to make the model used in this study's simulations available to developing countries in order to quantify the effects of the Uruguay Round on their own exports.

Notes

1. See also IMF (1984) and Sapir and Baldwin (1983) for similar model applications. Page, Davenport, and Hewitt (1991) employ a similar model for analyzing preliminary Uruguay Round results.

2. See Cline (1978), Laird and Yeats (1986) and Stern (1975).

Appendix table C1 Estimated effects of a 50 percent liberalization in trade barriers by the EC, Japan, and the United States on imports from developing countries

SITC	Description	1988–89 EC, Japan and United States imports from developing countries (millions of U.S. dollars))	Average applied tariff [a] (percent) US	EEC	Japan	Major types of NTBs or other measures [b]	Projected developing country export expansion[c] Value (millions of U.S. dollars)	Increase (percent)	Percentage of total increase
0	Food and live animals	46,700	2	5	6	GQ,V,L,TQ,ID,OM,SR,AD,CD	5,100	10.9	10.2
1	Beverages and tobacco	2,560	11	..	15	HS,AD	200	7.8	0.4
2	Crude materials except fuels	31,805	..	..	..	MFA,HS,SR,GQ,L,S,AD	200	0.6	0.4
3	Mineral fuels	87,717	..	..	..	TQ,S,OM,L	2,100	2.4	4.2
4	Animal and vegetable oils	2,205	..	7	6	HS,V,L,ID,AD,CD	100	4.5	0.2
5	Chemicals	11,572	5	5	3	GQ,S,Q,AD,CD,VR	200	1.8	0.4
6	Manufactures classified by materials	56,161	5	6	4	BQ,TQ,MFA,L,SV,OM,AD,CD,VR	4,800	8.5	9.6
7	Machinery and transport	44,162	4	7	3	SV,L,GQ,AD,CD,VR	1,500	3.4	3.0
8	Miscellaneous manufactured items	57,918	9	8	9	S,MFA,SV,GQ,BQ,AD,CD,VR	35,800	61.8	1.6
	Clothing (SITC 84)	28,238					28,879	102.3	57.6
	Footwear (SITC 85)	6,799					2,144	31.5	4.3
	Miscellaneous goods (SITC 89)	13,121					2,243	17.1	4.5
	Other SITC 8 goods	9,760					2,534	26.0	5.1
	Total of above	340,800					50,000	14.7	100.0

.. Negligible.

a. Average applied tariff rate excluding the effects of any nontariff barriers.

b. Restrictions applied in whole of part to the SITC group. The key to symbols applied is as follows:

AD,CD = antidumping or countervailing duties;
BQ = bilateral quota;
GQ = global quotas;
HS = prohibitions due to health and sanitary reasons or regulations;
ID = import deposits;
L = import licensing;
MFA = Multifibre Arrangement;
OM = other price distorting measures;
Q = quotas (method unspecified) or bilateral quotas;
S = standards;
SV = surveillance;
SR = seasonal restrictions;
TQ = tariff quotas;
V,MP = variable levy or minimum import price restriction;
VR = "voluntary" export restraint.

c. Projections based on a 50 percent reduction in tariffs and available estimates of NTB ad valorem equivalents. Detailed projections have been run assuming infinitely elastic supply conditions.

Source: World Bank staff estimates. See text.

East Asia and Latin America would gain the most from industrial country liberalization

Appendix table C2 The estimated change in developing countries' exports under a 30 and 50 percent reduction in trade barriers in the EC, Japan, and the United States
(percent)

	Share of total expansion accounted for by major product groups[a]									*Projected export expansion*		
Region	*Food and feeds*	*Agricultural and raw materials*	*Energy products*	*All manu-factures*	*Chemicals*	*Transport and machinery*	*Clothing*	*Iron and steel*	*Textiles*	*30 percent liberalization (US$m)*	*50 percent liberalization (US$m)*	*Regional group*
East Asia	5.5	2.5	0.1	91.9	0.4	4.8	58.7	0.4	2.2	16,300	27,100	54.2
Eastern Europe	10.5	2.6	5.3	81.6	2.6	2.6	28.9	13.2	2.6	2,300	3,800	7.6
Latin America and Caribbean	29.1	6.3	2.1	62.5	..	..	41.7	7.3	2.1	5,800	9,600	19.2
Middle East and North Africa	3.8	..	27.0	69.2	..	..	65.4	..	..	1,600	2,600	5.2
Other Europe	50.0	..	..	50.0	..	..	..	..	..	100	200	0.4
South Asia	2.2	..	..	97.8	..	..	91.1	..	6.7	2,700	4,500	9.0
Sub-Saharan Africa	13.6	0.1	4.5	81.8	4.5	4.5	31.8	22.7	..	1,300	2,200	4.4
All developing countries	10.6	2.0	3.2	84.2	0.6	3.0	54.8	3.8	2.4	30,000	50,000	100.0

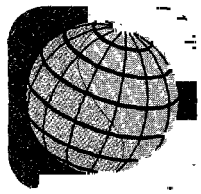
.. Negligible.

a. The following are the SITC Revision 1 codes for each of the product groups listed: foods and feed (0+1+22+4); agricultural and raw materials (2 less 22+28); energy products (3); chemicals (5); transport and machinery (7); clothing (84); iron and steel (67); textiles (65).

Note: The above projections are based on 30 to 50 percent cuts in applied tariffs and available estimates of nontariff barrier ad valorem equivalents.

Source: World Bank staff estimates based on SMART and COMTRADE data.

Appendix D: The former Soviet Union in the world economy



The former Soviet Union (FSU) accounts for about 5 percent of the world's population and almost 17 percent of its land area. Estimates of national income vary considerably, ranging from US$0.5 trillion to US$2.3 trillion; this places the FSU economy in the range of 2 percent to 9 percent of the global total. The FSU's share in world trade peaked in 1983 at 3.4 percent, and steadily declined thereafter to 1.8 percent in 1990 (approximately US$61 billion). About a quarter of FSU exports is manufactures. Oil and gas, iron and steel, gold, and armaments exports were its major foreign currency earners. The FSU is also an important importer of some primary commodities, particularly grains. In 1990, it accounted for 15 percent of world grain imports. Trade among the various republics is estimated to be about two and a half times greater than their collective trade with the rest of the world.

Preliminary information indicates that the fifteen economies of the FSU collectively experienced a contraction of 4 percent in net material product (NMP) during 1990, and a decline of about 14 percent in 1991. Officially declared price changes were negligible through 1988; they rose by 5 percent in 1989 and 8 percent in 1990. During 1991, retail prices rose by over 90 percent, services prices by 70 percent, and wholesale prices in industry by 250 percent. Central government revenues lagged behind expenditure, producing a budget deficit of about 20 percent of GNP.

Although complete data for 1991 have not been released, the fall in FSU foreign trade was dramatic; partial estimates suggest exports declined by between 30 and 40 percent and imports by between 40 and 50 percent. The first victims of this contraction were the East European (then CMEA) economies. By 1991, FSU exports to CMEA countries in current prices had declined to about 44 percent of their 1988 level and FSU imports to 49 percent. The FSU accounted for about 40 percent of exports of Eastern European countries in 1990, and was their major supplier of energy and other raw materials. The fall in FSU trade with former CMEA members was exacerbated by an agreement to settle payments in hard currencies and at world prices. Similarly affected were non-European CMEA members Cuba, Mongolia, and Vietnam. The collapse of CMEA trade, for instance, accounted for a large part of the 22 percent decline in Cuba's GDP between 1989 and 1991.

Several of the FSU's trading partners outside the CMEA were affected by the FSU's collapse. These countries included Angola, Cambodia, China, India, and Nicaragua. India's experience is representative. Its major exports to the FSU comprised agricultural products (40 percent) and chemical and engineering goods (20 percent each). In the 1980s, more than 90 percent of Indian knitwear went to the FSU. India's imports from the FSU included mainly arms, oil and petroleum products (about 60 percent of the rupee import bill), and machinery and equipment (about 30 percent). About 60 percent of India's total middle distillate imports between 1977 and 1991 came from the FSU. According to one estimate, crude oil and petroleum products that were to be imported in 1991 under the Trade Plan would save India about US$1 billion in convertible currency.

Indian-FSU economic relations were based on a bilateral payments mechanism, circumventing hard currency constraints. Transactions under bilateral rupee payments arrangements accounted for about 18 percent of India's exports and 9 percent of its imports in the 1980s. Of these transactions, trade with the FSU accounted for between 80 and 90 percent. Although trade transactions were denominated in rupees, India's debts to the FSU were expressed in rubles. The civilian debt is estimated to be 900 million rubles. The exact amount of military debt incurred by India has not been published; according to one estimate, it now stands at about 10 billion rubles, and its servicing accounted on average for about 3.5 percent of India's total current receipts in the period between 1988 and 1990.

The external transactions of the FSU have been disrupted by the collapse of inter-republic trade. Future developments in both internal and external

trade will be shaped by macroeconomic and trade policies pursued by the newly independent states, the level of Western assistance, and the willingness of individual republics to cooperate with each other.

Revealed comparative advantage in inter-republic trade (in world prices in 1989) shows that three groups of republics may be identified: the least affected, the moderately affected, and the very badly affected. Azerbaijan, Kazakhstan, Russia, and Turkmenia fall into the least vulnerable group; Armenia, Georgia, Kirghizia, Tadzhikistan, and Ukraine, Uzbekistan, are likely to be moderately affected; Belorus, Moldavia, and three Baltic states fall into the most vulnerable group, at least, in the short run.

In the least affected group, Azerbaijan is an important exporter of oil, and Kazakhstan of oil, coal, and ferrous and nonferrous metals. Although Russia will clearly increase its foreign currency earnings thanks to oil, gas, and nonferrous metals, its steel and machine producing industries may substantially contract as a result of falling demand from other republics. This may redirect their imports to Western partners.

In the moderately affected group, output will be disrupted unless they obtain external assistance and establish a system of multilateral clearing to facilitate trade among individual firms. Although both Ukraine and Kirghizia had a comparative advantage in heavy industry, they are also amply endowed with natural resources. The short-term negative effect of the collapse of the FSU on the other Asian economies may be compensated for by expansion of trade with Turkey, Iran, and Pakistan.

Independence will be an expensive proposition for Belorus, Moldavia, and the three Baltic states. They share similar characteristics. They all have substantial trade deficits with the rest of the FSU; they are all highly integrated into the FSU economy; and they all have partly subsidized personal incomes. With the exception of Estonia, they all had a large industrial base developed to meet the demands of the other republics.

The collapse of the FSU economy has had an effect on international commodity markets. International cocoa prices are estimated to have been depressed by 8 to 10 percent, and tea prices by 15 percent as a result of lower FSU demand. The termination of the special Soviet-Cuban "sugar-oil" relationship structurally changed world sugar trade and produced increased volatility and depressed prices. Raw cane sugar imports from Cuba will probably be replaced by sugar imports from India, Iran, Pakistan, or Turkey. In the short term, cotton prices will remain under pressure given the unusual volumes being bartered by the republics for goods. Similarly, the FSU became the focus of attention in international markets for minerals and metals because of the large increases in its exports in 1990 and 1991. These exports were a major factor in depressing prices of aluminum, gold, lead, nickel, and zinc.

Prospects for trade

In the short term, it appears that FSU exports to hard currency markets will be determined mainly by the following: the continued compression of domestic consumption; the diversion of exports away from Eastern European and other communist-bloc countries such as Cuba; the extent of strategic stocks remaining; and the ability of the FSU to maintain existing production facilities. The last-mentioned is most worrisome, given reports of energy supply shortages and shortfalls in domestic production of replacement parts for facilities that are in general disrepair and operating at a fraction of their nominal capacity.

It is expected that exports of petroleum will be maintained at close to recent levels but well below the peak levels of the 1980s. Domestic consumption of petroleum is expected to continue at lower levels in the FSU, particularly if there is a move towards international prices. Exports of natural gas present the most optimistic outlook; reductions in consumption, together with production near recent levels, means that exports can be expected to rise rapidly. Production and consumption of coal will probably decline significantly, but exports are such a small share of production that they are likely to be maintained near the levels of the 1980s.

Over the next decade, petroleum, natural gas, and metals and minerals appear to offer the best prospect for exports, although natural gas exports will be restrained by the capacity to transport the product and by foreign demand. In the longer run, if the market reforms are carried through, the trade patterns of the FSU will be basically determined by factor endowments. These vary substantially across republics, but in aggregate comprise the large agricultural land area, the large deposits of most minerals and metals and fuels, and the large number of people skilled in the basic sciences and in technical trades.

To take advantage of these huge endowments of natural resource will require investment in the modernization of existing facilities as well as in exploration, development, and greenfield plants. Choices may well have to be made between investments in energy, metals, and agriculture. Serious attention will have to be given to the market repercussions of these investments, especially in some of the base

metals (such as aluminum, copper, lead, and zinc) where prices can be significantly reduced by moderate increases in capacity.

In the next few years it is likely that the FSU will remain a major grain importer. In the long run there seems little doubt that it could emerge as a major grain exporter under the proper economic conditions. Many opportunities for increased productivity exist. Crop yields can be increased and yield variability decreased by adopting improved varieties from Europe and the United States. Greater output of livestock products can be obtained by improving the breeding stock and by improved feeding efficiency. More timely planting and harvesting is possible with better machinery and machinery maintenance, and better storage and grain handling would significantly reduce post-harvest losses.

FSU indebtedness and claims on developing countries

According to data made available by the Soviet Bank of Foreign Economic Affairs (Vneshekonombank, or VEB), as of the end of October 1991, the total external liabilities of the FSU were about $60.6 billion, including arrears (appendix table D1). This figure does not include unlicensed (i.e., illegal) debt of between three and five billion U.S. dollars or external liabilities to former socialist countries (including eastern Germany) and Finland, repayable in nonconvertible currencies. These liabilities are estimated at around US$29 billion. Recent quotes by the international press have put the external liabilities of the FSU at $83 billion but this figure includes future interest payments and also the foreign currency deposits of some public enterprises held by the VEB.

The currency composition of this debt, the breakdown between fixed and floating rate debt, and the amount of debt repayable on concessional terms are not known.

External claims of the FSU. Although the FSU is a moderately indebted country, it holds a substantial volume of claims on developing countries. According to data published by the FSU authorities, these amounted to around rubles 82 billion at end-1989. The largest claims are for the most part on countries that are not reporting to the World Bank's Debtor Reporting System (DRS). These include Cuba (rubles 15 billion), Mongolia (rubles 9 billion), Viet Nam (rubles 9 billion), Afghanistan (rubles 3 billion) and North Korea (rubles 2 billion). For those countries that do not report to the World Bank's DRS, the claims amounted to US$31.6 billion at end-1990 (when the ruble amounts are converted at the official rate of rubles 0.6 to the dollar) as compared with an estimated US$63.5 billion quoted by the FSU authorities for end-1989. Much of this discrepancy can be attributed to under-reporting to the DRS, particularly in respect of military debt for a few key countries like Algeria, India, Poland, and Yemen. It can also be attributed to exchange rates. Approximately one-half of the debt reported to the DRS is repayable in currencies other than rubles and how this has been accounted for in the data provided by the FSU authorities is currently not known.

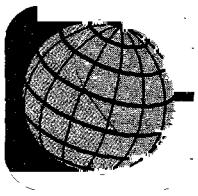
Appendix table D1 External debt of the FSU
(billions of U.S. dollars)

Type of Debt	*Amount*
Short term	8.4
of which, arrears	4.0
Medium and long term	52.2
Commercial banks (unguaranteed)	19.0
Suppliers credits	8.3
Official credits[a]	20.5
Bonds	1.7
Other	2.7
Total	60.6

a. Includes officially guaranteed bank credits.
Source: Vneshekonombank data.

Foreign Aid of the FSU. Foreign aid of the FSU was in large part military aid. In the period 1986–88, military aid to countries not in the communist bloc was five to six times the value of economic aid. Of noncommunist countries, India received the most economic aid in the 1986–88 period, with Afghanistan second, followed by Iraq and Syria. Iraq received the most in military aid, with India second.

Analysis has shown that for countries receiving economic aid, the level of aid was negatively correlated with their GDP/capita. While there was exclusivity in military aid vis-a-vis the United States, there was competition in economic aid with the United States for the same countries.



Appendix E: Statistical annex

Table E1 Exports of goods, 1990

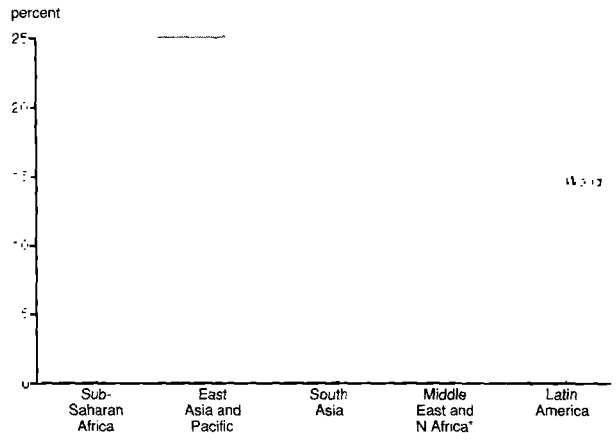
Merchandise exports, US $ millions; average annual growth rate1980-1990 (%); merchandise exports share of GDP (%)

	Exports	Growth	Share
Low-Income			
Afghanistan	..	..	..
Bangladesh	1,674	7.6	7.3
Benin	93	..	*6.4*
Bhutan	..	..	..
Burkina Faso	160	10.1	5.0
Burundi	75	-1.9	6.8
Cambodia	..	..	..
Central African Rep.	130	-1.3	10.0
Chad	200	..	18.1
China	62,091	11.0	17.0
Egypt, Arab Rep.	2,985	2.1	8.5
Ethiopia	297	-0.3	4.9
Ghana	739	3.8	11.8
Guinea	..	..	..
Haiti	138	*-12.4*	5.0
Honduras	916	2.4	33.5
India	17,967	6.5	6.3
Indonesia	25,553	2.8	23.8
Kenya	1,033	1.0	11.8
Lao PDR	..	..	..
Lesotho	..	..	..
Liberia	500	-2.7	..
Madagascar	335	-1.5	10.8
Malawi	412	4.3	22.1
Mali	347	9.9	14.2
Mauritania	468	3.8	44.5
Mozambique	..	..	..
Myanmar	322	-10.1	1.4
Nepal	*162*	..	*5.2*
Niger	435	4.3	17.2
Nigeria	13,671	-1.6	38.6
Pakistan	5,590	9.0	13.9
Rwanda	112	0.1	5.2
Sierra Leone	138	-1.4	15.4
Somalia	130	*-3.3*	13.9
Sri Lanka	1,984	6.8	24.4
Sudan	400	-0.9	4.7
Tanzania	300	*-7.4*	12.5
Togo	300	2.4	18.5
Uganda	151	*-1.9*	5.0
Viet Nam	..	..	..
Zaire	999	-11.2	13.3
Zambia	..	..	..

	Exports	Growth	Share
Lower middle-income			
Albania	..	..	..
Algeria	12,817	5.3	25.0
Angola	3,000	..	*35.0*
Argentina	12,353	1.4	11.7
Bolivia	923	1.4	20.6
Botswana	..	..	..
Bulgaria	..	..	..
Cameroon	1,200	-1.3	10.8
Chile	8,579	4.8	30.9
Colombia	6,766	10.6	16.5
Congo	1,130	5.9	39.4
Costa Rica	1,457	3.1	25.6
Côte d'Ivoire	2,600	2.7	26.2
Dominican Rep.	734	1.3	10.0
Ecuador	2,714	4.3	25.0
El Salvador	550	*-0.8*	10.2
Guatemala	1,211	-1.7	15.9
Iran, Islamic Rep.	15,000	21.1	12.6
Jamaica	1,347	0.6	34.0
Jordan	1,146	10.3	29.3
Lebanon	..	..	..
Malaysia	29,409	10.3	69.4
Mauritius	1,182	9.6	47.6
Mongolia	..	..	..
Morocco	4,210	5.4	16.7
Namibia	..	..	..
Nicaragua	379	*-5.3*	..
Panama	321	-0.3	6.8
Papua New Guinea	1,140	6.2	34.7
Paraguay	959	10.7	18.2
Peru	3,277	0.3	9.0
Philippines	8,681	2.5	19.8
Poland	13,627	3.0	21.4
Romania	..	..	..
Senegal	783	5.6	13.4
Syrian Arab Rep.	4,173	8.7	28.3
Thailand	23,002	13.2	28.7
Tunisia	3,517	4.9	28.1
Turkey	12,959	9.1	11.9
Yemen, Rep.	..	..	..
Zimbabwe	..	..	..

	Exports	Growth	Share
Upper middle-income			
Brazil	31,243	4.0	6.6
Czechoslovakia	17,950	..	40.4
Gabon	2,471	*1.4*	52.4
Greece	8,053	3.8	12.0
Hungary	9,588	5.5	29.1
Iraq	16,809	..	..
Korea	64,837	12.8	27.4
Libya	14,285	1.8	*41.4*
Mexico	26,714	3.4	11.2
Oman	458	..	..
Portugal	16,416	*11.7*	28.9
Saudi Arabia	31,065	-9.7	*34.3*
South Africa	23,612	1.7	23.3
Trinidad & Tobago	2,080	-3.7	40.8
Uruguay	1,696	3.2	20.6
Venezuela	17,220	1.8	35.7
Yugoslavia	14,365	0.1	16.3
High-income			
Australia	35,973	3.9	*11.4*
Austria	41,876	6.2	*25.7*
Belgium	118,002	4.7	*75.6*
Canada	125,056	5.9	*20.9*
Denmark	34,801	5.1	*26.4*
Finland	26,718	3.0	*20.1*
France	209,491	3.4	*18.0*
Germany	397,912	4.2	*28.6*
Hong Kong	29,002	*6.2*	41.4
Ireland	23,796	7.3	*61.0*
Israel	12,047	7.5	22.6
Italy	168,523	3.5	*16.2*
Japan	286,768	4.2	*9.6*
Kuwait	8,300	*-11.1*	*4.5*
Netherlands	131,479	4.4	*48.2*
New Zealand	9,045	3.4	*20.6*
Norway	34,072	7.2	*30.0*
Singapore	52,627	8.6	*152.1*
Spain	55,607	7.4	*11.7*
Sweden	57,326	4.4	*27.1*
Switzerland	63,699	3.5	*29.0*
United Arab Emirates	..	..	..
United Kingdom	185,891	2.7	*18.3*
United States	371,466	3.3	*6.8*

Merchandise exports share of GDP, 1990



Annual growth of exports, 1980-90

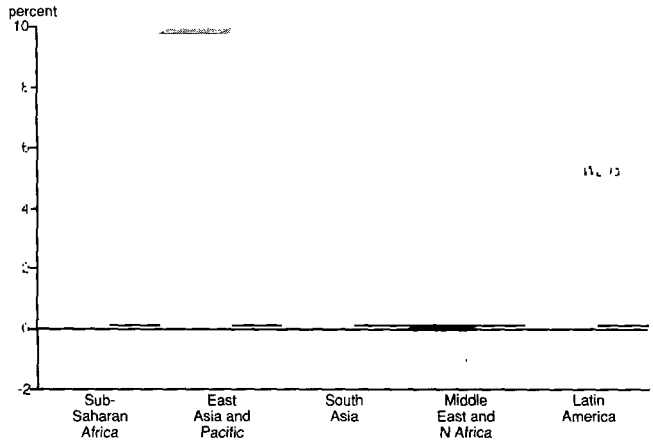


Table E2 Imports of goods, 1990

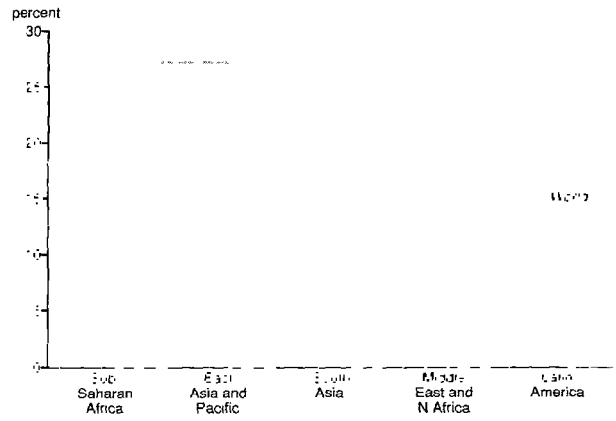
Merchandise imports, US $ millions; average annual growth rate 1980-1990 (%)

	Imports	Growth
Low-income		
Afghanistan	..	..
Bangladesh	3,646	8.0
Benin	483	..
Bhutan	..	..
Burkina Faso	480	1.0
Burundi	235	5.0
Cambodia	..	..
Central African Rep.	170	6.1
Chad	450	..
China	53,345	9.8
Egypt, Arab Rep.	10,340	-1.7
Ethiopia	1,081	4.2
Ghana	1,199	-0.1
Guinea	..	..
Haiti	272	*-6.2*
Honduras	1,028	-0.7
India	23,692	4.2
Indonesia	21,837	1.4
Kenya	2,124	1.6
Lao PDR	..	..
Lesotho	..	..
Liberia	450	-2.2
Madagascar	480	-0.4
Malawi	576	0.7
Mali	640	6.7
Mauritania	248	-5.1
Mozambique	..	..
Myanmar	270	-14.5
Nepal	*543*	..
Niger	230	-8.8
Nigeria	5,688	-15.1
Pakistan	7,377	4.0
Rwanda	279	11.4
Sierra Leone	146	-2.3
Somalia	360	*-4.3*
Sri Lanka	2,689	2.1
Sudan	600	-8.3
Tanzania	935	*-0.5*
Togo	700	1.4
Uganda	458	*3.2*
Viet Nam	..	..
Zaire	888	-4.0
Zambia	..	..

	Imports	Growth
Lower middle-income		
Albania	..	..
Algeria	9,605	-4.6
Angola	1,200	..
Argentina	4,077	-8.4
Bolivia	716	-2.4
Botswana	..	..
Bulgaria	..	..
Cameroon	1,300	-3.3
Chile	7,023	0.6
Colombia	5,590	-2.3
Congo	570	-3.1
Costa Rica	2,026	2.5
Côte d'Ivoire	2,100	-1.2
Dominican Rep.	2,057	3.5
Ecuador	1,862	-3.2
El Salvador	1,200	*-0.5*
Guatemala	1,626	-1.4
Iran, Islamic Rep.	13,000	8.0
Jamaica	1,685	1.1
Jordan	2,663	-0.5
Lebanon	..	..
Malaysia	29,251	5.6
Mauritius	1,616	11.2
Mongolia	..	..
Morocco	6,908	4.6
Namibia	..	..
Nicaragua	750	*-2.8*
Panama	1,539	-3.0
Papua New Guinea	1,288	2.6
Paraguay	1,113	1.5
Peru	3,230	-4.0
Philippines	13,080	2.3
Poland	9,781	1.2
Romania	..	..
Senegal	1,620	4.6
Syrian Arab Rep.	2,400	-8.3
Thailand	33,129	10.2
Tunisia	5,524	3.5
Turkey	22,300	7.0
Yemen, Rep.	..	..
Zimbabwe	1,851	..

	Imports	Growth
Upper middle-income		
Brazil	22,459	-0.3
Czechoslovakia	19,862	..
Gabon	760	*-1.8*
Greece	19,701	4.3
Hungary	8,646	1.3
Iraq	4,314	..
Korea	69,585	10.8
Libya	3,976	-10.4
Mexico	28,063	-1.1
Oman	2,608	..
Portugal	25,333	8.2
Saudi Arabia	24,069	*-10.0*
South Africa	18,258	-3.7
Trinidad & Tobago	1,262	-12.8
Uruguay	1,415	-1.1
Venezuela	6,364	-4.6
Yugoslavia	18,911	0.6
High-income		
Australia	39,740	4.7
Austria	49,960	5.2
Belgium	119,725	3.1
Canada	115,882	8.4
Denmark	31,562	4.2
Finland	27,098	4.7
France	232,525	3.2
Germany	341,248	3.9
Hong Kong	82,495	*11.0*
Ireland	20,716	3.6
Israel	15,197	4.7
Italy	176,153	4.2
Japan	231,223	5.6
Kuwait	4,800	*-5.7*
Netherlands	125,909	3.5
New Zealand	9,466	3.6
Norway	26,889	2.5
Singapore	60,647	6.7
Spain	87,487	9.0
Sweden	54,536	3.5
Switzerland	69,427	3.8
United Arab Emirates	..	..
United Kingdom	224,914	4.9
United States	515,635	7.6

Merchandise imports share of GDP, 1990



Annual growth of imports, 1980-90

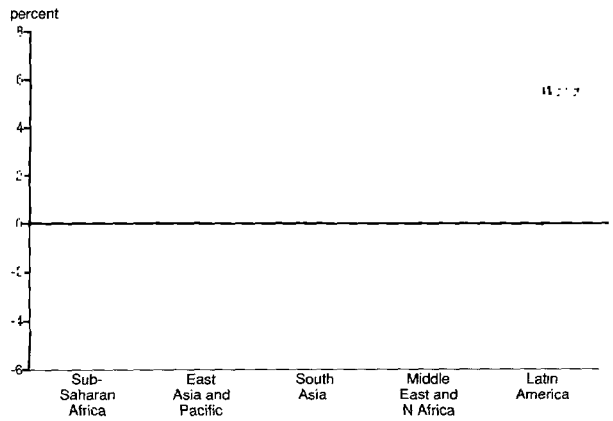


Table E3 Foreign direct investment, 1990

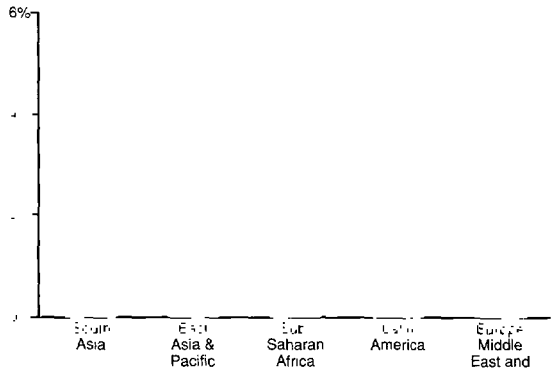
Net inflows of foreign direct investment (FDI), US$ millions; FDI share of gross domestic investment (GDI) (%)

	FDI	Share
Low-income		
Afghanistan	..	..
Bangladesh	3	0
Benin	0	..
Bhutan	0	..
Burkina Faso	0	0
Burundi	1	0.6
Cambodia	..	..
Central African Rep.	0	0
Chad	0	0
China	3,489	2.5
Egypt, Arab Rep.	947	11.6
Ethiopia	0	..
Ghana	15	1.6
Guinea	0	0
Haiti	8	2.7
Honduras	0	0
India	0	0
Indonesia	964	2.5
Kenya	26	1.2
Lao PDR	0	0
Lesotho	17	4.3
Liberia	0	..
Madagascar	0	0
Malawi	0	0
Mali	-1	0
Mauritania	0	0
Mozambique	0	0
Myanmar	0	0
Nepal	0	0
Niger	0	0
Nigeria	588	11.3
Pakistan	249	3.3
Rwanda	8	2.9
Sierra Leone	0	0
Somalia	0	0
Sri Lanka	31	1.7
Sudan	0	0
Tanzania	0	..
Togo	0	0
Uganda	0	0
Viet Nam	..	..
Zaire	0	0
Zambia	0	0

	FDI	Share
Lower middle-income		
Albania	..	..
Algeria	0	0
Angola	0	..
Argentina	2,036	22.9
Bolivia	45	8.8
Botswana	148	*16.4*
Bulgaria	0	0
Cameroon	0	0
Chile	595	10.6
Colombia	501	6.4
Congo	0	0
Costa Rica	111	6.7
Côte d'Ivoire	-48	-4.9
Dominican Rep.	133	13.1
Ecuador	82	3.9
El Salvador	0	0
Guatemala	0	0
Iran, Islamic Rep.	0	0
Jamaica	0	0
Jordan	0	0
Lebanon	0	..
Malaysia	2,902	20.4
Mauritius	41	5.5
Mongolia	..	..
Morocco	165	2.6
Namibia	..	..
Nicaragua	0	..
Panama	-30	-3.9
Papua New Guinea	0	0
Paraguay	79	6.8
Peru	34	0.4
Philippines	530	5.6
Poland	89	0.5
Romania	0	0
Senegal	0	0
Syrian Arab Rep.	0	0
Thailand	2,376	8.1
Tunisia	58	1.8
Turkey	697	2.8
Yemen, Rep.	0	0
Zimbabwe	0	0

	FDI	Share
Upper middle-income		
Brazil	1,340	1.3
Czechoslovakia	207	1.6
Gabon	-50	-5.6
Greece	*752*	*7.1*
Hungary	0	0
Iraq	..	..
Korea	715	0.8
Libya	159	..
Mexico	2,632	5.6
Oman	144	..
Portugal	2,123	11.9
Saudi Arabia	*-312*	*-1.8*
South Africa	-5	0.0
Trinidad & Tobago	109	12.9
Uruguay	3	0.3
Venezuela	451	10.1
Yugoslavia	0	0
High-income		
Australia	7,086	*10.0*
Austria	1,008	*2.6*
Belgium	..	..
Canada	5,943	*3.5*
Denmark	1,212	*5.5*
Finland	979	*1.5*
France	12,733	*5.0*
Germany	1,430	*2.6*
Hong Kong	..	..
Ireland	100	*1.4*
Israel	129	1.3
Italy	6,413	*1.4*
Japan	1,760	*-0.1*
Kuwait	..	..
Netherlands	8,017	*18.1*
New Zealand	229	*8.0*
Norway	821	*6.8*
Singapore	4,808	35.9
Spain	13,841	*8.8*
Sweden	2,331	*3.5*
Switzerland	4,925	*5.4*
United Arab Emirates	..	..
United Kingdom	33,392	*16.6*
United States	37,190	*8.0*

Ratio of FDI to GDI, 1990



Net inflows of FDI, 1990

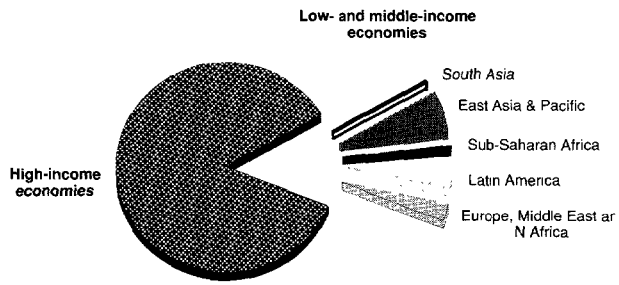
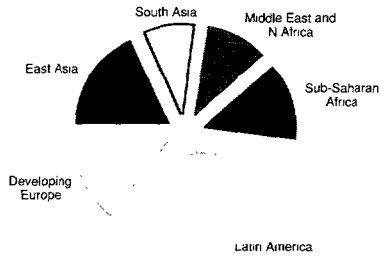


Table E4 External financing ratios, 1990

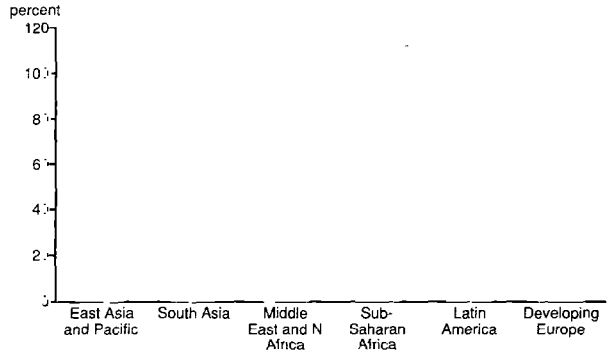
Total debt outstanding and disbursed (DOD) as a share of GNP (%); aggregate net transfers (ANT) as share of GNP (%)

	DOD/GNP	ANT/GNP
Low-income		
Afghanistan	..	..
Bangladesh	53.8	7.0
Benin	*78.9*	*16.8*
Bhutan	32.3	11.2
Burkina Faso	26.4	7.0
Burundi	83.2	18.0
Cambodia	..	..
Central African Rep.	70.6	15.2
Chad	44.8	24.4
China	14.4	2.1
Egypt, Arab Rep.	126.6	14.5
Ethiopia	54.2	11.3
Ghana	56.8	10.5
Guinea	97.6	7.9
Haiti	36.1	4.7
Honduras	140.9	7.7
India	25.0	0.1
Indonesia	66.4	1.2
Kenya	81.2	12.0
Lao PDR	123.3	18.8
Lesotho	39.6	10.5
Liberia	..	..
Madagascar	134.1	13.0
Malawi	85.6	17.3
Mali	100.7	12.2
Mauritania	226.6	13.8
Mozambique	384.5	74.1
Myanmar	21.1	0.6
Nepal	53.0	8.8
Niger	73.6	12.6
Nigeria	110.9	-5.1
Pakistan	52.1	2.5
Rwanda	35.0	9.8
Sierra Leone	146.2	9.6
Somalia	276.9	40.1
Sri Lanka	73.2	5.1
Sudan	186.2	7.7
Tanzania	281.9	43.4
Togo	81.8	6.2
Uganda	92.1	17.0
Viet Nam	..	..
Zaire	141.0	5.5
Zambia	261.3	23.1
Lower middle-income		
Albania	..	..
Algeria	53.1	-5.1
Angola	*115.2*	*6.2*
Argentina	61.5	-1.7
Bolivia	100.9	4.5
Botswana	20.6	-5.3
Bulgaria	56.9	-4.4
Cameroon	56.8	7.0
Chile	73.5	1.9
Colombia	44.5	-5.1
Congo	203.6	-2.3
Costa Rica	69.9	-1.1
Côte d'Ivoire	204.8	8.6
Dominican Rep.	62.9	2.1
Ecuador	120.7	-2.4
El Salvador	40.4	1.3
Guatemala	37.5	0.5
Iran, Islamic Rep.	7.6	-0.1
Jamaica	132.0	-4.1
Jordan	221.1	12.4
Lebanon	..	..
Malaysia	48.0	-1.0
Mauritius	37.9	3.9
Mongolia	..	..
Morocco	97.1	1.2
Namibia	..	..
Nicaragua	..	..
Panama	154.7	-2.3
Papua New Guinea	83.3	6.7
Paraguay	40.5	-0.8
Peru	58.7	0.5
Philippines	69.3	1.8
Poland	82.0	-0.4
Romania	1.1	0.1
Senegal	66.5	8.5
Syrian Arab Rep.	118.1	-3.1
Thailand	32.6	0.6
Tunisia	62.2	-1.4
Turkey	46.1	-0.3
Yemen, Rep.	97.1	6.8
Zimbabwe	54.1	3.5
Upper middle-income		
Brazil	25.1	-0.8
Czechoslovakia	18.6	1.6
Gabon	80.4	-1.0
Greece	..	..
Hungary	67.8	-4.0
Iraq	..	..
Korea	14.4	-0.9
Libya	..	..
Mexico	42.1	0.6
Oman	*39.0*	*-3.5*
Portugal	36.5	0.1
Saudi Arabia	..	..
South Africa	..	..
Trinidad & Tobago	50.8	-7.3
Uruguay	46.9	-4.1
Venezuela	71.0	-3.5
Yugoslavia	23.7	-2.2

Total debt outstanding and disbursed, 1990



Ratio of debt outstanding and disbursed to GNP, 1990



Ratio of aggregate net transfers to GNP, 1990

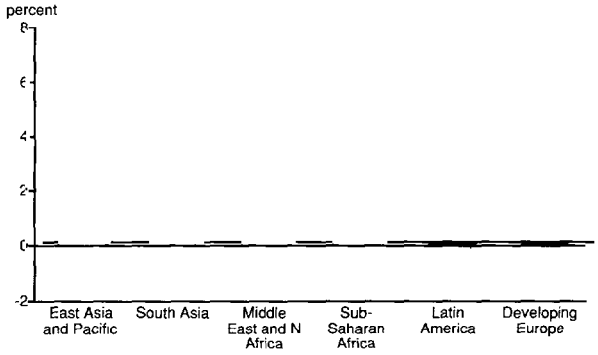
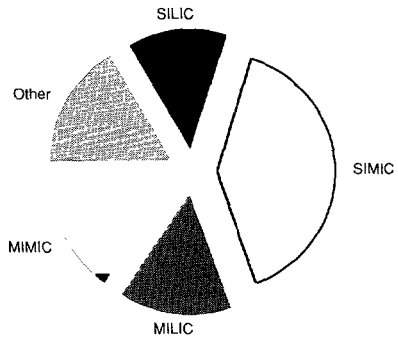


Table E5 Structure of long-term debt, 1990

Share of long-term debt (%): concessional debt; nonconcessional debt at variable interest rates; nonconcessional debt at fixed interest rates

	Concessional	Nonconcessional Variable	Nonconcessional Fixed
Low-income			
Afghanistan	..	..	..
Bangladesh	98	0	3
Benin	64	2	35
Bhutan	77	0	23
Burkina Faso	83	0	17
Burundi	93	0	7
Cambodia	..	..	..
Central African Rep.	87	0	13
Chad	88	0	12
China	21	36	42
Egypt, Arab Rep.	44	14	42
Ethiopia	87	3	10
Ghana	78	2	20
Guinea	72	8	20
Haiti	93	1	6
Honduras	43	20	37
India	43	19	37
Indonesia	34	41	25
Kenya	50	14	36
Lao PDR	99	0	1
Lesotho	79	0	21
Liberia	53	11	37
Madagascar	57	6	36
Malawi	82	4	14
Mali	97	0	3
Mauritania	80	6	14
Mozambique	65	5	30
Myanmar	92	0	8
Nepal	93	0	7
Niger	52	24	24
Nigeria	2	35	63
Pakistan	73	13	14
Rwanda	99	0	1
Sierra Leone	57	1	42
Somalia	81	1	18
Sri Lanka	83	5	12
Sudan	46	20	33
Tanzania	68	5	28
Togo	66	3	31
Uganda	68	2	30
Viet Nam	..	..	..
Zaire	35	16	50
Zambia	45	14	41
Lower middle-income			
Albania	..	..	..
Algeria	4	38	59
Angola	33	7	60
Argentina	0	81	19
Bolivia	49	24	27
Botswana	36	14	49
Bulgaria	0	74	26
Cameroon	29	16	55
Chile	3	76	21
Colombia	7	49	44
Congo	38	29	33
Costa Rica	26	31	43
Côte d'Ivoire	15	66	19
Dominican Rep.	35	31	34
Ecuador	9	62	29
El Salvador	64	10	26
Guatemala	29	17	54
Iran, Islamic Rep.	6	71	23
Jamaica	34	26	41
Jordan	40	25	36
Lebanon	24	10	66
Malaysia	13	53	34
Mauritius	40	32	28
Mongolia	..	..	..
Morocco	35	46	20
Namibia	..	..	..
Nicaragua	37	23	40
Panama	10	58	32
Papua New Guinea	25	56	20
Paraguay	33	18	49
Peru	13	39	48
Philippines	28	43	29
Poland	4	67	29
Romania	100	0	0
Senegal	66	5	30
Syrian Arab Rep.	88	0	12
Thailand	24	46	30
Tunisia	43	22	35
Turkey	19	34	47
Yemen, Rep.	93	2	6
Zimbabwe	37	26	38
Upper middle-income			
Brazil	3	72	25
Czechoslovakia	0	27	73
Gabon	28	10	62
Greece	..	..	..
Hungary	0	60	40
Iraq	..	..	..
Korea	19	41	40
Libya	..	..	..
Mexico	2	49	49
Oman	11	54	34
Portugal	7	33	61
Saudi Arabia	..	..	..
South Africa	..	..	..
Trinidad & Tobago	4	47	49
Uruguay	2	75	23
Venezuela	0	62	38
Yugoslavia	6	74	21

Long-term debt outstanding and disbursed, 1990



SILIC -- Severely indebted low-income
SIMIC -- Severely indebted middle-income
MILIC -- Moderately indebted low-income
MIMIC -- Moderately indebted middle-income

Structure of long-term debt, 1990

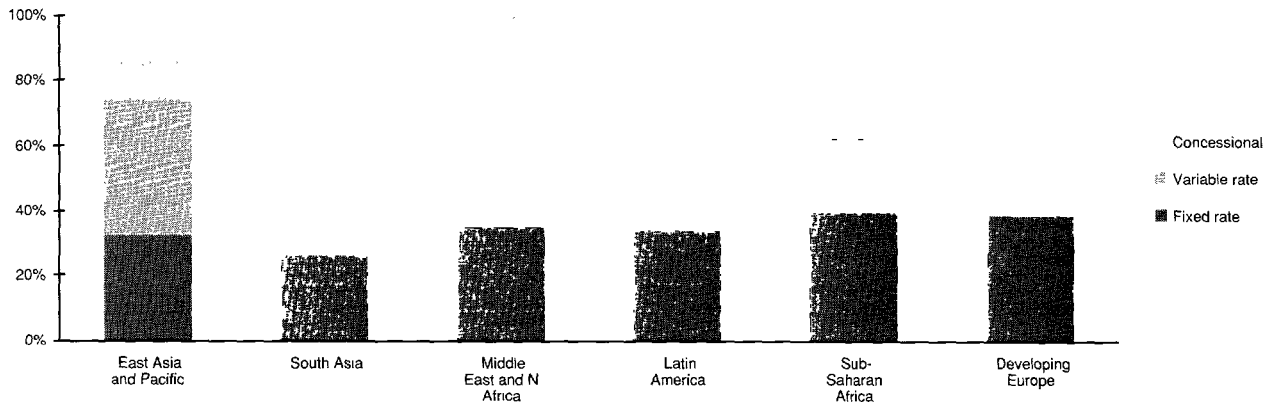


Table E6 Terms of trade, 1990

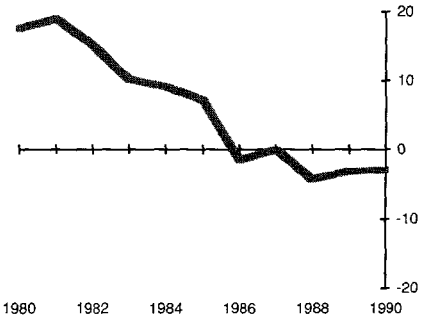
Barter terms of trade index, 1987=100; ratio of terms of trade effect to GNY in constant 1987 prices (%)

	Index	Ratio
Low-income		
Afghanistan	..	..
Bangladesh	95	-0.3
Benin	..	..
Bhutan	..	..
Burkina Faso	100	0.0
Burundi	70	-2.1
Cambodia	..	..
Central African Rep.	109	0.8
Chad	..	..
China	111	1.4
Egypt, Arab Rep.	76	-1.7
Ethiopia	84	-0.9
Ghana	75	-3.8
Guinea	..	..
Haiti	*97*	*-0.2*
Honduras	104	0.7
India	96	-0.2
Indonesia	111	2.5
Kenya	103	0.3
Lao PDR	..	..
Lesotho	..	..
Liberia	111	..
Madagascar	102	0.3
Malawi	93	-1.9
Mali	97	-0.4
Mauritania	107	3.1
Mozambique	..	..
Myanmar	127	0.6
Nepal	..	..
Niger	77	-4.9
Nigeria	100	0.1
Pakistan	95	-0.8
Rwanda	98	-0.1
Sierra Leone	80	-7.1
Somalia	*111*	*1.8*
Sri Lanka	90	-2.3
Sudan	100	0.0
Tanzania	*108*	*0.7*
Togo	*114*	*2.5*
Uganda	88	-0.8
Viet Nam	..	..
Zaire	163	5.1
Zambia	..	..

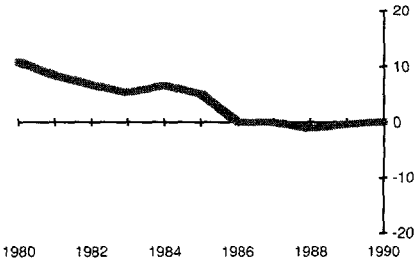
	Index	Ratio
Lower middle-income		
Albania	..	..
Algeria	99	-0.2
Angola	..	..
Argentina	112	1.5
Bolivia	97	-0.5
Botswana	..	..
Bulgaria	..	..
Cameroon	91	-0.8
Chile	131	7.6
Colombia	92	-1.5
Congo	99	-0.6
Costa Rica	114	3.3
Côte d'Ivoire	80	-6.8
Dominican Rep.	98	-0.2
Ecuador	109	1.8
El Salvador	114	1.2
Guatemala	*102*	*0.3*
Iran, Islamic Rep.	72	-3.9
Jamaica	88	-5.2
Jordan	112	2.3
Lebanon	..	..
Malaysia	94	-4.1
Mauritius	114	5.6
Mongolia	..	..
Morocco	86	-2.7
Namibia	..	..
Nicaragua	110	1.1
Panama	*138*	*2.3*
Papua New Guinea	75	-12.5
Paraguay	110	1.5
Peru	78	-2.9
Philippines	93	-1.5
Poland	103	0.9
Romania	..	..
Senegal	106	0.7
Syrian Arab Rep.	87	-3.5
Thailand	99	-0.4
Tunisia	99	-0.3
Turkey	98	-0.3
Yemen, Rep.	..	..
Zimbabwe	..	..

	Index	Ratio
Upper middle-income		
Brazil	123	1.9
Czechoslovakia	..	..
Gabon	*96*	*-1.9*
Greece	105	0.6
Hungary	87	-6.9
Iraq	..	..
Korea	108	2.4
Libya	97	-3.6
Mexico	110	1.4
Oman	..	..
Portugal	*105*	*1.5*
Saudi Arabia	95	-2.4
South Africa	93	-2.2
Trinidad & Tobago	110	4.2
Uruguay	104	0.8
Venezuela	164	14.8
Yugoslavia	121	3.6

Middle East and North Africa

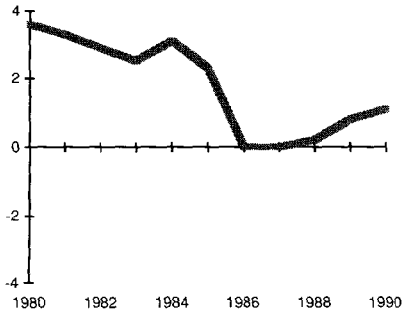


Sub-Saharan Africa



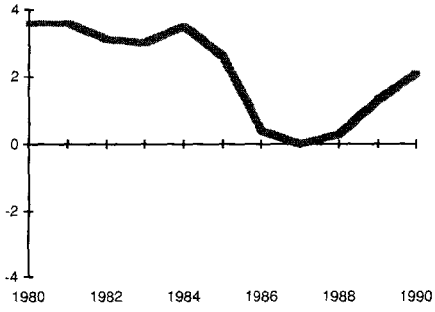
Terms of trade effect as percentage of GNY, 1980-90
1987 = 0 (Note differences in scale)

East Asia and Pacific



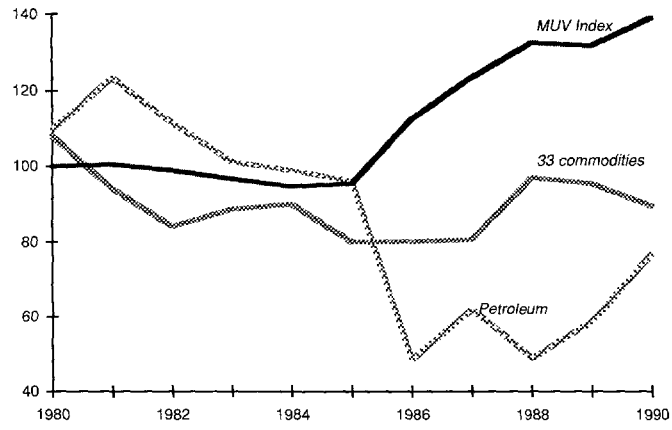
South Asia

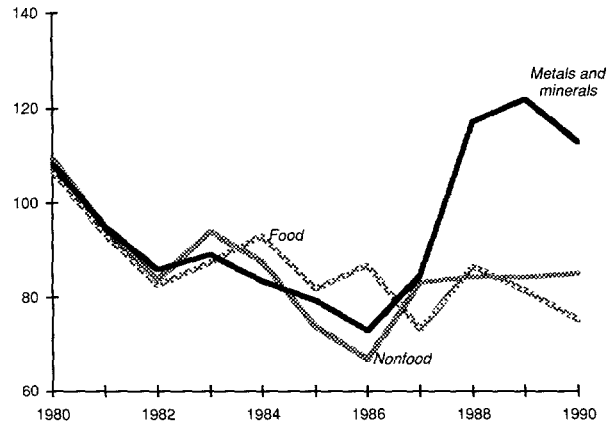
Latin America



		1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
G-5 unit value index of manufactures 1/		100	100	99	97	95	95	112	123	132	132	139
LIBOR 2/		14	17	14	10	11	9	7	7	8	9	8
Commodity price indexes 3/	weights											
Petroleum		110	123	112	101	99	96	49	62	49	59	77
33 commodities excl. energy		108	94	84	89	90	80	80	81	97	95	89
Agriculture	67.7%	107	94	83	89	92	80	83	75	86	82	77
Food	53.2%	107	93	83	87	93	82	87	73	87	81	75
Nonfood	14.4%	109	95	84	94	88	74	67	83	84	84	85
Timber	5.2%	113	90	90	84	96	78	87	128	134	129	121
Metals and minerals	27.1%	108	95	86	89	83	79	73	85	117	122	113
Commodity prices	units											
Agriculture												
Cocoa	cents/kg	260	208	174	212	240	225	207	199	159	124	127
Coffee	cents/kg	347	287	309	291	319	323	429	251	303	239	197
Tea	cents/kg	223	202	193	233	346	198	193	171	179	202	203
Sugar	cents/kg	63	37	19	19	12	9	13	15	23	28	28
Banana	$/mt	379	401	374	429	370	380	382	365	478	547	541
Rice	$/mt	434	483	293	277	252	216	211	230	301	320	287
Palm oil	$/mt	584	571	445	501	729	501	257	343	437	350	290
Soybean oil	$/mt	597	507	447	527	724	572	342	334	463	432	447
Cotton	cents/kg	205	185	160	185	179	132	106	165	140	167	182
Rubber	cents/kg	162	125	100	124	110	92	95	112	129	112	102
Other												
Logs	$/cm	196	156	156	145	167	136	151	221	234	225	210
Sawnwood	$/cm	365	314	302	304	307	276	266	276	307	422	524
Urea	$/mt	222	216	159	135	171	136	107	117	155	132	157
Metals and minerals												
Copper	$/mt	2,182	1,742	1,480	1,592	1,377	1,417	1,374	1,783	2,602	2,848	2,662
Aluminum	$/mt	1,456	1,263	992	1,439	1,251	1,041	1,150	1,565	2,551	1,951	1,639
Phosphate rock	$/mt	47	50	42	37	38	34	34	31	36	41	41
Steel products index (1979-81=100)		101	104	89	83	88	75	78	91	120	133	127
Energy												
Crude petroleum	$/bbl	31	34	31	28	28	27	14	17	14	16	21
Coal	$/mt	43	57	52	45	49	47	44	36	37	41	42

Primary commodity price indexes (1979-81 = 100)





Notes

1/ Unit Value Index (MUV index) in US dollar terms (1980=100) of manufactures exported from the G-5 countries (France, Germany, Japan, UK, and US), weighted by the countries' exports to developing countries.

2/ London interbank offered rate on six-month US dollar deposits.

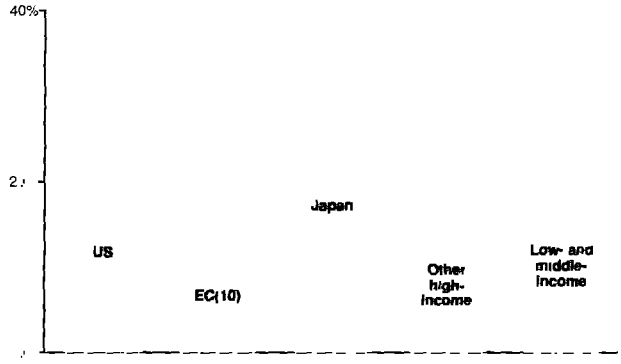
3/ Indexes are in current US dollar terms (1979-81=100); 33 commodity price index is weighted by developing country export values.

Table E8 Direction of merchandise trade, 1990

Percentage of world trade

From: / To:	High-income countries					Low- and middle-income countries 2/							All
	USA	EC(10)	Japan	Other HIC	All HIC	East Asia	South Asia	Europe	MENA	SSA	LAC	All LMICs	
All high-income	11.4	35.4	3.9	15.4	66.1	4.8	0.8	3.7	2.3	1.3	3.0	15.9	82.0
USA	..	2.9	1.5	4.1	8.6	1.0	0.1	0.3	0.3	0.1	1.6	3.4	12.0
EC(10)	3.1	25.1	0.9	6.4	35.5	0.9	0.3	2.6	1.4	0.9	0.8	6.9	42.4
Japan	2.9	1.7	..	2.1	6.8	1.5	0.1	0.2	0.2	0.1	0.3	2.5	9.3
Other high-income	5.3	5.7	1.5	2.9	15.3	1.4	0.2	0.6	0.4	0.2	0.3	3.1	18.3
All LMICs 1/	3.5	5.4	2.0	2.9	13.9	0.8	0.3	1.5	0.5	0.3	0.8	4.1	18.0
East Asia & Pacific	1.3	0.9	1.4	2.0	5.7	0.5	0.1	0.2	0.1	0.1	0.1	1.1	6.9
South Asia	0.2	0.2	0.1	0.1	0.6	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.9
Latin America	1.3	0.8	0.2	0.2	2.6	0.1	0.0	0.1	0.1	0.0	0.5	0.9	3.5
All countries	14.9	40.9	5.8	18.3	80.0	5.5	1.1	5.2	2.9	1.6	3.8	20.0	100.0

Share of merchandise imports from low- and middle-income countries, 1990



Direction of merchandise exports, 1990

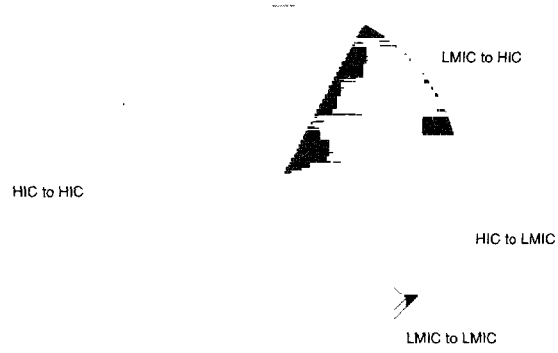


Table E9 Growth of merchandise trade, 1980-90

Average annual growth rate (%)

From: / To:	High-income countries					Low- and middle-income countries 2/							All
	USA	EC(10)	Japan	Other HIC	All HIC	East Asia	South Asia	Europe	MENA	SSA	LAC	All LMICs	
All high-income	7.5	5.3	6.6	5.4	5.8	5.9	2.5	2.2	-7.5	-5.5	-0.9	-0.5	4.3
USA	..	2.9	5.8	6.0	4.9	4.7	1.7	-0.5	-6.2	-7.6	0.6	0.1	3.3
EC(10)	6.2	5.2	13.2	4.6	5.4	7.6	3.6	3.5	-7.1	-4.8	-2.1	-1.2	4.0
Japan	7.8	8.7	..	5.2	7.1	4.5	0.6	-3.1	-12.6	-8.1	-4.1	-1.5	4.2
Other high-income	8.2	6.1	4.7	6.4	6.7	7.7	2.7	1.0	-5.6	-4.5	-1.9	1.5	5.7
All LMICs 1/	4.5	5.4	2.8	6.3	4.9	5.6	6.7	2.6	1.1	3.2	-1.9	2.2	4.1
East Asia and Pacific	12.1	11.1	6.8	10.9	10.0	11.7	11.3	8.1	4.4	6.6	4.3	8.7	9.8
South Asia	14.5	10.5	9.2	7.6	10.4	4.4	2.7	2.8	-3.7	-3.6	3.9	0.8	6.8
Latin America	5.3	3.3	5.1	3.2	4.4	12.1	1.0	-2.0	1.5	-2.4	-0.9	-0.1	3.0
All countries	6.6	5.3	5.1	5.6	5.6	5.9	3.6	2.3	-6.0	-4.2	-1.1	0.1	4.3

1/ Low- and middle-income countries: some regions not shown because of limited data availability.

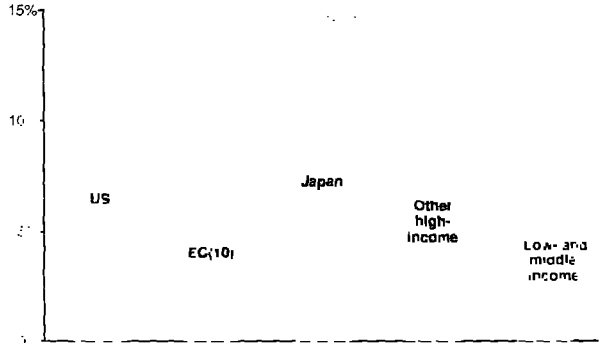
2/ HIC -- High-income countries; LMIC -- Low- and middle-income countries; MENA -- Middle East and North Africa; SSA -- Sub-Saharan Africa; LAC -- Latin America and Caribbean

Table E10 Direction of trade in manufactures, 1990

Percentage of world trade

From: \ To:	High-income countries					Low- and middle-income countries 2/							All
	USA	EC(10)	Japan	Other HIC	All HIC	East Asia	South Asia	Europe	MENA	SSA	LAC	All LMICs	
All high-income	13.0	36.9	3.0	17.5	70.4	5.1	0.8	3.9	2.5	1.5	3.4	17.2	87.6
USA	..	3.1	1.2	4.7	9.0	0.9	0.1	0.2	0.3	0.1	1.8	3.4	12.4
EC(10)	3.5	26.1	1.0	7.2	38.0	1.1	0.4	2.9	1.6	1.0	0.9	7.8	45.8
Japan	3.8	2.2	..	2.7	8.8	1.9	0.1	0.2	0.3	0.2	0.4	3.2	12.0
Other high-income	5.6	5.4	0.8	2.7	14.7	1.2	0.2	0.7	0.3	0.2	0.3	2.8	17.5
All LMICs 1/	2.6	3.0	1.0	2.6	9.3	0.5	0.2	1.2	0.4	0.3	0.5	3.1	12.4
East Asia and Pacific	1.5	0.9	0.8	2.1	5.3	0.4	0.1	0.1	0.1	0.1	0.1	0.9	6.2
South Asia	0.2	0.2	0.1	0.1	0.6	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.8
Latin America	0.7	0.3	0.1	0.1	1.2	0.1	0.0	0.0	0.0	0.0	0.4	0.6	1.7
All countries	15.6	40.0	4.0	20.1	79.7	5.6	1.0	5.1	2.9	1.7	3.9	20.3	100.0

Growth of manufactured imports from low- and middle-income countries, 1980-90



Growth of manufactured exports, 1980-90

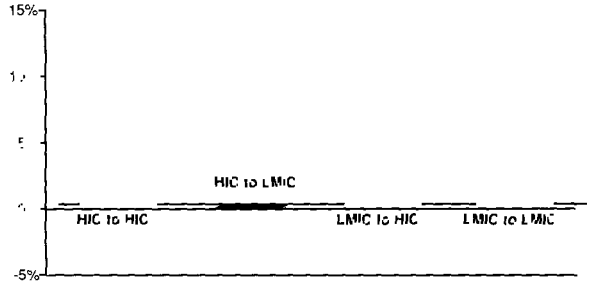


Table E11 Growth of trade in manufactures, 1980-90

Average annual growth rate (%)

From: \ To:	High-income countries					Low- and middle-income countries 2/							All
	USA	EC(10)	Japan	Other HIC	All HIC	East Asia	South Asia	Europe	MENA	SSA	LAC	All LMICs	
All high-income	7.7	6.0	10.7	5.3	6.3	6.7	3.1	2.3	-9.0	-6.2	-1.5	-1.0	4.5
USA	..	4.9	9.0	6.1	6.0	6.9	2.3	2.3	-9.5	-7.4	0.7	0.2	4.1
EC(10)	6.4	5.7	12.7	4.3	5.6	6.5	2.9	3.1	-8.3	-5.7	-3.4	-2.0	3.9
Japan	7.8	8.8	..	5.1	7.1	4.5	1.1	-3.1	-12.7	-8.0	-4.2	-1.6	4.2
Other high-income	8.5	7.3	11.4	6.5	7.7	11.4	6.8	1.6	-7.7	-5.8	-3.0	1.7	6.5
All LMICs 1/	13.0	8.1	14.5	10.9	10.6	13.4	6.1	2.7	-0.2	-4.6	1.5	2.3	7.6
East Asia & Pacific	14.6	12.8	14.8	11.4	13.1	13.6	8.3	10.0	2.3	5.2	11.3	8.6	12.4
South Asia	15.6	11.9	19.0	9.0	12.8	11.2	4.8	4.4	-8.2	-1.9	15.9	1.6	9.1
Latin America	11.1	5.1	7.1	11.0	9.2	19.9	16.7	2.8	-1.8	-2.9	-0.3	0.9	5.6
All countries	8.4	6.2	11.6	5.8	6.7	7.2	3.6	2.4	-7.9	-6.0	-1.2	-0.5	4.8

1/ Low- and middle-income countries: some regions not shown because of limited data availability.

2/ HIC -- High-income countries; LMIC -- Low- and middle-income countries; MENA -- Middle East and North Africa; SSA -- Sub-Saharan Africa; LAC -- Latin America and Caribbean

Table E12 Export concentration ratios, 1990

Share of top three primary commodity exports in merchandise exports (%); share of merchandise exports to major markets (%)

Share	Top three primary commodity exports		Share of exports to US	EC(10)	Japan
Low-income					
44.4	Fruits and nuts; wool; furs	Afghanistan	*2.7*	*51.3*	*1.5*
21.7	Shell fish; jute and other fibres; tea	Bangladesh	*35.9*	*27.4*	*6.4*
69.9	Cotton; crude petroleum; cocoa	Benin	*13.5*	*40.2*	*1.5*
54.4	Spices; stone sand and gravel; crude animal materials	Bhutan	*27.1*	*3.4*	*0.1*
44.3	Cotton; hides and skins; fresh vegetables	Burkina Faso	*1.6*	*73.0*	*2.3*
69.1	Coffee; tea; cotton	Burundi	*1.0*	*76.7*	*4.5*
..	..	Cambodia	..	..	..
47.0	Coffee; other wood; cotton	Central African Rep.	*0.6*	*89.2*	*0.0*
90.5	Cotton; crude vegetable materials; base metal ores	Chad	*0.2*	*60.7*	*0.0*
8.4	Crude petroleum; shell fish; refined petroleum	China	8.3	9.0	14.5
39.6	Crude petroleum; cotton; refined petroleum	Egypt, Arab Rep.	*5.2*	*39.6*	*3.6*
73.7	Coffee; hides and skins; crude vegetable materials	Ethiopia	*17.2*	*56.0*	*13.0*
56.6	Cocoa; other wood; wood sleepers	Ghana	*24.0*	*51.5*	*8.6*
86.6	Base metal ores; coffee; cocoa	Guinea	*25.7*	*62.1*	*0.4*
11.0	Coffee; fruit and nuts; cocoa	Haiti	*86.1*	*10.7*	*0.8*
71.3	Coffee; fruit and nuts; fresh meat	Honduras	*41.8*	*25.9*	*7.9*
9.4	Tea; iron ore conc.; refined petroleum	India	14.8	27.2	9.4
39.8	Crude petroleum; gas natural and manf.; natural rubber	Indonesia	13.1	11.7	42.5
65.1	Coffee; tea; crude vegetable materials	Kenya	*7.8*	*62.2*	*1.6*
..	..	Lao PDR	..	..	..
..	..	Lesotho	..	..	..
54.2	Iron ore conc.; natural rubber gums; other wood	Liberia	*11.6*	*66.0*	*1.8*
69.0	Coffee; spices; shell fish	Madagascar	*14.7*	*55.8*	*13.2*
84.9	Tobacco; tea; sugar and honey	Malawi	*12.9*	*62.9*	*8.0*
84.0	Cotton; hides and skins; crude vegetable materials	Mali	*3.9*	*46.3*	*1.8*
92.0	Shell fish; iron ore conc.; fresh fish	Mauritania	*4.2*	*52.2*	*35.4*
26.2	Shell fish; base metal ores; fruit and nuts	Mozambique	*6.1*	*13.6*	*5.7*
43.7	Other wood; fresh vegetables; wood sleepers	Myanmar	*3.0*	*8.0*	*8.3*
5.7	Animal feeds; spices; crude vegetable materials	Nepal	*28.7*	*32.7*	*0.6*
7.1	Crude petroleum; cocoa; hides and skins	Niger	*1.4*	*97.6*	*0.1*
96.4	Crude petroleum; cocoa; refined petroleum	Nigeria	*44.5*	*41.4*	*0.1*
23.1	Cotton; rice; shell fish	Pakistan	*12.3*	*26.6*	*10.5*
95.2	Coffee; tea; hides and skins	Rwanda	*8.4*	*76.0*	*0.5*
52.3	Base metal ores; cocoa; shell fish	Sierra Leone	*22.5*	*71.1*	*0.0*
77.7	Live animals for food; fruit and nuts; hides and skins	Somalia	*1.7*	*51.7*	*1.7*
26.1	Tea; natural rubber gums; fruit and nuts	Sri Lanka	*25.8*	*25.0*	*5.7*
68.8	Cotton; crude vegetable materials; cereals unmilled	Sudan	*4.1*	*39.4*	*7.2*
56.7	Coffee; cotton; tea	Tanzania	*4.7*	*50.1*	*4.5*
78.0	Crude fertilizers; cotton; coffee	Togo	1.1	33.6	0.1
97.6	Coffee; hides and skins; cotton	Uganda	*20.1*	*66.7*	*5.7*
50.8	Shell fish; crude petroleum; coffee	Viet Nam	*0.0*	*7.9*	*29.7*
28.6	Coffee; crude petroleum; other wood	Zaire	*20.5*	*64.6*	*3.4*
4.8	Electric current; tobacco; fruit and nuts	Zambia	*2.2*	*29.9*	*29.9*
Lower middle-income					
..	..	Albania	..	..	..
96.0	Crude petroleum; refined petroleum; gas natural& manf.	Algeria	*21.5*	*65.5*	*1.7*
95.2	Crude petroleum; refined petroleum; coffee	Angola	*57.5*	*25.0*	*0.6*
25.1	Animal feeds; vegetable oils; wheat unmilled	Argentina	13.8	29.4	3.2
53.2	Gas natural and manf.; base metal ores; precious metal ores	Bolivia	20.0	28.8	0.3
..	..	Botswana	..	..	..
..	..	Bulgaria	..	..	..

Top 13 commodity exports from low- and middle-income economies, 1990

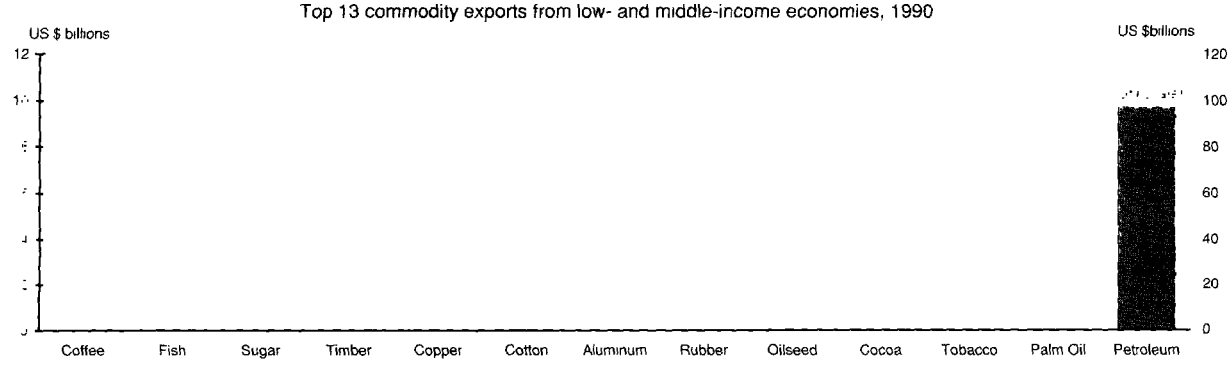
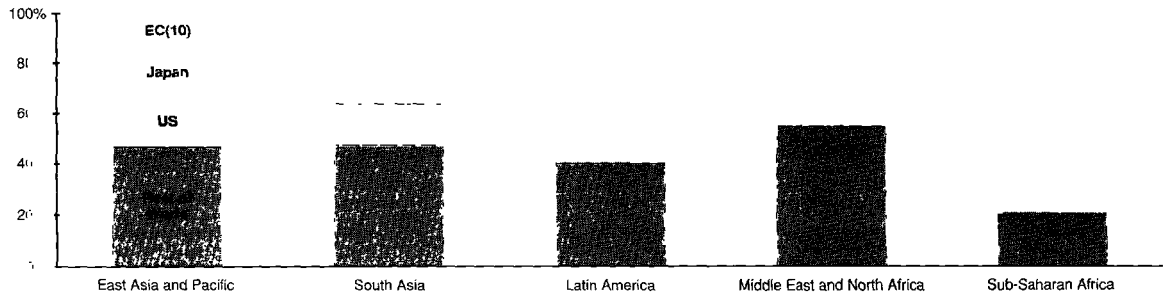


Table E12 Export concentration ratios, 1990 (Continued)

Share of top three primary commodity exports in merchandise exports (%); share of merchandise exports to major markets (%)

Share	Top three primary commodity exports		Share of exports to US	EC(10)	Japan
50.0	Crude petroleum; coffee; cocoa	Cameroon	*10.0*	*64.6*	*1.5*
20.2	Fruits and nuts; base metal ores; animal feeds	Chile	16.8	36.5	16.2
52.5	Crude petroleum; coffee; coal lignite and peat	Colombia	44.4	25.0	3.8
84.0	Crude petroleum; other wood; wood sleepers	Congo	*41.3*	*47.7*	*1.4*
55.3	Fruits and nuts; coffee; fresh meat	Costa Rica	*34.7*	*24.9*	*0.6*
62.6	Cocoa; coffee; fruit and nuts	Côte d'Ivoire	*12.1*	*71.9*	*0.9*
16.0	Sugar and honey; coffee; cocoa	Dominican Rep.	*55.9*	*20.4*	*5.7*
76.4	Crude petroleum; fruit and nuts; shell fish	Ecuador	53.0	9.5	1.9
59.7	Coffee; shell fish; sugar and honey	El Salvador	*35.8*	*22.5*	*2.9*
46.4	Coffee; fruit and nuts; sugar and honey	Guatemala	*34.7*	*15.7*	*2.3*
91.2	Crude petroleum; fruit and nuts; hides and skins	Iran, Islamic Rep.	*0.1*	*52.4*	*18.1*
53.1	Base metal ores; sugar and honey; alcoholic beverages	Jamaica	*36.3*	*29.4*	*0.9*
44.4	Fertilizers crude; fresh vegetables; refined petroleum	Jordan	*0.5*	*4.0*	*3.1*
24.0	Fresh vegetables; fruit and nuts;hides and skins	Lebanon	*10.3*	*23.1*	*0.5*
30.6	Crude petroleum; other wood; natural rubber	Malaysia	*18.2*	*14.8*	*15.6*
36.0	Sugar and honey; fresh fish; fish preserved and prepared	Mauritius	*13.8*	*73.7*	*0.3*
..	..	Mongolia	..	..	..
19.6	Crude fertlizers; shell fish; fruits and nuts	Morocco	1.9	63.8	3.9
..	..	Namibia	..		..
73.9	Coffee; cotton; fruit and nuts	Nicaragua	*0.5*	*45.0*	*13.2*
56.7	Fruits and nuts; shell fish; fresh fish	Panama	*46.1*	*25.0*	*0.3*
76.5	Base metal ores; coffee; other wood	Papua New Guinea	*2.0*	*32.4*	*37.0*
76.6	Cotton; oil seeds; fresh meat	Paraguay	4.3	28.2	0.3
43.5	Base metal ores; animal feeds; refined petroleum prod.	Peru	*26.5*	*26.3*	*10.9*
15.4	Fruits and nuts; vegetable oil; base metal ores	Philippines	*41.0*	*19.1*	*19.1*
10.2	Coal, lignite and peat; sulphur; fresh meat	Poland	*2.8*	*32.1*	*1.4*
..	..	Romania	..	..	..
40.5	Vegetable oil; petroleum prod. refined; fish	Senegal	0.1	52.1	2.0
76.8	Crude petroleum; refined petroleum; live animals for food	Syrian Arab Rep.	2.3	29.9	0.1
13.6	Rice; shell fish; fish preserved and prepared	Thailand	22.8	21.2	17.2
23.6	Crude petroleum; vegetable oil; shell fish	Tunisia	0.9	77.2	0.3
14.8	Fruits and nuts; fresh vegetables; tobacco	Turkey	7.5	51.8	1.8
83.7	Crude petroleum; coffee; hides and skins	Yemen, Rep.	*60.8*	*6.4*	*1.1*
36.4	Tobacco; maize; cotton	Zimbabwe	6.5	38.1	5.5
Upper middle-income					
18.3	Iron ore conc.; animal feeds; fruit preserved and prepared	Brazil	23.7	29.6	7.5
..	..	Czechoslovakia	..	..	..
85.8	Crude petroleum; other wood; base metal ores	Gabon	*13.5*	*57.2*	*2.9*
15.8	Refined petroleum; fruit and nuts; tobacco	Greece	5.6	63.6	1.0
2.3	All commodities; cotton; hides and skins	Hungary	3.5	31.5	1.2
95.5	Crude petroleum; refined petroleum; sulphur	Iraq	*13.9*	*33.6*	*5.8*
2.5	Fresh fish; refined petroleum; shell fish	Korea	29.9	13.3	19.4
95.8	Crude petroleum; refined petroleum; gas natural and manf.	Libya	*0.0*	*81.7*	*0.0*
39.4	Crude petroleum; fresh vegetables; refined petroleum	Mexico	70.3	12.3	5.6
12.2	Fresh fish; shell fish; defined petroleum	Oman	3.7	10.1	2.1
9.8	Pulp and waste paper; refined petroleum; alcoholic beverages	Portugal	4.8	73.4	1.0
86.6	Crude petroleum; refined petroleum; gas natural and manf.	Saudi Arabia	..	..	..
19.2	Coal lignite and peat; base metal ores; fruit and nuts	South Africa	*13.4*	*47.1*	*18.7*
68.2	Crude petroleum; refined petroleum; sugar and honey	Trinidad & Tobago	56.9	8.3	0.8
40.0	Wool; fresh meat; rice	Uruguay	9.4	24.1	1.2
51.4	Crude petroleum; nonferrous metal scrap; coal lignite and peat	Venezuela	5.8	3.7	2.3
5.6	Base metal ores; wood sleepers; refined petroleum	Yugoslavia	4.8	44.2	0.3

Low- and middle-income economies: major markets for merchandise exports, 1990



Technical notes

Appendix E

The principal sources for the data contained in this statistical annex are the World Bank's central database and the UN Commodity Trade database. The data concepts, definitions, and sources for tables E1 through E7 are identical to those used in the World Development Indicators of the *World Development Report*, as are the countries covered.

In these tables, the data for Germany refer to the Federal Republic of Germany before unification and the data for Belgium include Luxembourg. The classification of economies by income group and region follows the Bank's standard definitions (appendix A) except that aggregates for Sub-Saharan Africa exclude South Africa and all regional aggregates refer to low- and middle-income economies. In tables E8 through E12, the EC(10) aggregate refers to the ten high-income members of the European Community and exclude Portugal and Greece.

Most data are for 1990, but figures in italics indicate 1989 data. If data for both 1989 and 1990 are missing, the not-available symbol (..) is used. Growth rates are for the eleven-year period between 1980 and 1990; when fewer than ten observations are available, the growth rate is reported as not available. Current price data are reported in US dollars.

Notes on tables

Tables E1 and E2. Merchandise exports and imports exclude trade in services. Regional aggregates include intra-regional flows. Growth rates are based on constant price data. Note that in the chart accompanying table E2, the ratio of imports to GDP for the Middle East and North Africa region is based on 1989 data.

Table E3. Foreign direct investment refers to the net inflows of investment from abroad. Outward investment is excluded, but negative flows may result from divestment. Portfolio investment is excluded. Gross domestic investment includes changes in inventory.

Table E4. Total debt outstanding and disbursed includes public, publicly guaranteed, private nonguaranteed external debt, use of IMF credit, and short-term debt as reported to the World Bank Debtor Reporting System. Aggregate net transfers are equal to the sum of new flows of long-term debt (excluding IMF credits), plus official grants (excluding technical assistance) and net foreign direct investment minus interest payments on long-term loans and remittance of all profits.

Table E5. Long-term debt includes public, publicly guaranteed, and private nonguaranteed external debt having a maturity greater than a year, but excludes IMF credits. Concessional debt is debt with an original grant element of 25 percent or more. Variable interest rate debt includes all long-term, nonconcessional debt whose terms depend upon movements of a key market rate. This item conveys information about the borrower's exposure to changes in international interest rates. Nonconcessional fixed-rate debt is calculated as a residual. For complete definitions, see the *World Debt Tables, 1991-92.*

Table E6. Implicit price deflators are calculated from current and constant price data for merchandise trade. The "barter terms of trade" are calculated as the ratio of the export price deflator to the import deflator. The index base is 100 in 1987. The "terms of trade effect" is calculated as the difference between exports deflated by the import price deflator and constant price exports. This measures the income gain or loss caused by a change in the terms of trade. To "normalize" this indicator, it is divided by gross national income. It has a value of zero in 1987.

Table E7. See notes at the bottom of the table. Commodity price data are collected by the International Economics Department of the World Bank.

Tables E8, E9, E10, E11. Merchandise trade flows have been calculated from the UN Commodity Trade database and supplemented by World Bank estimates.

Table E12. Data on primary commodity exports and major markets have been calculated fromthe UN Commodity Trade database. Primary commodity exports include all three-digit level commodities in SITC groups 01 through 04. The top 13 primary commodity exports from low- and middle- income are derived from the FAO Agrostat, UNCTAD, and the UN Commodity Trade databases, supplemented by World Bank estimates. The rankings reflect average values of exports for the period 1985-87.

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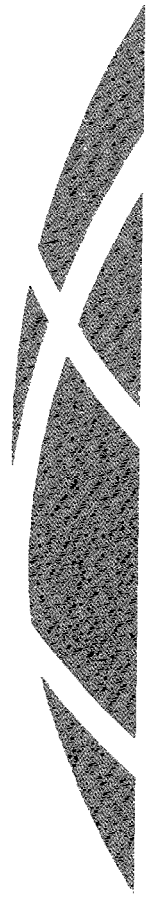
The 1990s started badly for developing countries. Despite this, their economic prospects look good when compared with the 1980s. The key international economic indicators offer a mixed outlook, but improved policies in developing countries themselves hold out the promise of higher growth.

This edition of *Global Economic Prospects and the Developing Countries*, the second in an annual series, examines the long-term prospects for the global economy in the 1990s and their implications for developing countries. Like the first edition, this report considers the economic links between industrial and developing countries. This year the authors emphasize links through international trade of manufactured goods. Manufactures have quickly become an important component of the exports of developing countries. In 1990 they accounted for three-quarters of global trade in goods and almost half that of developing countries.

To improve economic performance, developing countries must speed up export growth, particularly in manufactures. The extent to which they succeed will depend partly on the reduction of trade barriers in their main markets—the industrial countries. Such a reduction could significantly boost exports from developing countries. A failed Uruguay Round, however, would mean lost opportunities for trade, a possible rise in trade tension, and a weakened multilateral trading system.

Exporters of manufactures from developing countries face a challenging international business climate. Efficient international transport and telecommunication links will be needed to complement open trade and investment policies. Innovations in marketing and changes in management and production techniques have made this even more critical. The labor force needs continuous improvement in its education and level of skill if it is to make rapid adjustments to changes in technology, product mix, and work practices.



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