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To: Members of the Executive Board

From: The Acting Secretary

Subject: The Industrial Policies of Industrial Countries and Their
Effects on Developing Countries

Attached for consideration by the Executive Directors is a paper on the industrial policies of industrial countries and their effects on developing countries, which was prepared at the request of the Development Committee. This paper, together with the paper on trade policy issues and developments (SM/88/166, 8/3/88), has been tentatively scheduled for discussion on Wednesday, August 24, 1988.

Ms. Kelly (ext. 8374) is available to answer technical or factual questions relating to this paper prior to the Board discussion.

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The Industrial Policies of Industrial Countries
and their Effects on Developing Countries

Prepared by the Exchange and Trade Relations Department

(In consultation with other Departments)

Approved by H.B. Junz

August 3, 1988

	<u>Contents</u>	<u>Page</u>
I.	Introduction	1
II.	Industrial Policies in Industrial Countries	2
	1. Reasons for industrial policies	2
	2. Range and stance of industrial policies	4
III.	The Effects of Industrial Policies in Industrial Countries	10
	1. Domestic effects	10
	2. Trade effects	13
IV.	Trade Trends	20
V.	Conclusions	23
 Tables		
	1. Subsidies as Percent of GDP	26
	2. Government R and D Funding of Manufacturing Industry	27
	3. Post-Tokyo Round MFN Tariff Averages for Major Sectors and Share of Imports from Developing Countries in the EC, Japan, and the United States, 1984	28
	4. MFN Tariff Rates in the EC, Japan, and the United States for Selected Petrochemicals in 1988	29
	5. Escalation of Tariffs and Nontariff Barriers in Developed Countries	30
	6. Import Coverage Ratios of all Selected Nontariff Measures Applied by Selected Development Market- Economy Countries in the Period 1981-87	31
	7. Voluntary Export Restraints (VERs), September 1987	32
	8. Voluntary Export Restraints (VERs), May 1988	33
	9. Industrial Countries: Antidumping Investigations and Actions, 1981-86	34

	<u>Contents</u>	<u>Page</u>
10.	Industrial Countries: Countervailing Investigations and Actions, 1981-86.	35
11.	Subsidy Shares by Destination and in Total Officially Supported Export Credits by the OECD Countries	36
12.	Motor Vehicles: Impact of Import Restrictions on Japanese Cars in Four Countries	37
13.	Output and Employment Trends in Selected Sectors in the EC and the United States	38
14.	Direction of Merchandise Exports by Country Groupings, 1963-86	39
15.	Shares in World Textiles Exports, 1963-86	40
16.	GSP Schemes in "High Tariff" and Other Items in the EC, Japan, and the United States, 1984	41
17.	Shares in World Merchandise Exports, 1963-86	42
18.	Shares in World Exports of Manufactures, 1963-86	43
19.	Shares in World Merchandise, Exports, in Terms of Constant 1980 U.S. Dollars, 1963-86	44
20.	Direction of Exports of Manufactures by Country Groupings, 1963-86	45
21.	World Merchandise Exports Matrix, 1963-86	46
22.	Matrix of World Exports of Manufactures, 1963-86	47
23.	Shares in World Clothing Exports, 1963-86	48
24.	Shares in World Steel Exports, 1963-86	49
25.	Shares in World Exports of Foodstuffs, 1963-86	50
26.	Shares in World Exports of Road Motor Vehicles, 1963-86	51

Figure

1.	Some Economic Effects of VERs	10a
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I. Introduction

This paper has been prepared at the request of the Development Committee. This request reflects concern that the industrial policies of industrial countries, to the extent that they have been defensive, impose significant costs on industrial countries and may have diminished the positive effects of adjustment efforts by developing countries by limiting their export opportunities for manufactures. This is obvious for those developing countries that have an efficient industrialized base; for others that are resource rich, but have a limited manufacturing base, marketing opportunities are at the root of their efforts to diversify into higher value added stages of production. Access to foreign markets thus reinforces the success of efforts to implement appropriate growth-oriented adjustment strategies, improves the climate for investment, and is an element in an orderly solution to the debt problem.

Industrial policy is broadly defined as the deliberate attempt by a government to influence the composition of a nation's industrial output. The definition encompasses all government actions to foster activity in specific sectors, either for the purpose of shifting resources to higher productivity activities in support of adjustment objectives or to maintain resources in existing activities for security, political, or other reasons. Industrial policies are implemented both by domestic policies, such as subsidies and tax incentives, and by trade measures, such as, quantitative restrictions. This paper looks at industrial policies of industrial countries in terms of how they may affect trade flows in a broad sense, and in particular, those of developing countries. The focus, therefore, is largely on the more defensive aspects of such policies.

Industrial policies in the above sense, tend to distort relative prices. While they may assist individual industries in the adjustment process, the cost to consumers and taxpayers in terms of welfare can be large. The slower economic growth that can result limits the market access for developing country exports. Moreover, the nature of some industrial policy instruments, such as, bilateral quantitative restrictions, directly limits market access in a manner that tends to be inconsistent with comparative advantage.

In preparation for this paper, the staff held discussions with the authorities in Australia, Canada, France, Germany, Japan, Korea, Mexico, New Zealand, Singapore, the United Kingdom, and the United States. It did not prove possible to hold special discussions with the authorities of certain other countries, although use has been made of information supplied by them during their Article IV consultations with the Fund. Discussions were also held with officials from the secretariats of the African, Caribbean and Pacific States (ACP), the European Free Trade Association (EFTA), the European Community (EC), the General Agreement on Tariffs and Trade (GATT), the Organization for Economic Co-operation and Development (OECD), and the United Nations Conference on Trade and

Development (UNCTAD). Extensive use has been made of the publications of a number of these organizations.

Section II examines the reasons for, and range and status of, industrial policies in industrial countries. Section III looks at the effects of these policies, with particular reference to developing countries, and Section IV reports on trade trends. Section V draws some preliminary conclusions.

II. Industrial Policies in Industrial Countries

In OECD countries, government aid to industry increased substantially between 1973 and 1983 and use of trade measures, largely in the form of nontariff barriers (NTBs), rose. Direct subsidization of some industries may have declined since, but recently the use of export restraint arrangements has increased significantly, raising the possibility that NTBs are being used to substitute for domestic industrial policy measures.

1. Reasons for industrial policies

Over the past 15 years many governments have become increasingly concerned about shaping the industrial structure and easing the burden of industrial adjustment. A number of factors, including: the inflationary environment of the early 1970s; the oil shocks and rising commodity prices; slower economic growth that persisted into the early 1980s; the emergence of new capacity in developing countries which added to obsolescence and excess capacity in many traditional sectors, like shipbuilding and steel; the generally fiercer international competition; and the advent of new technologies played a role in pressing the need to transform manufacturing sectors. This continuing transformation led to concerns about the costs of change and disparities in income between national growth centers and regions in which the traditional sectors are located. Concerns also emerged about the continued viability of industries considered essential to the national interest.

Central to arguments on shaping the industrial structure is the thought that a nation might end up with an industrial mix inappropriate for its successful economic performance and political goals. The issue is then of support to ensure an appropriate level of activity in those sectors--normally referred to as strategic sectors--which are perceived to be of special value to an economy. 1/

1/ For a discussion of the pros and cons of supporting strategic sectors see, Paul Krugman, "Strategic Sectors and International Competition," U.S. Trade Policies in a Changing World, Robert M. Stern, (ed.), The MIT Press, Cambridge, Mass., U.S.A., 1987.

Industries can be strategic to an economy in several ways. First, in an uncompetitive environment, some industries, sustained by economies of scale, which in part derive from barriers to entry, can directly yield higher rates of return than others. ^{1/} These industries are often thought to be in the high technology category. A country can raise its national income at the expense of others by ensuring that its firms, rather than foreign firms, earn the excess returns. Support for such industries could help them attain an international niche, perhaps market dominance, which could generate persistent economic rents. Expenditure on research and development (R and D) is considered to be particularly important in fostering these industries.

Second, an industry may be strategic in that it indirectly generates external, or linkage, economies: an industry operating under increasing returns to scale reduces the input costs for the final users of its output, thereby increasing social welfare. In the past, industries, such as, steel and petrochemicals were thought of as vital linkage industries; more recently this role has been extended to the semiconductor and machine tools industries.

An industry may also be strategic in that it helps to meet national defense aims. Just as food security has been used as a reason for various forms of agricultural protection and intervention, government support for industries, such as, steel, shipbuilding, and aerospace has often been defended on the grounds that national security requires the continued viability of such industries.

Support to ease the burden of adjustment has tended to concentrate on traditional industries largely because these have been more affected than other sectors by an erosion of price competitiveness. These include clothing, textiles, shipbuilding, steel, and footwear. Support of this nature has also been directed to industries, such as, road motor vehicles, where it is thought that assistance at the first signs of excess capacity might help them to recapitalize and retrain their labor force to ensure their long-run profitability.

Intervention in traditional industries has been driven by the thought that the short-term social and political costs of adjustment to market forces would not be bearable, particularly as declining industries are often concentrated in regions where alternative employment options seem limited. In a somewhat different vein, it is also argued that with enough time and financing, industries would undertake phased retrenchment, modernization of plant, and specialization of product so as to regain competitiveness.

^{1/} As an extreme example, if economies of scale are sufficiently large in an industry, such that there is room for only one profitable entrant in the world market, then whichever firm manages to establish itself will earn supernormal returns that will not be competed away.

Countries also cite the industrial policies of others, including developing countries, as a reason for their own policies. A common argument is that if country A grants a subsidy or imposes an import barrier to the benefit of a sector, country B "needs to protect itself" against a possible loss of market share at home or abroad. This international spreading of support dilutes, and may negate, the possibilities for adjustment in the original sector in country A, perhaps giving rise to pressures for additional support. The contagion of defensive industrial policy measures could, as it has done in the cases of steel, textiles and clothing, build up a globally interlocking network of support activities: some argue that multilateral negotiations are then required to restore market disciplines to the sector on the grounds that the gains from liberalization are greater if all countries liberalize and that unilateral liberalization reduces the pressures for others to liberalize. Such arguments, however, ignore the benefits of unilateral liberalization. 1/

With regard to the international spreading of industrial support, many industrial countries argue that the erosion of their competitiveness in traditional industries is due, at least in part, to the trade and domestic support policies of a number of developing countries. Industrial countries note that many developing countries subsidize their industrial sectors and retain complex, nontransparent restrictions, in the form of high tariffs, quotas, import licensing, multiple exchange rates, and sometimes undervalued exchange rates, which limit the access of industrial country exports. 2/ A number of developed countries are of the view that it would be easier to dismantle the Multifibre Arrangement (MFA), 3/ and return trade in textiles and clothing to the disciplines of the GATT, if the higher value added products of the industrial countries in these sectors had easier access to developing country markets.

2. Range and stance of industrial policies

An indicative list of the domestic and trade measures used by governments to implement industrial policies follows.

1/ See J. Tumlrir, "International Economic Order and the Decline of Multilateralism," paper presented at the ACT Economics Society, Canberra, 1983.

2/ The trade barriers are often defended in terms of the GATT's balance of payments provisions, to which the developing countries have had more frequent and easier resort than the industrial countries.

3/ The MFA, under the aegis of which exports of textiles and clothing from lower cost producers (normally developing countries) to industrial countries are largely governed, has been extended three times, most recently for a five-year term from August 1, 1986. The Short- (1961-62) and Long-Term (1962-73) Arrangements on Cotton Textiles preceded the MFA.

Industrial Policies

Domestic measures	Trade measures
Subsidies	Tariffs
Cash transfers	Peaks <u>1/</u>
R and D funding	Escalation <u>2/</u>
Tax concessions	Nontariff barriers
Loan guarantees and insurance	Import quotas
Subsidized credits	Voluntary export restraints (VERs) <u>3/</u>
Capital grants	Tariff quotas <u>4/</u>
Regional aids	Discretionary and nondis-
Government procurement	cretionary import licensing
National product standards	Countervailing (CVD) and antidumping
Commodity-specific indirect	(ADD) investigations and duties <u>5/</u>
taxation	Health standards
	Export subsidies

1/ High tariffs on selected products in a structure with otherwise low overall tariff rates.

2/ Progressively higher tariffs, within a product category, as the level of processing and value added increases.

3/ Bilaterally agreed measures to restrain exports, such as, orderly marketing arrangements and export management rules. VERs can be government-to-government, government-to-industry, or industry-to-industry arrangements. The distinction between different forms of VERs is largely legal and terminological and has little, if any, bearing on their economic impact.

4/ Higher tariffs after a specified level of imports.

5/ Duties equivalent to subsidy and dumping margins, respectively, on imported products.

The extent to which governments use the above measures depends on their attitude toward industrial policies. In the United States the task of the Government is mainly to ensure that the macroeconomic environment remains sound and that regulatory legislation is obeyed. Its intervention has tended, therefore, to be limited to measures, such as, tax concessions, that are available across sectors, and selective actions in the area of border measures. In Japan, the Government plays an essential role in formulating industrial strategies; but it does so more by acting as a catalyst in the search for a consensus than by directing the force or pace of resource allocation. Consequently, its recent use of both domestic and trade measures has not been extensive. In most other OECD countries, governments traditionally play a larger role than in Japan or the United States to cushion the social effects of economic change and, therefore, have a stronger incentive to use both domestic and trade actions to ease the burden of industrial adjustment.

a. Data sources and difficulties

Data on domestic support measures are not readily available. A problem in this respect is the absence of an international consensus on the definition of a subsidy; this involves, among others, issues related to the appropriate role of government with respect to state-owned enterprises. Information on subsidies collected by organizations such as the Fund and the OECD are based on a narrow definition that includes only current transfers to the productive sector as a whole and excludes indirect subsidies, such as, tax concessions. Moreover, the data are not comparable as the availability of statistics on assistance by regional and local governments is not uniformly available. In general, a sectoral breakdown of subsidies is not available, although some were provided to the Fund by country authorities. Efforts are underway in the OECD and the EC to rectify the data problems but many countries are reluctant to provide detailed information on subsidies because they tend to be countervailable in GATT. ^{1/} In addition, countries have noted that sector-specific information is difficult to compile, especially because certain forms of assistance, such as, regional aid, cut across several sectors.

On most trade measures, data are collected by GATT and UNCTAD; however, they are not complete as countries do not always report the measures they use. Further, it is difficult to quantify the effects of nontariff measures. This difficulty has arisen in the Uruguay Round where a measure is being sought as a base of comparison for the exchange of concessions between participants. In some countries an "effective rate of assistance" (ERA) is used (to encompass all forms of assistance, including subsidies), but many countries lack an adequate data base to compute ERAs by sector.

b. Trends in domestic measures

Despite the paucity of reliable data, certain trends are reasonably clear. Government subsidization increased in all G-7 countries in 1972-83 and in 1985 government assistance was at a higher level than in 1972 in all countries except the United States (Table 1). In most countries, government aid to the manufacturing sector rose sharply and became more selective, largely in support of traditional sectors. However, since 1982-83 some scaling down--or, at least stabilization--of sector-specific government aid does seem to have occurred in a number of

^{1/} The OECD, on the basis of country responses to questionnaires, is currently receiving some information on industrial assistance, and the EC is committed to issuing a "White Paper" on state aids.

OECD countries. 1/ 2/ National, as well as EC and OECD, officials attribute this trend to a number of factors. Subsidies are a drain on national budgets, tend to be inefficient, and subject to political manipulation. Further, they are often countervailable under GATT, whereas many countries consider voluntary export restraints (VERs) to be legal "gray areas." By contrast to the recent trend in domestic measures, there has been an increase in selective trade measures, particularly VERs. Although the number of countervailing duty (CVD) and antidumping duty (ADD) cases may have leveled off, each case now generally involves higher values.

In Germany the percentage of government subsidies to the manufacturing sector rose eightfold during 1974-84, and those to shipbuilding, and steel, as a percentage of total industrial subsidies, rose from 23 percent in 1977 to 50 percent in 1983; 3/ there now is a greater focus on the need to reduce these budgetary costs. In the United Kingdom aid to industry doubled in the period 1976-81; steel, shipbuilding, and mining together received one quarter of total aid to industry in 1982-83, against 7.5 percent six years earlier. Again, shifts in budgetary policy and moves toward privatization are containing this trend. Recently, sector-specific subsidies have been reduced in some countries. In Canada, subsidies to the textiles and clothing sectors are being phased out, while in the EC limits have been placed on subsidies to steel and shipyards.

With regard to other domestic measures, tax preferences have been important in a number of countries. In Germany, tax concessions to enterprises, by both federal and regional governments, total some 40 to 50 percent of total subsidies (including such items as housing and consumer subsidies), while in the United States federal tax concessions to industry averaged 1.5 percent of GDP per annum in the period 1975-87. 4/ Recently, however, the tax system in the context of overall tax reform has become more neutral with respect to industry; this

1/ A decline in sector-specific aid has been accompanied by an increase in R and D and more generally available assistance. This has been complemented by some relaxation of the institutional framework for government control; the process of deregulation, privatization, and tax reform has spread, following the trend set by the United States in the early 1980s, to a number of industrial countries. Many governments now appear to be as concerned with creating the climate for efficient adjustment as with influencing adjustment in specific sectors.

2/ In a number of subsidized sectors capacity has been reduced, however, indicating that subsidies per unit of output may not have been reduced.

3/ Country data on sectors was provided either by the relevant country authorities or the EC Commission or is to be found in OECD, Economic Performance and Structural Adjustment, Paris, 1987.

4/ Data on support by individual states may be important but is not available.

example is being followed by other countries, including the United Kingdom. U.S. tax support has been provided mainly to encourage plant modernization and R and D expenditures. Support for the latter has been high in most developed countries (Table 2). It is difficult to quantify, or data is not available, on other forms of domestic support. However, considerable subsidies may be involved in government procurement practices; it is estimated that total EC public procurement contains a subsidy element of some 10 percent. ^{1/} Interest subsidies may also be involved in national product standards, which can be geared to the interest of domestic firms. Further, it is sometimes thought that industrial country companies create vested interests by transmitting their own national standards to developing countries through technical assistance.

c. Trends in trade measures

Successive rounds of multilateral trade negotiations have progressively reduced tariffs, such that the average most-favored-nation (MFN) rates in most industrial countries are now in the order of 6 to 7 percent on manufactures (Table 3) ^{2/} For many products the rates actually applied are lower than the MFN rates because of preferential arrangements, as under the Generalized System of Preferences (GSP) for developing countries. These averages, however, obscure the higher levels of tariff protection that still tend to be accorded to weak sectors of the economy. Thus, 33 percent of EC tariff lines had MFN rates above 10 percent, while Japan and the United States have such rates on about 17 percent of their tariffs. ^{3/} These tariff peaks tend to be concentrated in textiles, clothing, footwear, and some petrochemicals (Table 4). Tariff escalation is also a feature of most industrial countries' schedules (Table 5), particularly for certain foodstuffs, leather, fabrics, and some petrochemicals. For example, gasoline enters most developed countries at low tariffs but polypropylene does so at MFN rates of 12.5 percent in both the EC and the United States and at about 18 percent into Japan.

The increase of nontariff measures may have largely offset the reduction of tariffs as barriers to imports into the developed economies. For example, it is estimated that the economy-wide tariff equivalent of U.S. nontariff barriers on textiles, steel, and automobiles is about 25 percent, bringing protection to its level of

^{1/} J. Pelkmans, "Liberalization of Product Markets in the European Community," Free Trade in the World Economy. Towards an Opening of Markets, W. Gerich (ed.), J.C.B. Mohr, Tübingen, 1986.

^{2/} The latest available post-Tokyo Round MFN rates pertain to 1984 and do not reflect unilateral reductions of some tariffs, notably in Japan, in recent years.

^{3/} UNCTAD, "Protectionism and Structural Adjustment," TD/B/1160/Add.1, Geneva, 1988.

early postwar years. ^{1/} Such barriers affected 22.6 percent of the value of non-oil imports into 18 industrialized countries in 1987, a 21 percent increase over the 18.7 percent coverage rates in 1981 (Table 6). A significant factor in this increase has been the growing use of VERs; these measures are discriminatory in that they limit the supply of exports by commodity type, by country, and by volume. ^{2/} Their number has grown from about 50 in 1978 to 135 in late 1987; and, based on preliminary information, to 253 by April 1988, with much of the latter increase attributable to the EC (Tables 7 and 8). ^{3/} In April 1988, the exports of developing countries, particularly those of Korea, were restrained by 120 VERs, while 89 VERs were in place on the exports of OECD countries. It is notable that whereas in late 1985 no known VERs restrained exports to Japan, by April 1988 Japan had 12 VERs, largely in textiles and clothing.

Tables 9 and 10 show that since 1981 Australia, Canada, the EC, and the United States have initiated over 1,600 CVD and ADD investigations, of which some 38 percent resulted in a negative finding. Investigations concentrated on steel, machine tools and, in the case of the EC, electronics and chemicals. While these actions can be legal under GATT, legislation in some countries is sufficiently broad to allow their misuse as instruments of trade protection. ^{4/}

Export aids, including export credits (Table 11), have assisted industry in developed countries. Though progress has been made in reducing the subsidization of officially supported nonaid export credits, the subsidy element in these credits remains high; for the OECD countries as a group it rose from 14.2 percent in 1979 to 27.5 percent in 1981 before declining to 12 percent in 1985. Information on other forms of export assistance is not readily available for a wide range of countries.

^{1/} J. De Melo, and D. Tarr, "Welfare Costs of U.S. Quotas on Textiles, Steel and Autos," IBRD Working Paper, Washington, D.C., 1988.

^{2/} The principle of nondiscrimination is the cornerstone of the multilateral trading system; it facilitates trade on the basis of comparative advantage, acts to achieve a given level of protection at minimum cost to domestic consumers and the rest of the world, protects the interests of smaller trading nations, and helps to ensure the access of new entrants to the international market place.

^{3/} GATT, "Developments in the Trading System," various issues, Geneva. The actual number of VERs may well be greater as there are reportedly various undisclosed industry-to-industry and government-to-industry arrangements.

^{4/} For example, see Melvyn Krauss, "The New Protectionism," New York University Press, New York, 1978.

III. The Effects of Industrial Policies in Industrial Countries

Domestic effects of industrial policies are important not only for the country that utilizes them, but also for others, including developing countries. To the extent that industrial policies distort resource allocation and slow growth, these effects are transmitted to potential suppliers as well. Whether these costs are offset by adjustment benefits over time depends on the level of costs, both to consumers and taxpayers, and whether they achieve their objectives.

1. Domestic effects

The application of support tends to direct resources away from sectors of the economy that are viable without assistance. This shifts the burden of adjustment to more efficient sectors. Table 12 shows the effects in four countries of restrictions on imports of automobiles from Japan. In the United States the costs to consumers, in terms of higher prices, are estimated to have been in the order of US\$3.25 billion to US\$5 billion per annum. It is also estimated that average U.K. retail prices of textiles and clothing would be 5 percent to 10 percent lower in the absence of support by border measures. 1/ Estimates for 1984 indicate that the annual cost under U.S. trade protection on textiles and clothing amounted to US\$50,000 and US\$39,000, respectively, per job saved as compared with the then annual average textile and clothing wages of US\$13,400 and US\$10,500, respectively. 2/ Also, each job protected under a Japanese restraint on its exports of color television sets to the United States in 1977-80 cost about US\$60,000 per year. Still, the end result was the virtual demise of color television production in the United States. 3/

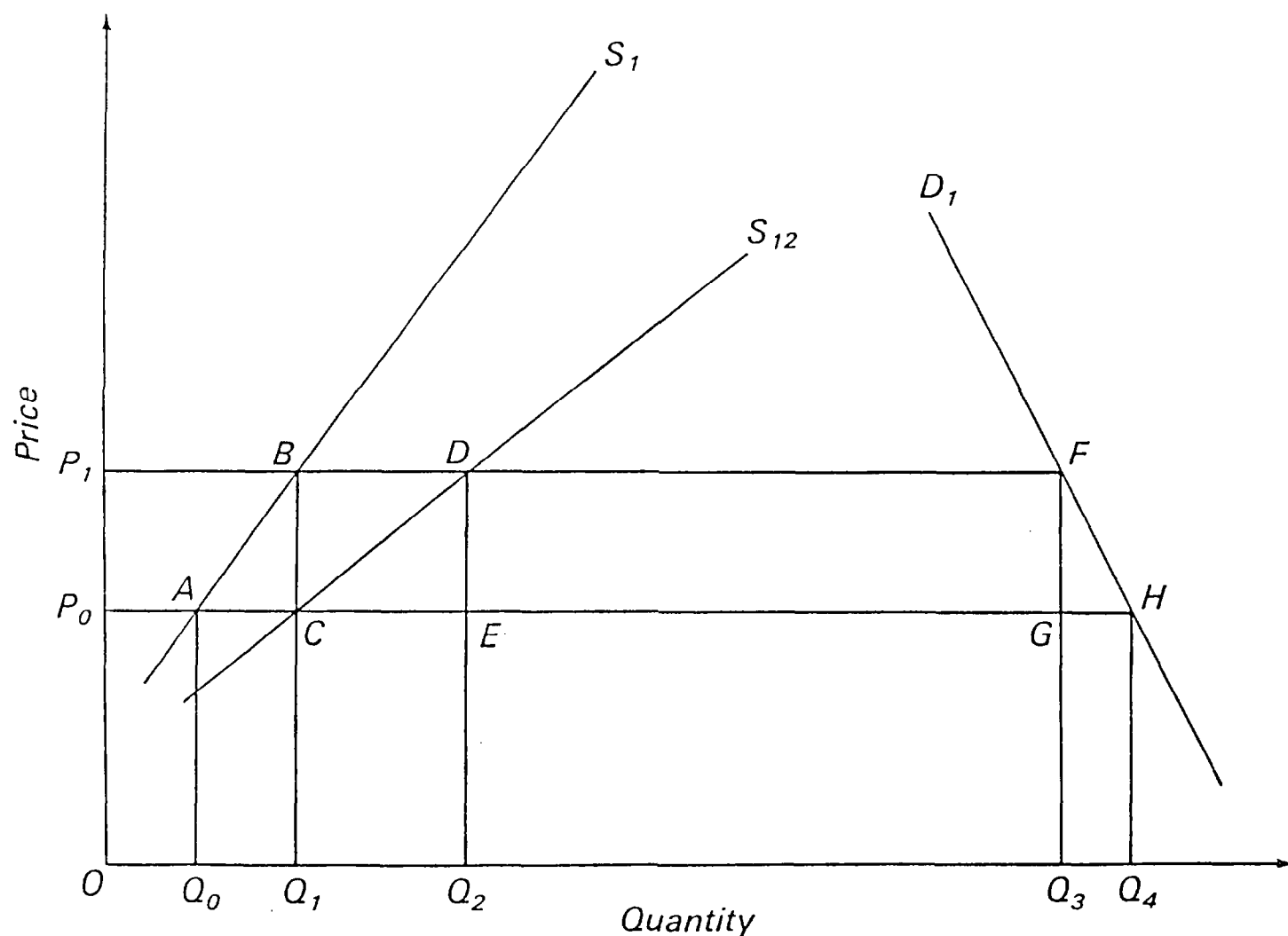
Besides raising domestic prices, VERs can also result in substantial financial transfers from the domestic economy to foreign producers (Figure 1). It is estimated, in this respect, that the annual transfer in the form of economic rents from OECD consumers to the four Asian newly industrializing economies (NIEs)--Hong Kong, Korea, Singapore, and Taiwan Province of China--in the area of textiles and clothing is at

1/ Z.A. Silberston, The Multi-Fibre Arrangement and the U.K. Economy, HMSO, London, 1984.

2/ G.C. Hufbauer, D.T. Berliner, K.A. Elliott, Trade Protection in the United States - 31 Case Studies, Institute for International Economics, Washington, D.C., 1986.

3/ OECD, Costs and Benefits of Protection, Paris, 1985.

FIGURE 1
SOME ECONOMIC EFFECTS OF VERs



S_1 is the home country supply curve. S_{12} is the aggregate supply curve of the home country and a partner country. D_1 is the home country demand curve. Under free trade, the price is P_0 , Q_0 is produced at home and imports are Q_0Q_4 , of which Q_0Q_1 is supplied by the partner country. Under a VER of Q_2Q_3 , which is imposed under the assumption that trade with the partner country remains free, the domestic price rises to P_1 , home production increases to Q_1 , and total imports decline to Q_1Q_3 ; but imports from the partner country increase to Q_1Q_2 as the result of *trade diversion*. *Economic rents* of $DFGE$ accrue to the restrained exporters; additional producer rents in the home country are P_0P_1BA and in the partner country they are $ABDC$. *Welfare loss* in the home country is $ABFH$. *Global welfare loss* is DCE plus FGH , of which DCE is the *global resource misallocation loss*.



least US\$2 billion. 1/ 2/ By another estimate these transfers from VERs worldwide in 1984, when the total number of VERs was about one third of the present number, could have been as much as US\$27 billion. 3/ Nevertheless, VERs are tempting to governments, in that they tend to hide the full cost of support, are relatively easy to negotiate and avoid retaliation. 4/

The question remains whether industrial policies serve to safeguard output and employment and promote adjustment in the supported sectors. The case for a country to follow a selective industrial policy is rooted in the existence of difficulties in its economy that constrain a flexible response of the factors of production to market change. But in reasonably competitive markets, wages and returns to other factors of production would be roughly equalized across sectors, indicating that intervention would result in a misallocation of resources and a net welfare loss for the nation. This argument has always been tempered by optimal tariff, infant industry and, more recently, strategic industry considerations. Successful intervention in these cases will depend critically on selecting the right sectors and even then the gains are

1/ OECD, 1985, *ibid.*

2/ It should be noted that the term "country" or "economy" used in this report does not in all cases refer to a territorial entity that is a state as understood by international law and practice. The term also covers some territorial entities that are not states but for which statistical data are maintained and provided internationally on a separate and independent basis.

3/ M. Kostecki, "Export-Restraint Arrangements and Trade Liberalization," *The World Economy*, Vol. 10, No. 4, London, 1988.

4/ Under GATT rules, safeguard provisions exist for temporary, emergency protection of domestic industries injured by import competition. Such actions, however, can involve negotiating compensation with the affected countries. These negotiations can be difficult and might fail, in which case the protecting country risks retaliation by the exporting country. In either case, compensation or retaliation, the exports of the country taking the safeguard action may suffer. By contrast, VERs have built-in compensation for the foreign supplier in the form of rents and a degree of certainty on market access. Further the domestic government in negotiating a VER often avoids the frequently lengthy, often multilateral, debate that invariably precedes other forms of protectionism; in such debates, the cost of the protective measure is likely to become clear, making them politically expensive and risky.

likely to be small and not widely distributed. 1/ Moreover, such intervention could result in costly trade wars, negating the benefits of support. In general, therefore, industrial policies will tend to distort relative prices and investment flows, leading to lower growth rates. 2/ Nevertheless, many governments continue to find selective industrial support measures attractive, in part because unemployment tends to be concentrated in regions where traditional sectors are located.

The aims of retaining employment and promoting adjustment might not be consistent with each other. Modernization to regain competitiveness often entails switching to a higher technology mode of production which necessitates changes in the quality of the labor force and in capital equipment. Thus, if assistance implies a political constraint to retain employment, adjustment by the industry might be delayed. This could happen in any event as unconditional support reduces competitive pressures and makes it easier to continue production with outdated and inefficient technology.

Nevertheless, by raising domestic profits, selective industrial support can make resources available for adjustment. This appears to have happened in the U.S. automobile industry and in certain parts of the textile and steel industries in both the EC and the United States, where capacity has been reduced and made more efficient. For example, between 1982 and 1986 capacity in the EC (10) and U.S. steel sectors declined by 16 percent and 18 percent, respectively, while output rose by 1 percent and 9 percent, respectively (Table 13). 3/

Significant employment losses have occurred in the steel, textiles, and clothing industries in countries supporting these sectors. In the period 1982 to 1986, employment in the steel sectors of the EC (10) and the United States declined by 23 percent and 32 percent, respectively. Between 1973 and 1984 employment in textiles and clothing declined by 46 percent and 43 percent, respectively, in the EC and 22 percent and 18 percent, respectively, in the United States. 4/ Further, in the EC shipbuilding industry, where subsidies have been an important factor, employment fell by some 65 percent in the period 1975 to 1986. 5/

1/ On these points see: A. Dixit, and G. Grossman, "Targeted Industrial Policy with Several Oligopolistic Sectors," Working Paper, Princeton University, Princeton, 1984; P. Krugman, 1987, op. cit.; and, Whitman, Marina V.N., "Comment on 'Strategic Sectors in International Competition,'" U.S. Trade Policies in a Changing World Economy, 1987, op. cit.

2/ On these points see Centre for International Economics, "Macroeconomic Consequences of Farm-Support Policies," Canberra, 1988.

3/ OECD, The Steel Market in 1986 and the Outlook for 1987, Paris, 1987.

4/ GATT, International Trade 1985/86, Geneva, 1986.

5/ Data supplied by the EC Commission.

Modernization, gains in productivity, and changes in macroeconomic conditions dominated the employment situation, as they did in the U.S. automobile industry where, despite protection under a Japanese restraint on its exports to the United States, employment declined by about 250,000 jobs in the early 1980s. 1/

It is possible, however, that employment in the above sectors would have fallen further in the absence of support measures. Thus, between 20,000 to 30,000 positions were saved in the U.S. automobile industry as a result of the Japanese VER (see Table 12). In 1980, Canadian restrictions on apparel imports protected 7.5 percent of the industry's jobs. 2/ Similarly, a 50 percent relaxation in the VERs protecting the Swedish clothing industry would reduce clothing employment in Sweden by about 6 percent, twice as large a job loss as a similar reduction of restraints would give rise to in the textile sector, which has become relatively capital intensive. 3/

Adjustment has clearly taken place in the sectors noted above. However, excess capacity is still a problem in a number of industries even though support measures have been in place for a considerable time. It is also clear that the support to assist the adjustment that has taken place has been expensive to the economies involved. The cost per job saved has been a multiple of wages earned, indicating that the resources to support adjustment would have earned higher rates of return in other sectors of the economy, and that adjustment might have been more rapid and efficient in the absence of support. Also, lost potential employment gains in other sectors of the economy are likely to have exceeded jobs saved by support measures. 4/ Moreover, in the above sectors the nature of support--which has been predominantly by means of trade measures--has afforded foreign exporters an opportunity to upgrade the quality of their products. The domestic industries thus now face increased competition in precisely those areas where they might otherwise have had a comparative advantage.

2. Trade effects

Industrial policies tend to slow economic growth and, therefore, the rate of trade expansion and the pace of integration of countries

1/ OECD, 1985, op. cit.

2/ G. Jenkins, "Costs and Consequences of the New Protectionism: The Case of Canada's Clothing Sector," North-South Institute/World Bank Monograph, 1980.

3/ C. Hamilton, "A New Approach to Estimation of the Effects on Non-Tariff Trade Barriers: An Application to the Swedish Textile and Clothing Industry," Weltwirtschaftliches Archiv, 1981.

4/ An example from agriculture illustrates the point; it is estimated that the removal of agricultural protection in Germany would result in a net gain of over 800,000 jobs and a 3 percent increase in GDP; Centre for International Economics, 1988, op. cit.

into the world economy. These policies have often served to reduce or limit the access of successful exporters to industrial country markets, frequently in labor and/or resource intensive areas where developing countries appear to have a comparative advantage. In this respect, it is perhaps indicative that since 1977 there has been a change in the direction of developing country exports away from industrial countries toward other developing countries (Table 14). Since 1981 developing countries have taken a relatively constant share of developing country exports despite a decline in market opportunities in those countries due, in part, both to the decline in commodity prices and the debt problem.

The policies of industrial countries may have had a particular impact on some developing countries in areas such as clothing and first and secondary processing stages of raw materials, including foodstuffs and petrochemicals, where initial attempts to enter the industrial product cycle are often made. For example, in textiles, where the MFA has become progressively more restrictive, the growth in the share of world exports of developing countries has slowed since 1981 (Table 15).

This section examines the trade effects of the industrial policies of industrial countries, with emphasis on developing countries; it does so in terms of tariff- and nontariff-related measures.

a. Tariff-related measures

(i) Tariffs, peaks and escalation

As noted in Section II.2a remaining tariff protection in the form of peaks and escalation tends to heavily affect developing countries especially because it is concentrated in traditional export sectors, such as, textiles and clothing, where the share of developing countries in the imports of industrialized countries tends to be high (see Table 3). Further, high tariff items often have lower GSP coverage than low tariff lines (Table 16) and tend to have an overall higher incidence of NTB coverage. 1/

The trade effects of tariff peaks appear to apply largely to labor and resource intensive sectors. This suggests that the industrial policies of the developed countries in these areas could have significantly influenced resource allocation in the developing countries. It is estimated that, disregarding nontariff barriers, imposing a 10 percent MFN ceiling on the tariff rates of the industrialized countries would increase their total imports from developing countries by about 1.5 percent (equivalent to almost 16 percent of trade covered by

1/ R. Erzan, and G. Karsenty, "Products Facing High Tariffs in Major Developed Market Economy Countries: An Area of Priority for Developing Countries in the Uruguay Round?," UNCTAD Discussion Paper No. 22, Geneva.

liberalization); the elimination of all tariffs on an MFN basis by the industrialized countries would lead to an overall trade expansion for developing countries of some 5 percent. Much of the expansion would come in the area of textiles and clothing, although food processing and miscellaneous manufactures would also benefit. These results are derived from a static model and could well be underestimates once the dynamic effects of improved resource allocations are taken into account.

Tariff escalation introduces trade biases, favoring the importation of raw materials rather than processed items. Owing to escalation, the effective protection afforded to processing industries in most developed countries through tariffs can be higher than the tariffs indicate. This is exacerbated by the fact that in many instances nontariff barriers also escalate from raw to processed materials; the incidence of nontariff barriers on the importation of raw cotton is low, if not zero, in most developed countries whereas cotton fabrics from low-cost suppliers are subject to the MFA.

The trade bias effects of tariff escalation are most pronounced in areas such as tropical foodstuffs and fabrics and, to some extent, in certain petrochemicals, where developing countries are the major source of the raw supplies. ^{1/} This indicates that reduced tariff escalation could yield an increase in developing country exports of processed products, particularly as studies show that import demand elasticities in the industrial countries increase with fabrication. ^{2/} If their costs remain competitive and they have access to the distribution chain, the initial expansion of exports would probably be centered on those developing countries which already have the relevant manufacturing skills, such as, Brazil, and a number of Middle Eastern and Asian middle-income countries that have a high concentration of the required raw materials. Further, in a number of other countries heavily dependent on tropical exports and with a high population base, improved access to industrial countries could trigger investment plans for the establishment of processing facilities, with consequent positive employment effects.

Employment considerations may not be as important for some Middle Eastern countries, which might elect to invest financial reserves in oil-refining and petrochemical production and distribution systems in industrial countries. Some diversification into offshore refining and distribution facilities has already taken place. Thus, Saudi Arabia recently purchased, for some US\$1 billion, a share in a number of U.S. refineries and access to gasoline stations. Such diversification, including diversification into petrochemical facilities, serves a number

^{1/} A. Yeats, "On the Analysis of Tariff Escalation: Is There a Methodological Bias Against the Interest of Developing Countries?," Journal of Development Economics, Vol. 15, No. 1, North Holland, 1984; and Fund staff estimates.

^{2/} See A. Yeats, 1984, *ibid.*

of functions. First, it provides the producers of the primary product with a secure outlet for all or part of their output. Second, it serves as a hedge against fluctuating prices: crude oil prices generally fall more rapidly than the prices of refined or petrochemical products and thus when oil prices are low, and prices of petrochemical feedstocks (oil and natural gas) are low in consequence, the offshore production and distribution investments will be relatively profitable, particularly as the cost of transporting oil is low compared with that of conveying petrochemicals. Third, diversification into offshore facilities is a hedge against protectionist measures on refined and petrochemical products by importing countries.

Sugar is an important example of tariff escalation with the average tariff for imports of sugar preparations into industrial countries being about 20 times higher than that for the raw product, giving considerable effective protection to processing plants in the developed countries. It is indicative in this respect that well over 90 percent of developing country exports in the sugar category are in the form of the raw material. These exports are hindered, however, by high nontariff barriers in many developed countries, particularly the EC, Japan, and the United States, all of which maintain some form of price support mechanism for the protection of domestic growers. These supports have encouraged the production of nonsugar sweeteners, such as high fructose corn syrup, which would not be profitable at the current free market price of sugar. As such, developing countries could gain significantly from a reduction of nontariff barriers, to improve their market access to the industrial countries for the raw product.

(ii) GSP schemes

Under most GSP schemes, "sensitive" items such as textiles, clothing and footwear are excluded from preferences, while others, such as, certain petrochemicals, receive limited GSP coverage. For example, in the EC some 140 "sensitive" products, including some petrochemicals, such as, methanol, are subject to either GSP ceilings--where the MFN tariff can be reintroduced at the request of the domestic industry once the ceilings are reached--or GSP tariff quotas--where the MFN tariff is automatically reintroduced when the quota level is reached. In the case of EC petrochemical imports from Middle Eastern exporters, the quota

level is typically reached early in the year. ^{1/} The textiles and clothing sectors, the products of which represent about 17 percent of all industrial tariff lines, account for about one half of industrial products excluded from all GSP schemes taken together. ^{2/} In 1984, the latest year for which data is available, about US\$32.5 billion of OECD imports from beneficiary countries received preferential tariff treatment under GSP schemes; this amount was equivalent to about 23 percent of all OECD dutiable imports from developing countries. ^{3/} These benefits may be affected in the future by the provisions in the schemes of some countries for (a) graduation of products of more developed suppliers, when sufficient competitiveness has been demonstrated, and (b) graduation of developing countries once specified per capita income levels have been attained.

(iii) Countervailing and antidumping duties

Industrial countries, as indicated, have had extensive resort to countervailing and antidumping investigations. Almost all investigations were on manufactured products, often against those from developing countries; in the period since 1981, almost 50 percent and 30 percent of the CVD and ADD investigations, respectively, were on products from developing countries (see Tables 9 and 10). Some 34 percent to 41 percent of investigations on developing country exports resulted in a negative finding, of no dumping or subsidization. There is evidence to suggest that investigations are sometimes used to harass foreign exporters and that the actions are used as substitutes for safeguard

^{1/} The GSP schemes of the EC, Japan, and the United States differ in their country and product coverage. For example, in fuels and petrochemicals, refined oil products, such as, gasoline and jet fuel oil, enter the EC duty free, as do most first-stage processing products based on oil or natural gas. About 5 percent of the EC's annual consumption of other petrochemicals is imported. Most of these imports enter duty free under free trade or preferential agreements with EFTA on the Mediterranean countries; the remainder is imported in some measure from the Gulf Cooperation Council countries, either under GSP ceilings or tariff quotas or subject to MFN tariff rates. Japan, by contrast, does not include refined oil products or petroleum gases in its GSP scheme. However, for many petrochemical products, such as, methanol, the Japanese scheme features a global amount by product of about 10 percent of imports, distributed on a first-come, first-served basis. The United States scheme excludes OPEC countries (except Ecuador, Indonesia, and Venezuela) and those above a certain per capita income. However, petrochemicals are generally included and are given duty free access subject to certain product graduation requirements.

^{2/} S.J. Anjaria, N. Kirmani, and A.B. Petersen, "Trade Policy Issues and Developments," Occasional Paper, No. 38, IMF, Washington, D.C., 1985.

^{3/} UNCTAD, "Review of the Implementation, Maintenance, Improvement and Utilization of the Generalized System of Preferences," TD/B/C.5/111, 1987.

measures. 1/ Further, the initiation of such cases can lead to price undertakings (not to export below a certain price) and VERs, which have negative trade effects. For example, as a result of antidumping investigations, six exporting countries agreed in November 1987 to observe a minimum price on their urea exports to the EC; in the case of Kuwait this undertaking covered 46 percent of its 1986 petrochemical exports to the EC. Saudi Arabia did not agree to such an undertaking, and the EC imposed an antidumping duty of 46 percent on EC imports of urea from Saudi Arabia, covering 11 percent of Saudi Arabia's 1986 exports of petrochemicals to the EC.

The above factors, together with their negative trade effects, bespeak the need for a restrained use of CVD and ADD investigations and duties and for very clear international disciplines in the area; only if the adverse effects of subsidies and/or dumping are severe and sudden would temporary protection against them be justified on social welfare grounds. 2/

b. Nontariff-related measures

The incidence of nontariff barriers applied by industrial countries on their nonfuel imports appears to fall somewhat more heavily on the exports of developing than on industrialized countries; in 1987 the coverage ratios were some 25 percent and 21 percent, respectively, for the nonfuel imports of industrial countries from developing and industrial economies. 3/ Exports of manufactures by developing countries are particularly affected by such measures, with the highest concentration being in steel, textiles and clothing, and footwear. In these sectors VERs are common.

Including the bilateral export restraints concluded under the MFA, a considerable portion, up to 50 percent, of world trade in textiles and clothing is managed and thus not subject to the normal forces of international trade. This affects developing countries most particularly as the preponderance of intra-developed country trade is not subject to export restraint arrangements. Since 1968, upward of 30 percent of world trade in steel has come under VERs, affecting exports from nearly all existing third country suppliers to the United States, the EC, and, most recently, Australia, as well as exports from the EC to the United States. Exports of agricultural and food products are also restrained by VERs, mainly from the more efficient producers, such as, Argentina, to the EC. In automobiles and transport equipment, as well as in electronic products, Japanese and Korean exporters limit their sales to

1/ J.M. Finger, J. and Nogues, "International Control of Subsidies and Countervailing Duties," The World Bank Economic Review, Vol. 1, No. 4, IBRD, Washington, D.C., 1987.

2/ W.M. Corden, "On Making Rules for the International Trading System," U.S. Trade Policies in a Changing World Economy, 1987, op. cit.

3/ UNCTAD, 1988, op. cit.

both the EC and the United States, while in footwear a number of OECD markets are protected by VERs with Korean and other developing country exporters.

VERs divert trade as they can create additional opportunities for some existing suppliers and new entrants (Figure 1). Typically, VERs are "leaky" when first applied in that they do not cover all sources of supply and/or allow substantial growth rates in exports, as has been the case in some bilateral agreements negotiated in the past under the MFA, from restrained suppliers to the protected market. As the domestic price of the product subject to the VER is likely to move above the world price, "leakiness" will provide an incentive, inter alia, for: (i) new entrants to invest in capacity to export to the affected market; and (ii) restrained exporters to circumvent their constraints by exporting via third countries, including by establishing capacity in those countries.

The evidence suggests that U.S. VERs have been relatively "leaky," in contrast to those of the EC. Thus, from 1980 to 1986 import penetration ^{1/} of the U.S. market increased from 4.6 percent to 7.9 percent for textiles, from 14.5 percent to 25.4 percent for clothing, and from 16.3 percent to 23.1 percent for steel. ^{2/} These higher ratios include increases in market shares especially by new entrants from developing countries. By contrast, in the EC (10) the import penetration ratio for steel rose only marginally from 1980 to 1986; ^{3/} and increases in import market shares since the late 1970s for clothing and footwear appear to have gone mainly to other industrial, particularly EC, country partners. ^{4/} In the absence of known VER protection prior to late 1985, "leakiness" cannot be tested for Japan.

Over time, the trade diversion effects of VERs tend to create pressure to broaden their country coverage. Thus, the United States negotiated VERs in 1984 with a number of new entrants from developing countries into its steel market and the MFA has progressively become more restrictive. The diversion effects also cause VERs to spread across importing countries, resulting in globally managed market-sharing arrangements, as is now largely the case for steel, and textiles and clothing. In such instances market share begins to depend as much, if not more, on negotiating strength as on comparative advantage, and investments can come to rely on the retention of managed trade for their

^{1/} Defined as imports as a percentage of domestic production plus imports minus exports.

^{2/} W.R. Cline, The Future of Trade in Textiles and Apparel, Institute for International Economics, Washington, D.C., 1987; and American Iron and Steel Institute, "Annual Statistics Report, 1986."

^{3/} OECD, The Steel Market in 1986 and the Outlook for 1987, Paris, 1987.

^{4/} C. Hamilton, "The New Protectionism and International Economic Integration," EFTA, Occasional Paper No. 21, Geneva, 1987.

profitability. These factors fundamentally change the nature of competition in an industry: VERs provide some real advantages to early and established producers, particularly in the form of rents and consequent resources for product upgrading and diversification; late starters can be quickly drawn into a VER network, as has been the case under the MFA, perhaps inhibiting development on the basis of comparative advantage and protecting thereby the position of the earlier entrants. ^{1/} All these factors make VERs difficult to dismantle as well.

With the proliferation of NTBs, liberalization of trade by OECD countries would most profoundly affect trade now covered by restrictive agreements. By one estimate, removal by industrialized countries of all barriers on imports from developing countries would increase their exports of textile and clothing exports by some 125 percent, of steel by about 62 percent, and of footwear by approximately 85 percent. ^{2/} The benefits would accrue mainly to those developing countries, such as, Brazil and Korea, that already have well-established manufacturing sectors. Other studies bear out these results. ^{3/} However, other developing countries would also benefit, especially in areas, such as, clothing where many Asian countries hold a comparative advantage. These are estimates of static effects only. A dynamic estimate would be higher as it would include the effects of increased opportunities for economies of scale, product differentiation and specialization.

IV. Trade Trends

In the 20 years to the mid-1970s, annual growth in the volume of world trade has generally exceeded that of world output, indicating a growing interdependence among nations. More recently, however, the momentum of trade expansion has slowed, with trade growing, on average, at rates only slightly above those of output. On the whole, the dynamics of growth of trade have been concentrated among industrial countries and, increasingly, between the industrial countries and the four Asian NIEs. As a group, other developing and centrally planned economies have not been drawn rapidly into the international trade network. Tables 17 through 26 present trade data for the period 1963-86. The salient features are:

^{1/} For example, the Maldives, a new entrant, has export restraint agreements with the United States since 1985 and Canada since 1986.

^{2/} S. Laird, and A. Yeats, "On the Potential Contribution of Trade Policy Initiatives for Alleviating the International Debt Crisis," UNCTAD, Reprint Series No. 66, Geneva, 1987.

^{3/} See, for example, N. Kirmani, L. Molajoni, and T. Mayer, "Effects of Increased Market Access on Exports of Developing Countries," Staff Papers, Vol. 31, No. 4, IMF, Washington, D.C., 1984.

1. The industrial countries' share of world merchandise exports, in both nominal and real terms, has grown; 1/ their share of world exports of manufactures has remained roughly constant, at about 80 percent. The shares of the United States have declined; those of Japan have grown, while those of the EC have remained relatively stable, largely underpinned by the growth of intra-EC trade. 2/ 3/

2. The developing countries' share of world merchandise exports was marginally lower in nominal terms in 1986 than it had been in 1963; in real terms, their share declined by some 25 percent over the same period. However, the share of the four Asian NIEs has risen steadily. The share of developing countries in world exports of manufactures more than doubled in the period 1963-86; almost all of this is attributable to the four Asian NIEs, which moved into the group of the world's 30 top exporters of manufactures. The aggregate data, however, disguise significant country differences. Since 1979, the average growth rate in the exports of manufactures of a number of developing countries, other than the four Asian NIEs, including Brazil, China, Indonesia, Mexico, Saudi Arabia, and Thailand, has exceeded the world growth rate. In some cases this reflects more outward-oriented policies. Brazil was able to increase its share of world exports of manufactures marginally, to 0.8 percent in 1986. In addition, since 1979 China has increased its share from about 0.3 percent to about 1 percent. 4/ On a regional basis, the shares of the African, non-NIE Asian, Latin American, and Middle Eastern groups of developing countries in world exports have declined between 1981 and 1986 (by 39 percent, 17 percent, 28 percent, and 74 percent, respectively).

3. At the sectoral level, the developing countries have gained world export shares in clothing, textiles, and steel, again mainly due to growth in the shares of the four Asian NIEs. Since 1981, coincidental with the intensification of NTBs and a slowing of the growth of world demand, the growth rates of developing country export shares of clothing and textiles and steel have fallen relative to 1973-81 period. Starting in the early 1980s trade in steel became increasingly subject to VERs

1/ The difference between nominal and real trends, in Tables 12 and 15, reflects, in part, movements in relative prices. In general, adequate price data are not available for a detailed volume analysis of trade flows. The effect of exchange rate changes on market shares is uncertain, depending on the relevant elasticities and the pass through of changes to market prices.

2/ The data used refer to the EC (10).

3/ In general, customs unions, such as, the EC, and free trade areas, such as, that proposed between Canada and the United States, can be trade-creating and liberalizing, mainly but not exclusively among, their members. However, they do divert trade and can lead to the formation of protective trading blocs, to the detriment of nonmembers.

4/ In Tables 15 through 26, which are based partly on GATT data, China is included among the centrally planned economies.

while the restrictiveness of the MFA increased in 1982. In foodstuffs the developing countries have increased their share of world exports since 1973, but their 1985 share was still significantly below that of 1963. In contrast to other developed country trading areas, the EC has increased its share of world exports since 1981 in all the above sectors, due largely to intra-EC trade developments.

4. In most other areas of trade, but particularly in the medium- to high-technology sectors, the developed countries have remained the predominant suppliers. Among the developing countries, essentially only the four Asian NIEs have made inroads into these markets. By 1983 some 25 percent of the exports of the four Asian NIEs were in the form of high-technology products, compared with less than 10 percent in 1967. 1/ 2/

An important contributory factor to the growth of intra-developed country trade has been the growth of intra-industry trade; the percentage of such trade in the total trade with the rest of the world of a group of 11 industrial countries 3/ increased from 46 percent in 1964 to 60 percent in 1985. 4/ This took place to a large extent in capital-intensive and science-based industries, for which the growth rate of exports has generally been higher than that for total exports. The growing integration of the industrial country economies has allowed them the advantages of the dynamic functions of trade, viz.: large scale production, product differentiation and specialization. Integration was aided by the significant trade liberalization, particularly in the area of manufactures, that took place in the first 30-odd postwar years. Since then the industrial countries have increased their use of NTBs but in general they retain more liberal trading systems than do the developing countries. This, together with the sharp decline in commodity prices since the early 1980s, is perhaps one reason why the growth of intra-industrial country trade has been pronounced since 1981.

Among the developing countries the four Asian NIEs have become increasingly integrated into the developed country trading network. By 1986 they accounted for about 8 percent of the imports of manufactures by industrial countries, compared with some 4 percent in 1973. 5/

1/ OECD, Structural Adjustment and Economic Performance, Paris, 1987.

2/ In most instances, however, the share of the four Asian NIEs is still relatively small. For example, in the area of road motor vehicles their 1986 share stood at 1.2 percent, compared with 0.4 percent in 1973.

3/ Australia, Belgium, Canada, France, Germany, Italy, Japan, Luxembourg, the Netherlands, the United Kingdom, and the United States.

4/ OECD, 1987, op. cit.

5/ These figures are derived from Table 21, on the assumption that the exports of the four Asian NIEs to the developed countries are a good proxy for the imports of the developed countries from the four Asian NIEs.

Moreover, by 1985 a considerable percentage of OECD imports from the four Asian NIEs was characterized by intra-industry trade and by economies of scale and extensive product differentiation. ^{1/} ^{2/} Their performance stands in marked contrast to that of the other developing countries, which in 1986 accounted for approximately 3.7 percent of industrial countries' imports of manufactures, compared with 4 percent in 1981 and 2.6 percent in 1973. The success of the four Asian NIEs is attributable in part both to the fact that they were early among the developing countries to focus on industrialization and to the fact that they have consistently maintained outward-oriented growth strategies. This allowed them to respond relatively flexibly to changes in the international economic environment. It is also the case that in areas, such as, textiles and clothing the four Asian NIEs may have been able to establish an important market base before the quota-dominated pattern of protection in industrial countries became more restrictive. By taking advantage of the higher prices in the protected markets and of the economic rents that typically result from arrangements like VERs, the four Asian NIEs have been able to upgrade and diversify their product lines. Further, the extra revenues have made it easier for them to enhance the product-mix of their economies, toward areas not covered by trade barriers.

V. Conclusions

Over the past decade or so, the benefits that developed economies have derived from adopting selective industrial policies appear to have been outweighed by the costs of those policies. Support for declining industries has assisted adjustment, but has imposed a heavy cost on consumers and taxpayers. The net effect of defensive industrial policies as implemented by many developed countries would seem to reduce the rate of return to capital, placing the economy at a competitive disadvantage in relation to countries that follow more market-oriented strategies. However, these economic costs often appear to be outweighed by the political costs of resisting protectionism, with countries sacrificing longer-term benefits for short-term compromises. A contributing cause is that the costs of protection are distributed throughout the economy, whereas the benefits tend to be concentrated and obvious in particular sectors.

^{1/} OECD, 1987, op. cit.

^{2/} The fact that developing countries have shown an increased interest in countertrade may be a function in part of their wish to integrate themselves into these dynamic aspects of trade, which include the rapid diffusion of technology; for example, by making an import contract for electronic products contingent upon domestic subcontracting of parts of the products they could draw themselves into intra-industry network if the required investment is efficient and can compete upon the completion of the import contract.

A shift in the industrial policies of industrial countries aimed at improving their competitive environment, including a liberalization of trade policies, would improve the efficiency of resource allocation and help maximize welfare. Developing countries would benefit both from the marketing opportunities that would be opened with liberalization and from the spillover of resulting higher growth rates in industrial countries. This points to the efficacy of unilateral liberalization measures as well as multilateral ones.

In some industrial countries less emphasis is being placed on domestic support policies and more on strengthening competitiveness. There appears to be some scaling down, or at least stabilizing, of the use of subsidies to the manufacturing sector, notably in Canada, where subsidies to the textiles and clothing industries are being phased out and in the EC where limits have been placed on state aids to ship-building and steel. The reliance on trade measures, especially VERs and similar arrangements, however, shows no signs of easing; in part, these measures may now be used increasingly to substitute for domestic industrial policy actions.

A number of industrial policy measures hinder developing country exports, in particular:

- tariff peaks, which are common in most industrialized countries, tend to be concentrated in areas, such as, textiles, clothing, footwear, and some petrochemicals, of export interest to developing countries; in these sectors GSP benefits are normally lower and NTB coverage higher than in others. A lowering of peaks would improve marketing opportunities of developing countries in industrial country markets;
- tariff escalation, which is also common in many industrialized countries, biases trade flows toward raw materials, inhibiting first and second stage processing in developing countries of products for which they are the primary suppliers of the raw products. Tropical foodstuffs, fabrics, and certain petrochemicals are cases in point. Reduced escalation could yield an increase in developing country exports of processed products, first, from countries with established manufacturing, but also elsewhere as it would provide greater incentive for investment in processing facilities, with its consequent positive effect on employment and growth;
- countervailing and antidumping investigations have been used extensively by a number of countries, particularly Australia, Canada, the EC, and the United States. Many of the investigations have been on exports of manufactured products from developing countries, with a significant number resulting in a negative finding; because of the way such cases often are administered, the latter tend to involve unjustifiable impediments to trade; and

- nontariff barriers in industrialized countries are more prevalent against the nonfuel exports of developing countries than those of developed countries. Voluntary export restraints and bilateral agreements under the Multifibre Arrangement particularly constrain developing country exports of textiles and clothing, areas where many developing countries make initial attempts to enter the industrial product cycle.

The trade trends show in particular that: (a) since 1981 intra-EC trade has been instrumental in increasing the EC share of world exports, particularly in clothing, textiles, steel, and foodstuffs; and (b) the steady growth in the share of developing countries in world exports of manufactures since 1963 is almost entirely accounted for by the four Asian NIEs. In the case of the EC, there have been benefits to integration, but it is perhaps significant that EC industrial support has been directed in large measure to those sectors where its share has increased.

With a few exceptions, the four Asian NIEs are almost alone among developing countries in having integrated themselves into the intra-industry network of the OECD countries. They have benefited in particular from consistent outward-oriented growth strategies and from being early starters in the process of industrialization. This facilitated the diversification and expansion of their industrial sectors, allowing an increase in their range of exportable manufactures, often in new areas where protection in industrial countries is more recent. Many other developing countries have lagged in the above process, in part because their focus on outward-oriented growth strategies was not always clear, especially with regard to resource allocation and the investment climate. However, it is also the case that limitations on access to developed country markets have constrained their export opportunities, in particular for those countries whose comparative advantage is commodity-based or lies in the manufacture of traditional goods, such as, textiles. As a result, the growth prospects of these countries have been adversely affected, particularly those of countries with large labor forces, and a shift to more export-oriented adjustment and growth strategies may have been slowed in a number of developing countries.

The Uruguay Round offers scope for lessening impediments to trade. Full utilization of this scope requires the active participation of all parties to the Round. The resulting reduction of trade barriers would benefit developing countries materially, but clearly is also in the self-interest of developed countries. To take full advantage of such liberalization, many developing countries need to pursue growth-oriented adjustment policies, based on exposure to the international forces of competition and hospitable to the inflow of overseas investment and technology.

Table 1. Subsidies as Percent of GDP 1/ 2/

Country	1952	1956	1960	1964	1968	1972	1976	1980	1982	1983	1984	1985
Italy	0.89	1.30	1.51	1.23	1.67	2.29	2.60	3.02	3.69	3.33	3.49	3.43
France	1.71	2.71	1.62	2.03	2.62	1.99	2.68	2.51	2.71	2.80	3.00	3.01
Canada	0.41	0.39	0.81	0.85	0.87	0.83	1.87	2.68	2.50	2.49	2.80	2.48
United Kingdom	2.68	1.76	1.93	1.56	2.06	1.82	2.72	2.50	2.15	2.13	2.44	2.22
Germany	0.65	0.20	0.79	0.99	1.44	1.48	1.97	2.06	1.84	1.90	2.07	2.01
Japan	0.79	0.26	0.34	0.65	1.11	1.12	1.31	1.50	1.40	1.42	1.28	1.15
United States	0.11	0.20	0.25	0.44	0.50	0.59	0.33	0.40	0.49	0.66	0.61	0.58

Source: OECD, National Accounts, Vol. 1, Main Aggregates, various issues, Paris.

1/ Countries listed in order of amount of subsidies a percentage of GDP in 1985.

2/ The data do not include subsidies such as tax concessions. In Germany total tax concessions to enterprises averaged about 1.8 percent of GDP per annum in the period 1975 to 1985 while in the United States federal tax concessions to industry were in the order of 1.5 percent of GDP a year during 1975-87; similar data is not available for other countries.

Table 2. Government R and D Funding of Manufacturing Industry

	United States	United Kingdom	France	Germany	Japan
Government funding as percentage of total R and D expenditure (1983)	31.6	31.8 <u>2/</u>	23.6	13.6 <u>2/</u>	1.5
Government funding as percentage of total R and D expenditure in high R and D intensity sectors <u>1/</u> (1983)	42.7	44.0	36.2	19.0	0.9
Share of high R and D intensity sectors <u>1/</u> in total government funding (1983)	94.8	96.3	91.3	67.0	25.7
Defense R and D expendi- ture as percentage of total government funding (1983)	64.3	49.6	32.7	9.6	2.4
Share of government- funded R and D performed in the public sector (1983)	26.0	39.0	47.0	32.0	--

Source: OECD, Structural Adjustment and Economic Performance,
Paris, 1987.

1/ Aerospace, computers, electronics (including telecommunications),
pharmaceuticals, scientific instruments and electrical engineering.

2/ 1981.

Table 3. Post-Tokyo Round MFN Tariff Averages
for Major Sectors and Share of Imports from Developing Countries in the EC, Japan, and the United States, 1984

(In percent)

Sector	EC		Japan		United States	
	Tariff average, <u>1/</u>	Share of developing countries in total imports, <u>2/</u>	Tariff average, <u>1/</u>	Share of developing countries in total imports	Tariff average, <u>1/</u>	Share of developing countries in total imports
Food	13.8	55.4	19.5	36.2	7.1	55.6
Agricultural raw materials	3.3	30.5	2.3	39.4	1.7	21.0
Mineral fuels	3.4	65.1	3.0	88.9	1.0	68.8
Ores and metals	4.0	31.2	3.9	46.1	3.8	23.8
Manufactures	7.0	20.3	6.7	27.9	6.7	28.0
Of which:						
Chemicals	4.2	14.1	6.0	16.6	5.9	15.6
Textiles and clothing	10.5	60.6	10.5	75.6	10.3	70.0
Machinery, transport equipment	4.7	10.2	4.6	15.3	3.5	19.1
Other manufactures	5.2	19.0	6.1	31.0	6.2	41.1
All sectors	7.8	40.0	8.0	58.3	6.2	36.9

Source: Erzan, R. and Karsenty, G. "Products Facing High Tariffs in Major Developed Market Economies: An Area of Priority for Developing Countries in the Uruguay Round," UNCTAD Discussion Paper No. 22, Geneva.

1/ Arithmetic averages of post-Tokyo Round MFN tariffs, excluding tariff lines for which data were not available, which were 11.6 percent of total tariff lines in the case of the EC and less than 1 percent for both Japan and the United States. About 95 percent of the excluded EC tariff lines were in the food sector, with most pertaining to variable levies.

2/ Excluding intra-EC trade.

Table 4. MFN Tariff Rates in the EC, Japan, and the United States for Selected Petrochemicals in 1988 ^{1/}

(In percent, or as indicated)

Product	Processing Stage	EC	Japan	United States
Ethylene, propylene butylene, and butadiene	Primary	--	5.8	--
Methanol	Primary	13.0	4.9	18.0
Toluene, benzene	Primary	--	3.7	--
Acetic acid	Secondary	16.8	3.0	1.8
Butanols	Secondary	6.6	10.5	8.8
Diethylene glycol	Secondary	8.0	7.2	12.3
Monoethylene glycol	Secondary	13.0	12.0	12.0
Polypropylene	Secondary	12.5	¥32/Kg (~17%)	12.5
Styrene	Secondary	6.8	8.0	7.4
ABS plastics	Tertiary	12.5	4.6	\$0.7/Kg+9.4%
Ethyl acetate	Tertiary	11.5	5.6	3.7
Polyvinyl acetate	Tertiary	12.0	5.8	4.0
P.V.C.	Tertiary	12.5	4.6	10.1
Vinyl acetate	Tertiary	11.5	5.6	3.8

^{1/} Source: EC Commission.

Table 5. Escalation of Tariffs and Nontariff Barriers
in Developed Countries 1/ 2/

(In percent)

Processing Chain	Average Tariff <u>3/</u>	Nontariff Barrier Import Coverage Ratios	Developing Countries' Exports as a Share of Their Total Exports in the Category	Developing-Country Share of World Exports
Meat				
Fresh and frozen	6.2	34.0	78.9	13.4
Prepared meat	8.4	41.3	21.1	23.9
Fish				
Fresh and frozen	4.3	56.9	83.2	42.6
Fish preparation	4.1	7.0	16.8	37.9
Vegetables				
Fresh vegetables	6.9	42.6	72.7	34.6
Vegetable preparations	13.2	16.4	22.3	24.4
Fruit				
Fresh fruit	7.4	27.6	72.8	41.1
Fruit preparations	17.1	9.1	27.2	36.2
Vegetable oils				
Oilseeds	--	1.9	35.2	12.9
Oils	4.4	5.8	64.8	83.0
Tobacco				
Unmanufactured	1.2	14.0	83.0	46.3
Manufactures	18.1	30.0	17.0	6.5
Sugar				
Sugar and honey	1.0	51.0	98.3	69.0
Sugar preparations	20.0	19.0	1.7	16.4
Cocoa				
Beans, powder, paste	1.0	--	96.3	76.0
Chocolate and products	3.0	1.0	3.7	5.9
Rubber				
Crude rubber	--	--	82.0	55.2
Manufactures	3.9	3.3	18.0	8.2
Leather				
Hides and skins	0.1	--	20.0	13.2
Leather	2.7	1.7	64.0	33.6
Manufactures	7.2	11.7	16.0	29.8
Wood				
Rough wood	--	--	39.0	48.4
Shaped wood	0.2	0.2	25.1	18.6
Veneer and plywood	1.7	6.6	25.1	37.7
Manufactures	3.5	2.7	10.8	22.9
Cotton				
Raw cotton	--	--	43.3	40.0
Cotton yarn	3.0	2.2	22.5	45.4
Cotton fabrics	5.8	62.1	34.2	32.7
Iron				
Iron ore	--	4.9	42.3	44.3
Pig iron	2.2	8.7	12.7	27.1
Ingots and shapes	2.2	8.7	10.3	13.5
Bars and plates	3.4	18.7	34.7	8.9
Other metallic ores				
Nonferrous ores	--	4.9	44.5	61.5
Wrought and unwrought metals	2.4	1.0	55.5	31.2
Phosphates				
Natural phosphates	--	--	55.9	55.5
Fertilizer	3.2	13.7	44.1	12.6
Petroleum				
Crude petroleum	0.5	11.1	83.8	84.1
Refined petroleum	1.0	10.7	16.2	42.7

Source: A. Yeats, "The Escalation of Trade Barriers," The Uruguay Round: A Handbook on the Multilateral Trade Negotiations, J. Michael Finger and Andrzej Olechowski, editors, IBRD, Washington, D.C. 1987.

1/ The countries included are Australia, Austria, EC (10), Finland, Japan, Norway, New Zealand, Sweden, Switzerland, and the United States.

2/ The table is based on 1982 trade data.

3/ The tariff rates are the trade weighted averages of rates actually applied.

Table 6. Import Coverage Ratios of all Selected Nontariff Measures 1/ Applied by Selected Developed Market-Economy Countries 2/ in the Period 1981-87

(In percent)

	Import Coverage Ratios <u>3/</u>						
	1981	1982	1983	1984	1985	1986	1987
All products	24.2	24.6	24.8	18.7	19.5	20.6	20.8
Fuels	40.9	40.9	40.9	15.2	15.2	15.2	15.2
All except fuels	18.7	19.3	19.5	19.9	20.9	22.3	22.6
All food items	35.3	36.2	36.6	38.7	39.5	38.2	38.2
Food and live animals	41.2	42.3	42.9	44.8	45.7	44.2	44.1
Oil seeds and nuts	3.2	3.2	3.2	3.2	2.7	4.8	4.8
Animal and vegetable oil	7.1	7.1	7.1	7.1	7.1	7.9	7.9
Agricultural raw materials	3.0	10.5	10.5	3.9	4.1	11.6	11.6
Ores and metals	15.0	17.0	16.1	21.4	22.2	24.0	23.4
Iron and steel	36.0	42.7	35.8	52.7	58.2	63.4	62.2
Nonferrous metals	3.8	3.7	7.3	6.5	4.0	4.3	4.4
Manufactures	18.1	18.1	18.4	18.3	19.6	21.1	21.5
Chemicals	12.2	11.4	11.8	11.9	12.1	12.5	13.4
Leather	8.6	8.6	8.6	12.2	12.9	12.9	12.1
Textiles	38.1	36.5	39.8	39.5	41.6	41.2	41.2
Clothing	59.6	60.4	60.5	60.9	60.5	60.2	59.6
Footwear	80.5	40.7	40.7	25.6	25.6	25.6	25.6

Source: UNCTAD, "Protectionism and Structural Adjustment," TD/B/L160/Add.1, Geneva, 1988.

1/ Includes certain paratariff measures, import deposits and surcharges, variable levies, antidumping and countervailing actions, quantitative restrictions (including prohibitions, quotas, nonautomatic licensing, state monopolies, voluntary export restraints and restraints under MFA and similar textile arrangements), import surveillance, automatic licensing and price control measures.

2/ Austria, Canada, EEC (10), Finland, Japan, New Zealand, Norway, Switzerland, and the United States.

3/ Ratios have been computed using 1984 import trade weights. Computations were made at the tariff-line level and results aggregated to relevant product group levels.

Table 7. Voluntary Export Restraints (VERs), September 1987

Table 7. Voluntary Export Restraints (VERs), September 1987			
Major Known VERs (Excluding the MFA)		Restrained Exporters (by Number of Arrangements) ^{1/}	Protected Markets (by Number of Arrangements) ^{1/}
Total	135	Japan (25); Korea (24); OILDCs (43); OICs (23); E. Eur. (20)	EC (69) ^{2/} ; United States (48); Japan (6); OICs (12)
Steel	38	EC (4); OICs (9); LDCs (14); E. Eur. (11)	United States (25); EC (12); OICs (1)
Agricultural and food products ^{3/}	20	ICs (8); LDCs (7); E. Eur. (5)	EC (19); Japan (1)
Automobiles and transport equipment	14	Japan (13); Korea (1)	EC (11); United States (1); OICs (3)
Textiles and clothing	28	Korea (3); OILDCs (22); E. Eur. (3)	United States (11); EC (7); Japan (5); OICs (5)
Electronic products	11	Japan (6); Korea (5)	United States (11); EC (7); Japan (5); OICs (5)
Footwear	8	Korea (4); OILDCs (4)	EC (8); United States (3)
Machine tools	7	Japan (4); OICs (2); LDCs (1)	EC (5); OICs (3)
Other	9	Korea (5); LDCs (1); ICs (2); E. Eur. (1)	EC (3); United States (4)
			EC (4); United States (3); OICs (2)

ICs are developing countries; LDCs are other industrialized countries; OICs are other industrialized countries; LDCs are other industrialized countries; OICs are other industrialized countries; LDCs are other industrialized countries; OICs are other industrialized countries; LDCs are other industrialized countries; OICs are other industrialized countries; LDCs are other industrialized countries; OICs are other industrialized countries; LDCs are other industrialized countries; OICs are other industrialized countries; LDCs are other industrialized countries; OICs are other industrialized countries; LDCs are other industrialized countries; OICs are other industrialized countries; LDCs are other industrialized countries; OICs are other industrialized countries; LDCs are other industrialized countries; OICs are other industrialized countries; LDCs are other industrialized countries; OICs are other industrialized countries; LDCs are other industrialized countries; OICs are other industrialized countries; 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Source: GATT, "Review of Developments in the Trading System," L/6289, Geneva, 1987.

^{1/} EC is the European Community; E. Eur. is East Europe; OILDCs are other developing countries; OICs are other industrialized countries; LDCs are developing countries; ICs are industrialized countries other than the EC.

^{2/} Including 20 arrangements involving individual EC member states.

^{3/} Including three discriminatory import quota arrangements.

Table 8. Voluntary Export Restraints (VERs), May 1988

Major Known VERs (Excluding the MFA)		Restrained Exporters (by Number of Arrangements) <u>1/</u>	Protected Markets (by Number of Arrangements) <u>1/</u>
Total	253	Japan (35); Korea (32); OILDCs (88); OICs (54); E. Eur. (44)	EC (137) <u>2/</u> ; United States (60); Japan (12); OICs (43); E. Eur. (1)
Steel	47	EC (5); OICs (15); LDCs (17); E. Eur. (10)	United States (30); EC (15); OICs (2)
Agricultural and food products <u>3/</u>	54	ICs (28); LDCs (17); E. Eur. (9)	EC (40); E. Eur. (1); Japan (3); OICs (10)
Automobiles and transport equipment	17	Japan (16); Korea (1)	EC (13); United States (2); OICs (2)
Textiles and clothing	71	Korea (5); OILDCs (46); E. Eur. (20)	EC (21); United States (14); Japan (9); OICs (27)
Electronic products	19	Japan (8); Korea (6); OILDCs (5)	EC (16); United States (3)
Footwear	14	Korea (6); OILDCs (5); E. Eur. (3)	EC (11); OICs (3)
Machine tools	7	Japan (4); OICs (2); LDCs (1)	EC (3); United States (4)
Other	24	Korea (6); OILDCs (5) ICs (11); E. Eur. (2)	EC (18); United States (4); OICs (2)

Source: GATT, "Review of Developments in the Trading System," C/W/548 Geneva, 1988.

1/ EC is the European Community; E. Eur. is East Europe; OILDCs are other developing countries; OICs are other industrialized countries; LDCs are developing countries; ICs are industrialized countries. The term "other" in OILDC and OIC refers to countries other than those identified in the particular classification (e.g., OICs under "footwear" refer to all industrial countries other than the EC).

2/ Including 50 arrangements involving individual EC member states.

3/ Including 19 discriminatory import quota arrangements.

Table 9. Industrial Countries: Antidumping Investigations and Actions, 1981-86 ^{1/}

	1981		1982		1983		1984		1985		1986 ^{2/}		1987 ^{2/} First Half	
	Investi- gations	Actions	Investi- gations	Actions	Investi- gations	Actions	Investi- gations	Actions	Investi- gations	Actions	Investi- gations	Actions	Investi- gations	Actions
Australia	49	28	77	47	80	58	56	36	63	30	63	10	11	—
Industrial countries	34	14	55	25	59	44	30	26	38	15	35	7	8	—
Developing countries	15	11	20	20	21	13	21	10	19	12	20	3	3	—
Centrally planned economies	—	3	2	2	—	1	5	—	6	3	8	—	—	—
Canada	23	13	72	21	36	41	31	16	36	27	55	45	34	36
Industrial countries	12	8	54	10	27	29	20	9	18	16	21	18	21	20
Developing countries	8	1	15	7	7	10	8	5	12	8	30	17	10	12
Centrally planned economies	3	4	3	4	2	2	3	2	6	3	4	10	3	4
EC	47	16	55	42	36	45	48	31	45	12	37	21	10	8
Industrial countries	9	18	18	9	11	12	16	9	9	9	11	9	2	3
Developing countries	3	5	15	4	9	12	5	6	16	1	8	—	4	1
Centrally planned economies	35	3	22	29	16	21	27	16	20	2	8	12	4	4
United States	14	4	61	45	47	15	71	25	65	53	70	50	47	43
Industrial countries	7	3	47	41	27	9	32	8	19	19	30	15	32	25
Developing countries	4	—	13	3	19	6	23	17	41	20	34	32	13	10
Centrally planned economies	3	1	1	1	1	—	16	—	5	14	6	3	2	8
Total	133	61	265	155	199	159	206	108	209	122	225	126	102	87
Industrial countries	62	33	174	85	124	94	98	52	84	59	97	49	63	48
Developing countries	30	17	63	34	56	41	57	38	88	41	92	52	30	23
Centrally planned economies	41	17	28	36	19	24	51	18	37	22	26	25	9	16

Sources: J.M. Finger, and A. Olechowski, *The Uruguay Round: A Handbook on the Multilateral Trade Negotiations*, IERD, Washington, D.C., 1987; "Semi-Annual Reports on Antidumping and Subsidies Measures," various issues, Geneva.

^{1/} The countries listed have initiated virtually the totality of antidumping investigations undertaken worldwide. Actions taken include the imposition of definitive duties and minimum price undertakings by exporting countries. Investigations include those opened in the context of reviewing an existing antidumping duty or after allegations of breach of an undertaking.

^{2/} The data are based on actions reported by signatories to the GATT Committees on Subsidies and Antidumping Practices, which exclude the actions taken against nonsignatories.

Table 10. Industrial Countries: Countervailing Investigations and Actions, 1981-86 ^{1/}

	1981		1982		1983		1984		1985		1986 2/ First Half	
	Investi- gations	Actions	Investi- gations	Actions	Investi- gations	Actions	Investi- gations	Actions	Investi- gations	Actions	Investi- gations	Actions
Australia	—	—	3	—	7	9	6	1	3	1	1	2
Industrial countries	—	—	3	—	7	9	5	1	3	1	1	2
Developing countries	—	—	—	—	—	—	1	—	—	—	—	—
Centrally planned economies	—	—	—	—	—	—	—	—	—	—	—	—
Canada	—	3	1	—	3	—	2	2	2	2	—	1
Industrial countries	—	3	1	—	3	—	2	2	1	1	—	1
Developing countries	—	—	—	—	—	—	—	—	1	1	—	—
Centrally planned economies	—	—	—	—	—	—	—	—	—	—	—	—
EC	1	1	3	—	2	3	1	1	—	—	—	—
Industrial countries	—	—	1	—	1	1	—	1	—	—	—	—
Developing countries	1	1	2	—	1	2	1	—	—	—	—	—
Centrally planned economies	—	—	—	—	—	—	—	—	—	—	—	—
Japan (Industrial countries)	—	—	—	—	1	—	—	—	—	—	—	—
United States	10	6	124	80	21	21	50	18	40	24	28	28
Industrial countries	6	1	85	61	3	3	14	2	12	6	8	10
Developing countries	4	5	39	19	16	18	34	16	27	17	20	18
Centrally planned economies	—	—	—	—	2	—	2	—	1	1	—	—
Total	11	7	131	80	34	33	59	22	45	27	29	30
Industrial countries	6	1	90	61	15	13	21	6	16	8	9	12
Developing countries	5	6	41	19	17	20	36	16	28	18	20	18
Centrally planned economies	—	—	—	—	2	—	2	—	1	1	—	—

Sources: J.M. Finger, and A. Olechowski, 1987, op. cit.; and GATT, "Semi-Annual Reports on Antidumping and Subsidies Measures," various issues, Geneva.

^{1/} The countries listed have initiated virtually the totality of countervailing investigations undertaken by individual countries. Actions taken include the imposition of definitive duties and minimum price undertakings by exporting countries. Investigations include those opened in the context of reviewing an existing countervailing duty or after allegations of breach of an undertaking.

^{2/} The data are based on actions reported by the signatories to the GATT Committee on Subsidies and Antidumping Practices, which exclude the actions taken against nonsignatories.

Table 11. Subsidy Shares by Destination and in Total Officially Supported Export Credits by the OECD Countries 1/

(In Percent)

	1979	1980	1981	1982	1983	1984	1985
OECD	6.7	13.4	9.9	10.5	4.0	9.5	2.2
NICs	35.4	31.4	26.6	20.8	21.8	28.3	10.3
CPE	26.2	13.2	13.2	11.8	12.8	5.9	1.1
OPEC	11.2	5.0	4.4	4.4	12.1	28.0	22.5
LDCs	20.4	36.9	45.9	52.5	49.3	28.3	63.9
Subsidy shares (all areas)	14.2	19.2	27.5	22.2	15.8	25.4	12.0

Source: OECD, Structural Adjustment and Economic Performance, Paris, 1987.

1/ Subsidies are calculated as the net present value of credits using actual credit terms and estimated market terms. Data pertain to officially supported credits of over three years maturity. They do not include the aid component of tied aid credits. Thus, this table gives the subsidy element in officially supported non-aid export credits.

Table 12. Motor Vehicles: Impact of Import Restrictions on Japanese Cars in Four Countries 1/

	United States	Canada	France	Great Britain
Nature of restrictions	Voluntary export restraint	Voluntary export restraint	3 percent market share limitation	11 percent market share limitation
Overall cost to consumers	US\$3.25 to US\$5 billion per year	Can\$ 199 to Can\$ 913 million	F 625 to F 1,800 million	Not available
Increase in transaction prices	US\$1,300 for Japanese cars US\$660 for domestic cars	Can\$ 900 to Can\$ 1,500 for Japanese cars Can\$ 0 to Can\$ 750 on North American cars	6 percent on Japanese cars	10 percent on Japanese cars
Impact on Japanese car sales	Decrease by 1 million cars in 1985	Decrease by 44,000 to 55,000 cars	Decrease by 70,000 to 85,000 cars in 1983 and 1985 respectively <u>1/</u>	Decrease by 123,000 cars per year
Additional sales to domestic producers	300,000 to 700,000 cars in 1985	At most 39,000 cars	10,000 cars	23,000 to 25,000 <u>2/</u>
Additional profits of domestic producers	US\$550 to US\$1,290 million in 1985	Can\$ 44 million	FF 35 million	Not available
Number of jobs saved in the automobile sector	20,000 to 30,000	880 at most	500 to 3,600	2,000 to 4,000
Cost to the consumer of each job saved	US\$93,000 to US\$250,000	Can\$ 200,000	FF 0.5 to FF 1.25 million	Not available

Source: OECD, The Costs of Restricting Imports: The Automobile Industry, (Paris, 1987).

Table 13. Output and Employment Trends in Selected Sectors in the EC and the United States

<u>Steel</u>	<u>EC 1/</u>		<u>United States</u>	
	<u>Output 2/</u> (In millions of tons)	<u>Employment 2/</u> (In thousands)	<u>Output 2/</u> (In millions of tons)	<u>Employment 2/</u> (In thousands)
1973	150.1	800.4	136.8	521.4
1979	140.2	687.8	123.7	478.5
1982	111.4	541.1	67.7	323.6
1986	112.9	416.1	73.8	220.4
<u>Road Motor Vehicles</u>	<u>EC 3/</u>		<u>United States</u>	
	<u>Output 4/</u> (In millions of units)	<u>Employment 5/</u> (Index:1980=100)	<u>Output 4/</u> (In millions of units)	<u>Employment 5/</u> (Index: 1980=100)
1973	12,547	...	12,681	124.8
1979	12,221	100.0	11,475	117.9
1982	10,982	92.2	6,985	88.1
1986	12,100	90.2	11,317	98.9
<u>Textiles</u>	<u>EC 6/</u>		<u>United States</u>	
	<u>Output 5/</u> (Production Index, 1980=100)	<u>Employment 5/</u> (Index:1980=100)	<u>Output 5/</u> (Production Index, 1980=100)	<u>Employment 5/</u> (Index: 1980=100)
1973	103.4	138.4	103.1	119.5
1979	101.8	102.3	104.1	103.9
1982	93.0	86.3	89.7	91.0
1986	99.0	78.8 <u>7/</u>	119.6	84.5 <u>7/</u>
<u>Clothing</u>	<u>EC 6/</u>		<u>United States</u>	
	<u>Output 5/</u> (Production Index, 1980=100)	<u>Employment 5/</u> (Index:1980=100)	<u>Output 5/</u> (Production Index, 1980=100)	<u>Employment 5/</u> (Index:1980=100)
1973	104.0	116.7	92.6	105.5
1979	103.0	102.2	106.5	98.9
1982	92.2	84.4	85.2	88.0
1986	98.3	76.7 <u>7/</u>	107.4	76.9 <u>7/</u>
<u>Shipbuilding</u>	<u>EC</u>		<u>North America</u>	
	<u>Output 8/</u> (In thousands of gross register tons)	<u>Employment 5/</u> (Index:1980=100)	<u>Output 8/ 9/</u> (In thousands of gross register tons)	
1976	5,734	168.1 <u>10/</u>	587	
1980	2,944	100.0	500	
1983	3,358	88.7	401	
1986	1,901	59.1	177	

1/ EC (9) until 1979; thereafter EC (10).

2/ OECD, "The Steel Market in 1986 and the Outlook for 1987," Paris, 1987.

3/ EC (10).

4/ GATT, International Trade, various issues, Geneva; the EC data point for 1986 is estimated from GATT data for the EC (12).

5/ Staff estimates, based on GATT and OECD data.

6/ EC (9) for 1973 to 1980; EC (10) for 1981 to 1984; EC (12) from 1985 onwards.

7/ The number given is for 1985.

8/ OECD, Press Release, various issues.

9/ Employment data is available only for shipbuilding and repairing.

10/ The number given is for 1975.

Table 14. Direction of Merchandise Exports
by Country Groupings, 1963-86 1/ 2/

(In percent)

	1963	1973	1977	1981	1985	1986
From developed countries	100.0	100.0	100.0	100.0	100.0	100.0
To: Developed countries	75.3	77.7	70.7	69.2	75.0	77.3
Developing countries	21.1	17.7	24.5	26.0	19.9	18.3
Centrally planned economies	3.6	4.6	4.8	4.8	5.1	4.4
From developing countries	100.0	100.0	100.0	100.0	100.0	100.0
To: Developed countries	73.7	74.5	76.0	70.5	67.2	67.4
Developing countries	21.0	20.8	19.9	25.8	26.1	25.8
Centrally planned economies	5.3	4.6	4.1	3.7	6.7	6.7
From four Asian NIEs	...	100.0	100.0	100.0	100.0	100.0
To: Developed countries	...	74.3	67.3	61.4	64.5	68.5
Developing countries	...	24.2	28.7	33.0	27.7	25.1
Centrally planned economies	...	1.5	4.1	5.5	7.8	6.5
From other developing countries	...	100.0	100.0	100.0	100.0	100.0
To: Developed countries	...	74.6	77.2	72.1	68.1	67.0
Developing countries	...	20.2	18.7	24.5	25.5	26.2
Centrally planned economies	...	5.2	4.1	3.4	6.4	6.8
From centrally planned economies	100.0	100.0	100.0	100.0	100.0	100.0
To: Developed countries	20.5	27.4	28.1	31.1	28.6	25.7
Developing countries	13.2	15.4	17.0	19.9	18.4	18.9
Centrally planned economies	66.3	57.2	54.8	49.0	53.0	55.4

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates

1/ Based on nominal U.S. dollar values.

2/ Numbers may not add up due to rounding.

Table 15. Shares in World Textiles Exports, 1963-86 1/

(In percent)

	1963	1973	1977	1981	1985	1986
Total exports	100.0	100.0	100.0	100.0	100.0	100.0
Developed countries	78.2	75.1	74.1	67.3	64.7	65.1
EC	57.4	47.2	45.2	38.1	42.0	44.0
Intra-EC	28.2	27.4	26.8	22.7	25.9	28.0
Japan	15.5	10.5	10.9	10.6	9.0	8.2
U.S.A.	8.4	5.2	5.8	6.6	4.3	3.9
Other developed countries	5.3	12.2	12.3	12.1	9.4	9.1
Developing countries	15.3	17.3	18.1	23.0	24.7	...
Four Asian NIEs	...	6.8	8.0	11.2	15.4	16.0
Other developing countries	...	10.6	10.2	11.8	9.3	...
Centrally planned economies	6.5	7.5	7.8	9.6	10.6	...

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates.

1/ Based on nominal U.S. dollar values.

Table 16. GSP Schemes in "High Tariff" and Other Items
in the EC, Japan, and the United States, 1984 ^{1/}

(In percent)

Post-Tokyo MFN Tariff	Percentage of Tariff-Lines Subject to GSP	Average GSP Rate <u>2/</u>	Average Post-Tokyo MFN Tariff Rates		
			For Tariff-Lines Subject to GSP	For Tariff-Lines Not Subject to GSP	For All Tariff-Lines
<u>EC</u>					
"High tariff" items (above 10 percent)	69.3	2.6	15.1	20.1	16.6
Lower tariff items (10 percent or less)	77.9	0.1	5.7	2.2	4.9
All <u>3/</u>	67.5	0.7	7.8	7.6	7.8
<u>Japan</u>					
"High tariff" items (above 10 percent)	62.7	6.5	16.7	34.9	23.5
Lower tariff items 10 percent or less)	70.8	0.3	5.6	2.7	4.8
All <u>3/</u>	69.4	1.2	7.4	9.4	8.0
<u>The United States</u>					
"High tariff" items (above 10 percent)	23.6	—	17.7	17.8	17.8
Lower tariff items (10 percent or less)	75.0	—	4.7	3.2	4.0
All	51.2	—	5.7	6.7	6.2

Source: UNCTAD, "Protectionism and Structural Adjustment," TD/B/1160/Add.1, Geneva, 1988.

^{1/} The GSP preferences presented pertain to 1984 and do not take into account deeper preferences granted to least developed countries.

^{2/} Arithmetic averages, excluding tariff-lines for which rates were not available.

^{3/} Figures for "all" items in the first two columns include also those tariff-lines for which post-Tokyo MFN tariff rates were not available.

Table 17. Shares in World Merchandise Exports, 1963-86 1/

(In percent)

	1963	1973	1977	1981	1985	1986 <u>2/</u>
Total exports	100.0	100.0	100.0	100.0	100.0	100.0
Developed countries	67.6	70.8	64.6	63.0	66.3	69.6
EC <u>3/</u>	33.7	36.7	33.7	30.9	31.1	34.5
Intra-EC	15.2	19.8	17.1	15.8	17.0	19.7
Japan	3.5	6.4	7.2	7.8	9.1	9.9
United States	15.7	12.0	10.2	11.5	10.7	9.7
Other developed countries	14.6	15.8	13.5	12.8	15.3	15.6
Developing countries	20.3	19.2	25.7	27.6	22.9	19.5
Four Asian NIEs <u>4/</u>	1.5	2.9	3.1	4.3	5.9	6.3
Other developing countries	18.8	16.4	22.6	23.4	17.0	13.3
Centrally planned economies <u>5/</u>	12.1	10.0	9.7	9.4	10.8	10.8

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates.

1/ Based on nominal U.S. dollar values.

2/ The most recent year for which comprehensive data are available.

3/ EC 10: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, and the United Kingdom.

4/ Hong Kong, Korea, Singapore, and Taiwan Province of China.

5/ Excluding Yugoslavia.

Table 18. Shares in World Exports of Manufactures, 1/ 1963-86 2/

(In percent)

	1963	1973	1977	1981	1985	1986
Total exports	100.0	100.0	100.0	100.0	100.0	100.0
Developed countries	80.9	83.1	82.6	80.8	79.0	79.6
EC	44.0	46.5	45.0	40.1	39.9	42.6
Intra-EC	20.6	22.8	20.9	18.9	20.3	23.0
Japan	...	10.0	11.9	13.3	14.2	14.1
United States	...	12.3	12.0	13.9	12.0	10.3
Other developed countries	...	14.3	13.8	13.4	12.8	12.6
Developing countries	5.8	6.9	8.0	10.7	12.2	11.8
Four Asian NIEs	...	3.7	4.2	6.2	7.9	7.9
Other developing countries	...	3.2	3.8	4.5	4.2	3.9
Centrally planned economies	13.3	10.0	9.3	8.6	8.9	8.6

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates.

1/ SITC categories 5 through 8 minus 68.

2/ Based on nominal U.S. dollar values.

Table 19. Shares in World Merchandise Exports,
in Terms of Constant 1980 U.S. Dollars, 1963-86 1/

(In percent)

	1963	1973	1977	1981	1985	1986
Total exports	100.0	100.0	100.0	100.0	100.0	100.0
Developed countries	50.4	55.7	59.5	65.0	67.1	63.9
EC	26.3	31.0	33.5	33.7	34.1	32.7
Intra-EC	11.8	16.7	16.9	17.3	18.6	18.6
Japan	2.4	4.4	6.1	7.2	8.2	7.6
United States	10.1	8.7	8.6	10.6	8.9	8.6
Other developed countries	11.5	11.6	11.3	13.5	15.9	15.1
Developing countries	31.2	29.2	29.4	26.1	22.4	23.2
Four Asian NIEs	0.8	1.8	2.7	4.1	5.4	5.9
Other developing countries	30.4	27.5	26.7	21.9	17.0	17.3
Centrally planned economies	18.5	15.1	11.1	8.9	10.6	12.9

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates.

1/ Numbers may not add up due to rounding.

Table 20. Direction of Exports of Manufactures
by Country Groupings, 1963-86 1/ 2/

(In percent)

	1963	1973	1977	1981	1985	1986
From developed countries	100.0	100.0	100.0	100.0	100.0	100.0
To: Developed countries	71.9	76.7	69.9	67.0	73.9	76.8
Developing countries	24.8	18.9	25.1	28.4	20.8	18.6
Centrally planned economies	3.3	4.4	5.0	4.5	5.3	4.6
From developing countries	100.0	100.0	100.0	100.0	100.0	100.0
To: Developed countries	65.7	68.4	63.5	60.2	66.4	69.9
Developing countries	31.8	28.4	34.2	37.6	28.1	24.7
Centrally planned economies	2.4	3.2	2.3	2.2	5.5	5.4
From four Asian NIEs	...	100.0	100.0	100.0	100.0	100.0
To: Developed countries	...	78.3	70.6	64.8	67.4	71.0
Developing countries	...	20.3	26.8	31.8	24.6	22.7
Centrally planned economies	...	1.4	2.6	3.4	8.0	6.3
From other developing countries	...	100.0	100.0	100.0	100.0	100.0
To: Developed countries	...	57.0	55.5	53.9	64.6	67.8
Developing countries	...	37.7	42.5	45.7	34.6	28.8
Centrally planned economies	...	5.3	2.0	0.4	0.8	3.4
From centrally planned economies	100.0	100.0	100.0	100.0	100.0	100.0
To: Developed countries	20.5	27.4	28.1	31.1	28.6	25.7
Developing countries	14.8	13.3	15.2	21.3	18.4	18.1
Centrally planned economies	74.0	70.5	67.9	60.5	63.9	62.9

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates

1/ Based on nominal U.S. dollar values.

2/ Numbers may not add up due to rounding.

Table 21. World Merchandise Exports Matrix, 1963-86 1/ 2/

(In percent) 3/

	1963	1973	1977	1981	1985	1986
World exports	100.0	100.0	100.0	100.0	100.0	100.0
To: Developed countries	68.4	72.1	67.9	66.0	68.2	69.8
Source: Developed countries	50.9	55.0	45.7	43.6	49.7	53.8
Developing countries	15.0	14.3	19.5	19.4	15.4	13.2
Four Asian NIEs	...	2.1	2.1	2.6	3.8	4.3
Other developing countries	...	12.1	17.4	16.8	11.6	8.9
Centrally planned economies	2.5	2.7	2.7	2.9	3.1	2.8
To: Developing countries	20.2	18.0	22.6	25.4	21.2	19.8
Source: Developed countries	14.3	12.5	15.9	16.4	13.2	12.7
Developing countries	4.3	4.0	5.1	7.1	6.0	5.0
Four Asian NIEs	...	0.7	0.9	1.4	1.6	1.6
Other developing countries	...	3.3	4.2	5.7	4.3	3.5
Centrally planned economies	1.6	1.5	1.7	1.9	2.0	2.0
To: Centrally planned economies	11.5	9.9	9.5	8.7	10.6	10.4
Source: Developed countries	2.4	3.3	3.1	3.0	3.4	3.1
Developing countries	1.1	0.9	1.1	1.0	1.5	1.3
Four Asian NIEs	...	0.0	0.1	0.2	0.5	0.4
Other developing countries	...	0.8	0.9	0.8	1.1	0.9
Centrally planned economies	8.0	5.7	5.3	4.6	5.7	6.0

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates.

1/ Based on nominal U.S. dollar values.

2/ Numbers may not add up due to rounding.

3/ All numbers are as a percent of total world merchandise exports.

Table 22. Matrix of World Exports of Manufactures, 1963-86 1/, 2/

(In percent) 3/

	1963	1973	1977	1981	1985	1986
World exports	100.0	100.0	100.0	100.0	100.0	100.0
To: Developed countries	63.5	70.1	64.5	62.1	68.0	71.0
Source: Developed countries	58.2	63.7	57.8	54.2	58.4	61.1
Developing countries	3.8	4.7	5.1	6.4	8.1	8.3
Four Asian NIEs	...	2.9	3.0	4.0	5.3	5.6
Other developing countries	...	1.8	2.1	2.4	2.7	2.6
Centrally planned economies	1.5	1.6	1.6	1.6	1.6	1.6
To: Developing Countries	23.9	19.0	24.9	28.8	21.5	19.3
Source: Developed countries	20.0	15.7	20.7	23.0	16.4	14.8
Developing countries	1.9	2.0	2.7	4.0	3.4	2.9
Four Asian NIEs	...	0.8	1.1	2.0	1.9	1.8
Other developing countries	...	1.2	1.6	2.0	1.5	1.1
Centrally planned economies	2.0	1.3	1.4	1.8	1.6	1.6
To: Centrally planned economies	12.7	10.9	10.6	9.1	10.5	9.7
Source: Developed countries	2.7	3.6	4.1	3.6	4.2	3.6
Developing countries	0.1	0.2	0.2	0.2	0.7	0.6
Four Asian NIEs	...	0.1	0.1	0.2	0.6	0.5
Other developing countries	...	0.2	0.1	—	—	0.1
Centrally planned economies	9.8	7.0	6.3	5.2	5.7	5.4

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates.

1/ Based on nominal U.S. dollar values.

2/ Numbers may not add up due to rounding.

3/ All numbers are as a percent of total world exports of manufactures.

Table 23. Shares in World Clothing Exports, 1963-86 1/

(In percent)

	1963	1973	1977	1981	1985	1986
Total exports	100.0	100.0	100.0	100.0	100.0	100.0
Developed countries	78.0	55.6	50.4	46.9	43.6	45.5
EC	34.7	39.0	35.9	31.4	32.7	35.9
Intra-EC	17.2	26.5	23.6	20.2	19.8	22.7
Japan	6.9	2.9	1.9	1.4	1.5	1.2
United States	3.1	2.2	2.6	3.1	1.5	1.4
Other developed countries	34.4	11.6	9.9	11.1	7.9	7.0
Developing countries	15.5	30.3	36.9	40.7	43.3	...
Four Asian NIEs	...	23.6	27.6	29.7	31.2	30.4
Other developing countries	...	6.8	9.3	10.9	12.0	...
Centrally planned economies	6.5	14.1	12.7	12.5	13.2	...

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates.

1/ Based on nominal U.S. dollar values.

Table 24. Shares in World Steel Exports, 1963-86 1/

(In percent)

	1963	1973	1977	1981	1985	1986
Total exports	100.0	100.0	100.0	100.0	100.0	100.0
Developed countries	81.5	85.3	83.7	83.4	79.1	78.4
EC	33.6	49.5	44.0	41.9	43.8	45.6
Intra-EC	16.2	25.4	20.7	18.3	21.2	25.7
Japan	...	18.7	22.3	22.6	19.6	17.3
United States	...	4.6	3.5	3.9	1.8	1.5
Other developed countries	...	12.6	13.9	15.0	14.0	14.1
Developing countries	4.3	3.3	4.0	6.9	9.8	...
Four Asian NIEs	0.5	0.7	1.2	2.7	4.3	4.1
Other developing countries	3.8	2.6	2.8	4.2	5.5	...
Centrally planned economies	14.2	11.3	12.3	9.7	10.4	...

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates.

1/ Based on nominal U.S. dollar values.

Table 25. Shares in World Exports of Foodstuffs, 1963-86 1/ 2/

(In percent)

	1963	1973	1977	1981	1985	1986
Total exports	100.0	100.0	100.0	100.0	100.0	100.0
Developed countries	55.2	66.8	61.3	67.4	61.8	61.7
EC	17.1	28.6	28.8	31.3	34.7	38.2
Intra-EC	9.2	19.3	19.9	19.1	22.8	26.8
Japan	...	1.0	0.7	0.8	0.7	0.7
United States	...	19.2	15.6	18.7	13.8	11.4
Other developed countries	...	17.9	16.3	16.6	12.6	11.5
Developing countries	35.3	25.5	31.4	26.2	30.9	...
Four Asian NIEs	...	1.5	2.4	2.4	3.0	3.2
Other developing countries	...	24.0	29.0	23.8	27.9	...
Centrally planned economies	9.5	7.7	7.3	6.4	7.3	...

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates.

1/ Based on nominal U.S. dollar value.

2/ SITC categories 0, 1, 221, and 4.

Table 26. Shares in World Exports of Road Motor Vehicles, 1963-86 1/

(In percent)

	1963	1973	1977	1981	1985	1986
Total exports	100.0	100.0	100.0	100.0	100.0	100.0
Developed countries	94.0	92.7	93.6	93.4	94.7	...
EC	62.4	49.3	46.7	45.6	34.5	38.5
Intra-EC	26.2	24.2	23.6	22.5	19.2	23.0
Japan	...	11.9	17.4	24.0	26.5	27.0
United States	18.7	14.6	14.1	12.2	12.2	9.4
Other developed countries	...	16.8	15.3	11.6	21.5	...
Developing countries	2.0	0.9	1.1	1.9	1.6	...
Four Asian NIEs	...	0.4	0.6	0.9	1.0	1.2
Other developing countries	...	0.5	0.5	1.0	0.6	...
Centrally planned economies	4.0	6.4	5.3	4.6	3.7	...

Sources: GATT, IMF, UN, UNCTAD; and Fund staff estimates.

1/ Based on nominal U.S. dollar values.

