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# 11 Effects of Protection in Developed Countries on Developing Countries' Exports of Manufactures

Helen Hughes and Anne O. Krueger

The twenty-five years after 1945 witnessed the most rapid rate of sustained economic growth the world economy has ever experienced. An even more rapid expansion of international trade and capital flows accompanied and stimulated that growth. Whereas world real GNP grew at an average rate of about 5.2 percent over the period 1950–70, world exports in constant prices grew even faster—at 7.3 percent annually.

The expansion era was marked by a systematic and considerable reduction in barriers to trade and capital movements: declining barriers stimulated international economic relations and hence national productivity and income growth, and prosperity eased the further dismantling of barriers. The successive GATT rounds of negotiations were the principal instrument of freeing up trade, resulting in average tariffs on industrial products of less than 5 percent in the European Community (EC), the United States, and Japan at the end of the Tokyo Round.

The rate of growth of both real GNP and of trade, however, declined after 1973, and a widespread discussion of protectionist pressures followed. In part because of the continuing multilateral trade negotiations and the fact that they prevented the unilateral raising of tariffs, these pressures were generally for the erection of nontariff barriers (NTBs) and for nonborder protection. For a variety of reasons to be discussed below, some of the most visible pressures and public discussion were aimed at

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the imports of the developing countries (LDCs). To be sure, these pressures did not surface without a prior history: the Multifiber Arrangement had its origins in bilateral "voluntary export restraints" (VERs) negotiated as early as 1955; stainless steel flatware imports were subjected to VERs in the early 1960s; and, by the late 1960s, other commodities were either protected or there were threats of protection.<sup>1</sup> In the United States, the proposed Burke-Hartke bill of 1969 would have imposed strict quantitative limits on the levels and rates of growth of all imports into the United States. Although it was defeated by a narrow margin, it represents the most protectionist piece of legislation that would have had a reasonable possibility of being passed by the United States Congress in recent times.

Despite these earlier efforts to adopt highly restrictive measures, there is a widespread perception that protectionist pressures increased significantly in the 1970s, and that those pressures resulted in a pronounced increase in protection in the form of NTBs against manufactured imports from developing countries.<sup>2</sup>

It is the purpose of this paper to analyze the evidence on the extent of NTBs and their impact on manufactured imports from LDCs into developed country (DC) markets in the 1970s. Section 11.1 sets forth the analytical problems that arise when direct measurement of NTBs is not feasible and provides a rationale for the indirect inferences used in the paper. Section 11.2 reviews the evidence on the incidence of protection by individual commodity groups. Section 11.3 examines the evidence on market penetration by LDCs. Section 11.4 evaluates the extent to which the data permit any inferences about the incidence of protection among developing countries. Section 11.5 then assesses the extent to which protection against imports of manufactured goods from developing countries may have increased in the 1970s.

### **11.1 Estimating the Impact of NTBs**

In a world market for a given commodity which has substitutes in consumption or production, an effort by country *A* to impose a quantitative restriction on imports of that commodity from country *B* may fail to have the intended protectionist effect for a wide variety of reasons: (1) the NTB may be unenforceable; (2) the exports of country *B* may be diverted to a third market, while the previous suppliers of the third market may then ship their production of the good to the NTB-imposing country;<sup>3</sup> (3) the commodity in question may be a close substitute in production for similar, possibly higher-value items, and producers in the exporting country may shift their production structure toward those items while exporters in other countries shift their production structure toward

the item protected from *B*'s exports. While these last two would not be costless, they could substantially reduce the effects of protection.

For all of these reasons, it is not enough to say that DCs imposed NTBs in the 1970s. To be sure, there are a priori grounds for believing that restrictive trade measures impose some costs, but that is not to say that they completely achieve their intended purpose. An ideal methodology for dealing with this problem does not in practice exist. In principle, one might develop a general equilibrium model of world trade (broken down into relevant commodity groups) and then estimate what would have happened to individual trade flows, given price and income elasticities, in the absence of protection. The difficulties inherent in this approach are well known and need not detain us here: it would require a careful modeling not only of growth paths of developing countries but also of the evolution of their supply functions of various exports; substitution in production and among geographic origins is so important and difficult to estimate that any results would be highly suspect.

In this paper, therefore, an alternative, and indirect, approach is adopted. We first review the highly visible NTBs for the commodity groups for which protection against LDC products is thought to have been important. We then examine the rate at which developing countries were able to increase their shares of developed country markets in the 1970s as a whole and in each half of the decade. Thereafter, evidence on shifts in geographic origin of LDC imports is examined. These three pieces of evidence together provide a strong, although not conclusive, impression that the incidence of protection against manufactured exports from the developing countries was probably considerably less than is generally believed.

## **11.2 Protection against Manufactured Imports in the 1970s**

As already noted, our focus centers on protection against manufactured imports from LDCs. We therefore ignore trade in agricultural products where EC actions have clearly increased protection in the 1970s. As a partial offset, it should also be noted that protection against some processed primary commodities—vegetable oils, builders' hardware and plywood, etc.—decreased in the 1970s.

We first examine trends in protection against manufactured commodities in which the LDCs have a special interest—clothing and textiles, footwear and leather products, electronics, etc. Thereafter, protection against developed country products that has spilled over to developing countries is examined. Finally, other policies affecting imports of manufactures from LDCs—export credits and domestic policies—are examined. The section concludes with an assessment of the overall balance.

### 11.2.1 Protection against Imports from LDCs<sup>4</sup>

#### *Clothing and Textiles*

High tariffs and quantitative restrictions on imports from developing countries date back to the 1920s, when the principal industrial countries imposed barriers against imports of labor-intensive goods from Japan into their domestic and colonial markets. These protectionist actions escalated in the 1930s, and protection was reintroduced in textiles as soon as the Japanese exports began to recover in the early 1950s.<sup>5</sup> Large shipments of low-cost (albeit low-quality) imports precipitated arguments of “unfair competition from cheap labor,” and in many countries the textile industry, organized from the 1930s to press for protection, was successful in maintaining relatively high tariffs in this “sensitive” area in the face of otherwise declining tariffs. Rapidly growing clothing and textile imports from Hong Kong, Taiwan, and Korea led to further protectionist measures, notably to voluntary export restraints and orderly marketing arrangements in the early and mid-1960s. The administrative bargaining these arrangements entailed, originally principally between the United States and the Far Eastern exporters, became increasingly secretive and complex, and spread to more LDC and DC countries. The ensuing development of protection of clothing and textiles was very complex.

The producers’ trade associations in the developing countries which were the main exporters favored the voluntary restraint form of restriction on trade (VERs), as contrasted with higher tariffs or quotas administered by importing countries. VERs enabled them to appropriate the rents arising from restrictions when the quota implementation rested with them. This also suited those producers and retailers in developed countries that had moved to subcontracting or direct investment in production in the LDCs, and had thereby encouraged more movement to production in the LDCs. The producers and importers (wholesalers and large retailers) who remained in the industrial countries countered by pressing for developed country import restrictions in addition to tariffs.

The higher prices of textiles in the developed countries induced protected producers to invest in capital-intensive production processes and so to compete (at the higher price) with the producers in developing countries in many product lines (Shepherd 1981; Isard 1973). In some cases such investment led to real competitiveness through greatly improved quality in the final product, although in other cases the domestic price increases resulting from protection were a contributing factor. One of the highest wage countries in the world, Switzerland, was thus able to increase its high quality textile exports through the 1970s. Design and marketing superiority also enabled some sectors of clothing and textiles

to remain competitive in DCs. The Italian clothing industry, for example, was reorganized on the original lines of the Hong Kong industry, moving from integrated operations to subcontracting for high-quality products, just as Hong Kong was moving toward more integrated production for mass production low- and medium-quality goods.

Some countries—developing and developed—were not able to keep up with the changes taking place in the clothing and textile industries. Traditional clothing and textile exporters, such as India, had difficulties filling their import quotas into the DCs, and so did some of the new Latin American exporters (Morawetz 1981). But a number of LDC newcomers to exports did well (Havrylyshyn and Wolf 1981; Havrylyshyn and Alikhani 1982). Large producers in Hong Kong and Taiwan began to invest in production in Singapore, Malaysia, and Thailand, often in association with local entrepreneurs. Initially, this permitted them to avoid quotas, because new supplying countries were outside the restrictive agreements. Later, as exports from new geographic sources had increased, they obtained the right to a new quota as restrictive arrangements spread. Rents to the original producers increased because they remained the most efficient operators, and because they usually received the largest continuous (and thus most profitable) orders (Luey 1969). Investors from other developing countries, notably India, also began to invest abroad in Southeast Asia and farther afield, for example, in Mauritius, because export barriers prevented them from increasing such exports from their home bases. More European and Japanese firms began to produce offshore as developing country producers diversified their sales into new geographic areas.

The protectionist measures of the 1960s became consolidated into the Multifiber Arrangement (MFA) which, by 1978, contained provisions to control import growth by product and country according to bilateral arrangements, supplementing the continuing high tariffs that escaped the successive multilateral trade negotiations (table 11.1).

During the 1970s multifiber import quotas spread from the United

**Table 11.1** Textile Tariffs after the Tokyo Round (percent of c.i.f. price)

	Textile Mill Products	Apparel and Miscellaneous Made-Up Products
Canada	15.1	21.2
EC	8.6	12.1
Japan	9.0	13.2
United States	11.4	21.1

SOURCE: Donald B. Keesing and Martin Wolf, *Textile Quotas against Developing Countries*, Thames Essays no. 23, London: Trade Policy Research Centre, 1980.

States to other countries and came to cover more products. In 1977-78 the quota systems were made more comprehensive and more restrictive, particularly in the EC. At the same time, growth rates of consumption and exports declined as DC growth fluctuated and slowed down (Keesing and Wolf 1981). Reductions in protection on clothing and textiles to the African, Caribbean, and Pacific Group of States (ACP) associated with the EC did little to offset the EC's growing restrictiveness because they provided that either the inputs used had to be manufactured in their own countries or imported from the EC. This meant that clothing manufacturers could not use low-cost East Asian textiles, severely limiting the advantages of their privileged market access. On balance protectionism in clothing and textiles increased in the 1970s in all respects: restrictions were applied to more products and more countries, and they were applied more stringently.

The producers' surpluses accruing to the established exporters became evident in the growth of legal and illegal auction and other sale systems for export and import quotas. In some cases, notably in Hong Kong and Taiwan, clothing and textiles were marginally priced in the highly competitive domestic markets, benefiting LDC consumers (and tourists). The cost of protection via VERs was borne by two groups. First, consumers in the industrial countries paid higher prices than those that would have prevailed in the absence of protection. Because competition from developing countries was greatest in low-cost mass consumption goods, the costs were borne primarily by low-income consumers (Jenkins 1980).

The second group was the developing countries, although the incidence was undoubtedly uneven within countries and between them. The developing countries' exports were restricted. The extent of the restrictions is moot. The existing leading countries moved up-market in clothing and textiles and diversified out of these products. Whether they would have moved more rapidly or slowly without the rents and restrictions of protectionism it is impossible to know. Export growth from "new" countries was also restricted, but some may have benefited from the limitations placed on the principal exporters. The new countries obtained investment, which combined capital with technology and marketing skills that they may not otherwise have obtained, and more generally were able to enter and compete in markets in which prices were raised by protection.

Overall, developed country consumers clearly were adversely affected by restrictions on textile and apparel imports. Developing countries as a group probably also lost, although they did receive the rents on VERs in at least partial compensation. One further factor relevant for assessing the probably future impact of protection should be noted: during the 1970s, Japan was reducing its net exports of textiles and apparel. This undoubtedly eased the impact of the MFA. This feature will no longer

serve as a buffer in the future. To what extent it mitigated protection is difficult to evaluate.

#### *Footwear and Leather Products*

Footwear was also a "sensitive" industry in Europe, the United States, and Canada by the mid-1960s, with exports again first originating principally from the Far East and then diversifying rapidly across developing countries. Tariffs had remained relatively high through the 1960s, VERs and OMs were common, and there was pressure to increase quantitative restrictions in the 1970s.

Protection was, however, less effective than in the clothing and textile industry. Footwear is a smaller industry than textiles, and it consists of smaller firms with frequent entry and exit. Many firms, including some of the larger ones, were not able to handle the major changes in taste to informal footwear that became marked from the mid-1960s, and pressure for protection eased with their exit from the industry. Some firms moved part of their production abroad or used imported components. Industrial country firms were able to continue to compete in the high-quality upper end of the market by using their advantages in design and craftsmanship, and there was little investment in new capital-intensive technology. Protection did not increase appreciably in the 1970s, and it is doubtful whether it had any effect on production trends in the industry in the United States (Mutti and Bale 1980). Thus when the principal NTBs were removed in the United States in 1981 there was relatively little organized opposition from the industry, and there seems to have been no major change in production trends.

Protection on other leather products such as handbags was probably even less effective. It has been even more sporadic than that on footwear. Some producers from industrial countries were able to compete effectively through design and craftsmanship at the top end of the market (U.S. International Trade Commission 1982), but protectionist efforts did not succeed in preventing rapid expansion in imports.

#### *Electronic Products, Cutlery, Hand Tools, Etc.*

As the developing countries widened their range of export products in the late 1960s, calls for protection were heard in response to increases in imports of a variety of goods. Manufacturers in Europe and the United States complained about growing imports of metal products, such as cutlery, hand tools, and even barbers' chairs. They were successful in having some partial, and often also temporary, restrictions imposed on imports, but the coverage was limited and it is doubtful whether restrictions were very effective. Then electronic products became the focus of attention.

Electronics assembly moved offshore in many developed countries in



the late 1960s and early 1970s and, in addition, local entrepreneurs began to produce electronic goods in Taiwan, Korea, and Hong Kong in the 1970s. Large electronics firms in developed countries had conflicting interests: they wanted to encourage some types of imports, but they simultaneously wanted protection against others. In the United States, Zenith was the only major firm not to move production overseas until the early 1980s, when it too was forced to do so by competition from other U.S. producers and from Japanese and other imports. There were protests against imports in most of the industrial countries, and some restrictive actions followed, mostly of the VER-OMA type but with some increases in tariffs as well.

However, those measures were too partial and spasmodic to reverse the trend in the DCs toward the substitution of imports for local production in a growing range of products. Indeed, electronics firms, which had mostly started as assembly operations in LDCs, extended their activities deeper into manufacturing processes, even where this involved technology-intensive microprocessing. Although some observers forecast that the likely impact of changing electronics technology would result in the industry's relocation in the DCs in the mid-1970s, this has not happened. There was apparently more talk of an increase in VERs and OMAs in the mid-1970s than impact. The electronic, cutlery, hand tool, and other machine exports from LDCs were further diversified and expanded, but parts of these industries also remained competitively located in industrial countries. The trend was even more strongly toward intra-industry trade than in clothing, textiles, and footwear.

### *Miscellaneous Products*

The miscellaneous group of manufacturing which includes toys, sporting goods, and musical instruments had a fairly large proportion of developing country exports from the 1960s, and it continued to grow rapidly in the 1970s. The competition these products faced in industrial countries came from relatively small industry groups and relatively small firms. In some cases the industrial country industry was practically wiped out. Baseball bats and gloves in the United States are an example. In others, such as musical instruments, developed country firms remained competitive. But little protectionist fervor was generated from the declining firms, and intra-industry trade largely developed on lines of comparative advantage in a widening circle of "industries."

#### 11.2.2 Protection against DC Products That Also Affects LDC Manufactured Exports

In the mid-1970s, the focus of protectionist pressure swung from manufactured goods originating in LDCs to those from DCs. The bulk of protective measures taken were against imports of steel and automobiles.

Japan was the initial target, but in the late 1970s recriminations also arose between the United States and the EC over steel, petrochemicals, and associated industries. A few developing countries, notably Brazil and Korea, have been caught in these disputes because to a limited extent they are also competitors. This is particularly true in steel (Kamahito 1981).<sup>6</sup> And other developing countries are affected insofar as they are potential entrants or suppliers of raw material inputs whose demand is reduced by higher output prices.

The problems of these industries date back to the nineteenth century, and already once, in the 1930s, led to serious difficulties. It can plausibly be argued that the difficulties these industries are experiencing originate more in the domestic economies and structure of the industries than in trade itself. It is in defense of such industries that VERs, OMAs, and new protective measures such as the Trigger Price Mechanism for steel have spread.

The distribution of benefits and costs of these arrangements vary. With the Trigger Price Mechanism the protected countries' producers seem to have benefited, at least in the short run. The costs are very considerable. Protection for steel is inevitably followed by demands for protection in steel-using industries that compete internationally. Thus while the high cost of steel may be passed on to consumers by the construction industry, the competitiveness of producers of automobiles and domestic consumer durable goods suffers as consumers choose cheaper imports. Where the industry concerned has large employment but is dominated by a small number of firms, it demands—and often receives—further protection. But since the protected industries are large, the increases in costs are correspondingly high. To date, however, it would appear that those costs have been borne by the developed countries themselves and have not impacted significantly on LDC exports.<sup>7</sup>

### 11.2.3 Administered Protection

Another effect of the increasing pressures for protection has been the establishment of a considerable bureaucracy in the industrial countries. It sifts, interprets, sends through legal processes (in the case of the United States), and evaluates the demand for protection under dozens of different rubrics. In the EC two-fold layers of national and community bureaucracies deal with protection.

One of the reasons for the difficulty of evaluating administered protection is that its formats differ so widely. The more transparent the administration of protection, the less protective, but also the more public it is likely to be. Countries such as the United States and Australia appear to be relatively protectionist because they have more transparent systems of protection than Japan and the EC. Yet it is clear that Australia, except for clothing, footwear, and motor vehicles, reduced its protection sub-

stantially in the 1970s (Anderson and Garnaut). For the United States, requests for protection handled by such agencies as the International Trade Commission (ITC) and the Treasury were quite numerous, and the White House was involved in a number of trade policy decisions. Nonetheless, the overall impact of these measures was limited (Finger 1981, 1982; Finger, Hall, and Nelson 1982).

Evaluating EC trends is even more difficult. Apart from increasing protection against agricultural imports almost continuously, and against clothing and textiles in 1977, individual members of the EC, and the EC itself, introduced a large number of measures, many of them, however, of small effect and limited duration. Although all countries agreed to the several EC-wide increases in protection, not all implemented them. With the free flow of goods within the EC, imports flowed into member countries which did not implement the EC decisions to be sold also in those that did. A listing of the measures taken in countries such as Italy (Grilli 1980) would suggest that imports from developing countries were restricted. Yet overall, several analysts have concluded that there seems to have been little actual increase in the degree of restriction resulting from administered protection against imports from developing countries (Anjaria et al. 1981; Gard and Riedel 1980). If protection had significantly increased, the ACP States that received a great deal of preferential treatment might have been expected to have had booming exports, but this has not been the case.

Japan's system of administered protection is very opaque, even to Japanese scholars. However, discussions with Korean exporters indicate that the weight of administrative action in the 1970s was used to open markets to developing countries. The exception was traditional semi-handicraft products, especially silk, which was restricted. However, Japan's distribution system is heavily biased against imports (Yasugi 1980). The government began to plan reforms in the early 1970s but failed to carry them out because of reduced national growth rates and threatened unemployment. In that sense it failed to reduce protection with considerable costs to consumers.

#### 11.2.4 Suppliers' Export Credit Subsidies

A major area of protection that has received little attention is export subsidies. These are protective of domestic producers when their magnitude permits producers to export profitably who would otherwise be unable to do so. In the context of protection against manufactured exports from LDCs, these subsidies may permit DC exporters to retain market shares when, in their absence, LDC exports would rise more rapidly.

Some export subsidies are granted directly to the exporting firm and

these are impossible to trace. A significant, but also, unknown, volume takes the form of direct or indirect (through central bank discounts or public insurance) subsidies to exporters. Suppliers' credits grew in volume in the 1970s as trade grew, but the subsidy element declined as real interest rates fell, rising again as interest rates rose after 1979. The total volume of subsidy through export credits is estimated as having risen from \$330 million to \$3.5 billion from 1976 to 1980 (Fleisig and Hill, this volume).

Although export credit subsidies are always distortive of trade among industrial countries, it was argued in the 1950s and 1960s that the developing countries benefited because they were exporters of primary products and labor-intensive nondurable consumer goods, and importers of capital goods. This is, however, no longer the case. Developing countries appear to have a comparative advantage in producing "one-of" capital goods such as ships, oil rigs, hydroelectric generators, and specialized earth-moving machines (in contrast to mass-produced equipment). Those activities require relatively large inputs of skilled labor, such as draftsmen, technicians, and engineers whose wages are still low in developing countries. This type of export production has been developing for some twenty years, but the technological innovations that led to the use of numerically controlled machine tools have greatly speeded it up by enabling skilled workers to be trained in six months instead of six years.

Developing countries exporting such capital goods have to borrow abroad to finance exports in order for them to be competitive with the industrial country subsidies on suppliers' credits. This is clearly a case where the final consumers benefits, the taxpayers of exporting countries pay the cost of subsidy, developing countries' exports are disadvantaged, but developing countries importing capital goods may benefit.

#### 11.2.5 Nonborder Protection

As protectionist pressures for high tariffs and quantitative and other import restrictions were mostly defeated in the 1950s and 1960s, protectionist interests sought subsidies for domestic production. The arguments for subsidies followed the traditional protectionist and mercantilist cases for import substitution and export growth, with a heavy weight being given to employment issues. This was particularly important in the case of "senile" industries such as textiles and shipbuilding. "Regional balance" became another rationale for local and national subsidies. Federal systems were particularly prone to this approach. Even the relatively liberal Federal Republic of Germany had many state subsidies (Donges 1980).

The principal forms of subsidy or nonborder protection were the following:

- a) Favored tax treatment and other subsidies for research and de-

velopment were used in an effort to stimulate technological advances, “pick the winners,” implement “positive structural adjustment,” and change the comparative advantage of senile industries.

b) Nationalization, initially advocated to take over the “commanding heights” of the economy, was used instead to take over floundering firms. It was either done directly with deficits in the public budget or the industries were instead assisted by subsidies, particularly in such oligopolistic sectors as steel and automobiles.

c) Regional taxation exemptions and cash subsidies were enacted to enable firms to move to areas where they otherwise could not operate efficiently.

d) Subsidy support was used in the mid-1970s for “senile” industries to avoid unemployment and maintain exports.

The extent of such subsidies is not known. Except for a few years and industries there are not even complete enumerations, and there are only very partial quantifications of the effects. The microeconomic impact was almost certainly more serious than the macroeconomic impact, but trading partners were deprived of markets and the industrial countries themselves were hence injured as exporters. There were high budgetary costs. For example, in the late 1970s it is estimated that it cost about \$45,000 a year to maintain a job in the Swedish shipbuilding industry that paid a worker \$20,000 (Hamilton 1981a).

In theory, subsidies may be preferred to their tariff equivalent or other import restrictions because they are more direct and more transparent. In practice this was not generally the case in the early and mid-1970s. Budgetary controls proved to be very lax in the boom years, and there is a marked absence of ex post analysis of the costs and benefits of R&D expenditures, subsidies to “pick the winners,” and so on.<sup>8</sup> Budgets frequently lumped together subsidy sums for various purposes, leaving it to administrators to pick the “winning” firms or industries.

However, by the late 1970s, the available evidence suggests that under the pressure of declining national growth the peak of subsidization, and nonborder protection generally, had been passed (Hamilton 1981b; Yonezawa 1980). The pressure for budgetary restraints led to greater scrutiny, particularly where fiscally conservative governments were elected. In most countries, even if subsidy budgets were not actually reduced, they ceased to grow with other expenditures by the early 1980s.

Nonborder protection probably largely canceled out among the industrial countries. Indeed, the biggest effect may have been the costs of imposing protection and the reduced incentives for efficiency in the protection-imposing countries. If everything is protected, nothing is protected. Some firms may have obtained windfall rents from which capital, management, and labor benefited. But consumers had to pay more, and taxpayers had to support production. The developing countries probably

gained in some cases but lost in others. Export competition may have been more difficult for potential LDC exporters in some industries, but to the extent that subsidies went to marginal, inefficient firms, the immediate impact was to make competition easier by raising prices. Shipbuilding is an example of an industry which shifted location despite massive subsidies.

#### 11.2.6 The Balance

In the next two sections, we evaluate data on the behavior of LDC-manufactured exports in an effort to ascertain how effective protection may have been. Based on the evidence concerning the ability of the LDCs to maintain exports in the face of increased protection in the DCs, pessimists could conclude that export growth from developing countries was halted in the latter part of the 1970s. However, even pessimists might have expected the ACP countries to benefit by trade diversion from other developing country producers (although there are questions about supply elasticities in those countries). Optimists, on the other hand, might conclude that the underlying trends continued to be in the direction of liberal trade, mainly because of the success of the multilateral rounds of trade negotiation.

The threat of protection was considerable, but it can be argued that the cost of the protectionist measures taken was borne largely by the domestic economies of the industrial countries, with serious protective effects on the developing countries' exports confined to the textile and apparel industry.<sup>9</sup> Even optimists would, however, be likely to conclude that the Far Eastern exporters would have been most injured because the bulk of the protectionist measures were taken against them. It is clear that trade would have grown faster and everyone would have been better off with an even more rapid reduction of overall protection. Some of the losses, moreover, may have been through the impact on investment decisions of the uncertainty that was engendered in developing countries by protection.

### 11.3 Market Penetration Trends in the 1970s

One indirect check on the impact of protectionist measures is to examine the growth of LDC exports and their shares of developed country markets. The data used for this purpose combine production data in eleven industrial countries with export and import data to calculate apparent consumption for some 150 product groups<sup>10</sup> and classify trade origin and destination by principal trading groups. Table 11.2 shows the growth of LDC manufactured exports during the 1970s.<sup>11</sup>

LDC exports of manufactures to DCs grew at nearly 11 percent per annum in the 1970s, with the fastest growth occurring in metal products,

**Table 11.2** Product Composition of Developing Countries' Manufactured Exports to Industrial Countries, 1970-80

ISIC	US\$ (billion)		Average Annual Real Growth Rate <sup>a</sup>	Share of Total (percent)	
	1970	1980	1970-80	1970	1980
31 Food, beverages and tobacco	7.5	27.6	4.8	34.4	18.2
32 Textile, wearing apparel and leather industries	3.4	31.4	13.2	15.6	20.7
33 Manufacture of wood and wood products, including furniture	0.8	5.6	10.2	3.7	3.7
34 Manufacture of paper and paper products: Printing and publishing	0.2	1.6	15.0	0.7	1.1
35 Manufacture of chemicals and of chemical, petroleum, coal, rubber and plastic products	3.6	37.5	14.4	16.6	24.7
36 Manufacture of nonmetallic mineral products, except products of petroleum and coal	0.1	1.4	16.4	0.5	0.9
37 Basic metal industries	4.0	15.1	4.2	18.6	9.9
38 Manufacture of fabricated metal products, machinery and equipment	1.6	28.5	20.7	7.5	18.8
39 Miscellaneous manufacturing industries	0.5	3.1	11.7	2.2	2.1
3 All manufactured products	21.7	151.9	10.8	100.0	100.0

SOURCE: World Bank, Market Penetration research project data, for this and following tables.

<sup>a</sup>Growth rates were calculated by least-squares method. Deflated by industrial country GDP deflators.

machinery (including electronic products), nonmetallic minerals (particularly glassware and ceramics), paper and printing (from a low base), chemicals, and clothing, textiles, and leather. In gross output terms, chemicals became the principal product exported. However, textiles and metal products and machinery, which have a much higher value added in production, were economically more important. The relative share of food products declined, in part reflecting inelastic demand, but also because of high and increasing protection in the EC. Given the extent of

protection against the clothing and textiles group, and its increase in the 1970s, the rapid rate of growth of textile exports is somewhat surprising.

It is even more surprising that the Far Eastern exporters, against whom much of the protection was directed, remained successful. Table 11.3 indicates that the Far Eastern exporters increased their share of total exports, largely at the expense of Latin American countries whose exports of food products (mainly coffee) declined markedly in real terms, but also at the expense of "old" southern European exporters and such countries as India and Pakistan. The ASEAN group made the principal gains in addition to the Far Eastern exporters (particularly if Singapore is excluded), and so did a number of small countries such as Mauritius and Malta. Among the Latin American countries Brazil did well in paper, nonmetallic mineral products, base metals and metal products, and machinery, but all from a relatively small base.

It may be objected that the 1970–80 data conceal the intradecade shift in trends. That this was not markedly the case is evidenced by the data in table 11.4. Imports into the industrial countries from developing countries grew rapidly, and much more so than imports from other industrial countries throughout the decade, although growth in developing country market penetration was more rapid in the early 1970s than in the later 1970s. The bulk of the decline in growth (except in textiles in the EC, see below) can probably be explained by faltering growth in the industrial countries. Market penetration growth of LDCs continued to be much faster than total import growth in the later period despite protectionist measures.

Table 11.5 shows the shares of the developing countries in developed country markets. With the exception of Australia and Canada, the industrial countries markedly increased the openness of their economy in the 1970s, as measured by import shares.

Market penetration varied considerably by country in 1970 and so did market penetration growth rates for the 1970s. The initial level of market penetration, a country's overall growth (and hence its growth of imports), and the overall impact of policies were clearly important, but so were supply conditions not captured by these data.

Japan had the lowest share of imports from all sources in its economy in 1970, and this was still true in 1980. Given its location in East Asia, moreover, it had a surprisingly low share of imports from developing countries and relatively low growth of such imports in the 1970s. Price comparisons suggest that for many goods this is not the result of the competitiveness of Japanese production, but rather that Japan's distribution system is a more effective barrier to trade than other forms of protection. However, the products that the Far Eastern LDCs were exporting were precisely those in which Japan was earlier preminent. As



**Table 11.3 Manufactured Exports of Developing Countries to Industrial Countries, by Origin and Product Groups, 1970–80**

ISIC		All Developing Countries (US\$ billion)	Percent Share of Exports from				
			Southern Europe <sup>a</sup>	Far East <sup>b</sup>	Latin America	Other Developing Countries	(ASEAN) <sup>b</sup>
31 Food, beverages and tobacco	1970	7.5	9.5	2.7	50.0	37.8	(8.0)
	1980	27.6	8.4	4.4	49.1	38.1	(12.1)
	Growth rate: 1970–80	15.2	11.7	19.3	15.1	15.9	(20.1)
32 Textile, wearing apparel and leather industries	1970	3.4	19.7	41.8	7.7	30.7	(2.5)
	1980	31.4	18.6	44.5	9.0	27.9	(5.4)
	Growth rate: 1970–80	24.5	22.9	25.6	27.4	23.0	(36.3)
33 Manufacture of wood and wood products, including furniture	1970	0.8	20.3	29.9	13.7	36.2	(22.5)
	1980	5.6	20.0	31.2	10.0	38.8	(31.3)
	Growth rate: 1970–80	21.1	20.1	22.4	16.2	22.1	(25.4)
34 Manufacture of paper and paper products: Printing and publishing	1970	0.2	57.9	14.2	10.7	17.2	(2.9)
	1980	1.6	39.1	21.0	32.0	7.8	(2.8)
	Growth rate: 1970–80	26.4	21.7	32.6	39.7	16.0	(23.7)
35 Manufacture of chemicals and of chemical, petroleum, coal, rubber and plastic products	1970	3.6	10.4	10.9	54.4	24.2	(4.9)
	1980	37.5	9.5	13.3	37.7	40.0	(10.4)
	Growth rate: 1970–80	25.8	23.7	29.9	21.5	31.4	(33.9)

36 Manufacture of nonmetallic mineral products, except products of petroleum and coal	1970	0.1	50.2	17.0	27.5	5.3	(1.0)	
	1980	1.4	39.4	36.4	13.5	10.6	(2.8)	
	Growth rate:	1970-80	27.9	23.8	40.2	20.2	48.0	(41.7)
37 Basic metal industries	1970	4.0	7.3	0.7	30.9	61.1	(7.4)	
	1980	15.1	16.2	8.2	32.9	42.7	(13.2)	
	Growth rate:	1970-80	14.7	22.7	41.5	15.4	10.7	(22.0)
38 Manufacture of fabricated metal products, machinery and equipment	1970	1.6	25.8	35.5	16.5	22.2	(4.1)	
	1980	28.5	22.9	43.7	14.9	18.5	(16.8)	
	Growth rate:	1970-80	32.8	28.9	34.6	31.0	37.2	(48.5)
39 Miscellaneous manufacturing industries	1970	0.5	4.5	85.2	3.3	6.9	(8.1)	
	1980	3.1	4.7	79.7	4.5	11.1	(5.6)	
	Growth rate:	1970-80	22.8	21.6	22.1	25.2	28.5	(32.2)
3 All manufactured products	1970	21.7	13.1	15.5	35.3	36.1	(6.6)	
	1980	151.9	15.2	25.7	27.1	32.0	(11.7)	
	Growth rate:	1970-80	21.8	22.1	27.9	18.9	20.5	(28.7)

<sup>a</sup>Southern Europe consists of Andorra, Cyprus, Gibraltar, Greece, Israel, Malta, Portugal, Spain, Turkey, and Yugoslavia.

<sup>b</sup>Far East: Korea, Taiwan, Hong Kong and Singapore; ASEAN: Indonesia, Malaysia, Philippines, Thailand, and Singapore. Singapore is thus included in both groups, and the other ASEAN countries are also included in "other developing countries." The ASEAN group is duplicative.

**Table 11.4** Import Growth in Industrial Countries, 1970–75, 1975–80 and 1970–80 (average annual growth)

	Growth of Import Shares		
	Imports from Industrial Countries	Imports from Developing Countries	Imports from European Centrally Planned Economies
1970–75	4.9	9.7	10.9
1975–80	3.2	7.0	3.7
1970–80	3.6	7.2	6.3
Value of imports in 1980 (\$US billion)	610	152	20

such the Japanese net export balance was diminishing and reductions in exports are not reflected in the data.

Belgium, Sweden, and the United Kingdom had the lowest growth rates in market penetration from developing countries in the 1970s, but they all started from relatively high initial levels. Australia, the Netherlands, France, and the United States had the highest increase in import penetration. The Netherlands also started at a high level of penetration in 1970. Its high growth of imports from developing countries thus reflected policy commitment and the effectiveness of its implementation policies. In France, the GSP and special bilateral arrangements with Southern Europe, the Maghreb, Africa South of the Sahara, and the Caribbean encouraged imports from those areas, which still accounted for more than two-thirds of imports in 1980. Yet despite policy biases in favor of the latter countries and against the Far East, the East Asian exporters continued to increase their share of French markets by 23 percent a year in 1975–80.

Most of the industry groups and subgroups show the same general patterns as the overall trends. This is reflected in the data presented in table 11.6. In all categories of manufactures, the LDC shares of DC imports increased. Despite protection, the increase was rapid for textiles, clothing, footwear, TV and radio, and the other groups subject to protection. As already noted, the developing countries' gains in processed food, beverages, and tobacco products were minimal. They increased their market penetration (table 11.6; Duncan and Lutz 1982) by only 1.5 percent a year in the 1970s in that category. For all manufactures, however, the rate of increase in share was over 7 percent a year—hardly evidence of trade restrictions having been highly effective.

One of the reasons why protective measures had relatively little impact on overall import performance was the diversification of developing

**Table 11.5** Share of Developing Country Imports in the Apparent Consumption of Manufactured Goods, in Eleven Industrial Countries, 1970–80 (percent)

	Share in Apparent Consumption				Growth of Import Shares	
	1970		1980 <sup>a</sup>		1970–1980 <sup>b</sup>	
	All Imports	Imports from Developing Countries	All Imports	Imports from Developing Countries	All Imports	Imports from Developing Countries
Australia	22.3	2.1	25.9	5.5	2.6	11.0
Canada	27.0	1.3	31.1	2.1	1.7	5.0
European Community	20.4	2.5	31.8	4.6	4.8	6.7
Belgium	57.5	5.7	80.1	6.2	3.2	1.4
France	16.2	1.9	23.1	3.8	3.6	7.8
Germany	19.3	2.3	30.8	4.8	4.9	8.1
Italy	16.3	2.2	31.6	5.2	6.8	9.3
Netherlands	52.3	3.9	62.1	7.5	2.0	6.7
United Kingdom	15.8	2.8	26.6	4.1	5.8	3.8
Japan	4.7	1.3	6.2	2.4	2.4	5.8
Sweden	31.3	2.8	37.9	3.8	2.5	3.9
United States	5.5	1.3	8.6	2.9	4.5	8.6
Industrial countries	11.6	1.7	17.6	3.4	4.3	7.2

<sup>a</sup>Preliminary data subject to revision.

<sup>b</sup>Average annual rate of growth estimated by an ordinary least-square regression: growth rates are of the share of the market to avoid deflation problems.

**Table 11.6 Share of Imports from Developing Countries by Product Groups, 1970 and 1980**

ISIC	Total Imports		Share of Apparent Consumption		Import Penetration Growth
	1970	1980	1970	1980	1970-80
	(US\$ billion)		<i>M</i>		(percent per annum)
	1970	1980	<i>O + M - X</i>		
			(percent)		
31 Food	7.5	27.6	3.5	3.7	1.5
32 Clothing, textiles and footwear	3.4	31.4	3.1	10.5	13.1
322 Clothing	1.4	16.6	4.0	16.3	15.0
321 Textiles	1.5	8.9	2.3	5.4	8.6
324 Footwear	0.2	3.2	2.6	16.3	18.9
323 Leather products	0.3	2.7	6.2	17.3	11.5
33 Wood products	0.8	5.6	1.9	3.6	7.1
34 Paper	0.2	1.6	0.2	0.5	11.9
35 Chemicals	3.6	37.5	2.0	3.8	5.7
36 Nonmetallic minerals	0.1	1.4	0.3	1.1	13.8
37 Base metals	4.0	15.1	3.5	4.1	2.1
38 Machinery	1.6	28.5	0.4	2.1	17.6
3811 Cutlery & hand tools	0.1	0.9	0.8	3.3	15.6
3812 Metal furniture	0.03	0.2	0.6	1.6	9.5
3832 Radio, TV, etc.	0.5	9.2	1.6	7.2	18.6
39 Other manufactured products	0.5	3.1	4.0	8.0	9.4
Total	21.7	151.9	1.7	3.4	7.2

country exports by product. The most rapid increases in market penetration came in machinery and nonmetallic mineral products (including china and glassware). Another high growth sector is the miscellaneous group that includes sports equipment, toys, and musical instruments. Nonetheless, clothing, textiles, and footwear still rank high on the list despite their relatively high market penetration in 1970 and despite textile protectionism.

The low correlation between the extensive import controls particularly designed to limit the growth of imports from the Far East and the increase in market penetration by the Far Eastern countries supports the hypothesis that administrative protection is not only costly, but also largely ineffective.

This is illustrated by the continuing strength of the Far Eastern exporters (table 11.7). Their market penetration growth was exceeded in 1970–75 and for the 1970s as a whole by the ASEAN group of the second-wave exporters and by some other newcomers (Havrylyshyn and Wolf 1981; Havrylyshyn and Alikhani 1982). However, when competition became tougher in more growing markets in the late 1970s, and although protection was mainly directed specifically against the Far Eastern exporters, they were able to compete and expand exports more rapidly than other countries, notably those of Southern Europe and Latin America.

#### 11.4 The Impact of Protection on Suppliers

The primary and immediate impact of protection (to the extent that it is effective) is to reduce imports from those suppliers against which the protection is directed. But this is only the first step in a long chain affecting both demand and all sources of supply. As a first step toward disentangling these effects, table 11.8 indicates the changes in the share of imports of clothing, textile, and footwear markets into the United

**Table 11.7** Market Penetration Growth by Developing Country Groups, 1970–75, 1975–80, and 1970–80

	1970–75 (average annual growth rates)	1975–80	1970–80	Volume of Imports	
				1970 (US\$ million)	1980
Southern Europe	11.4	7.2	7.6	3	23
Far East <sup>a</sup>	16.4	10.0	12.7	3	39
ASEAN <sup>a</sup>	21.9	9.6	13.3	1	18
Latin America	7.2	4.3	4.7	8	41

<sup>a</sup>Far East: Korea, Taiwan, Hong Kong, and Singapore. ASEAN: Indonesia, Malaysia, Philippines, Thailand, and Singapore. Singapore is thus included in both groups.

**Table 11.8 Clothing, Textile and Footwear Import Shares by Principal Exporting Groups and Importing DCs, 1970–80 (percent)**

	U.S.				EC				Japan			
	1970	1976	1978	1980	1970	1976	1978	1980	1970	1976	1978	1980
<i>ISIC 322 Clothing</i>												
Imports from:												
Far East	42.9	62.0	60.7	64.0	12.4	19.5	17.2	17.9	55.4	70.6	65.3	50.9
Southern Europe	4.5	2.3	1.7	0.9	6.2	12.6	13.2	13.6	0.8	1.0	1.2	0.8
Latin America	4.3	10.5	10.3	9.2	0.1	1.0	0.9	0.9	0.2	0.2	0.2	0.1
Other developing	4.2	7.8	10.9	14.5	1.7	6.9	7.8	10.7	15.0	9.0	9.9	20.1
Industrial countries	43.9	15.8	14.3	10.2	75.9	53.9	55.4	51.8	27.8	18.9	23.2	27.9
Eastern European countries	0.2	1.6	2.1	1.2	3.7	6.1	5.5	5.1	0.8	0.3	0.2	0.2
(ASEAN)	(4.3)	(5.5)	(7.5)	(7.3)	(0.1)	(1.8)	(2.0)	(2.6)	(0.5)	(1.8)	(0.9)	(1.8)
Total share of imports <sup>a</sup>	6.4	11.9	16.3	16.7	20.6	40.2	43.0	48.0	4.4	10.4	9.4	10.7

*ISIC 321 Textiles*

## Imports from:

Far East	6.4	14.0	11.5	14.0	2.2	3.1	2.7	2.7	26.7	36.0	37.4	29.9
Southern Europe	3.3	2.1	2.1	1.9	3.6	6.0	6.4	6.6	0.7	0.2	0.3	0.4
Latin America	4.5	9.3	10.7	9.7	0.9	2.5	2.3	2.5	2.1	3.1	2.0	2.3
Other developing	18.5	22.3	20.4	25.5	7.6	8.5	9.2	10.6	23.9	22.8	26.9	26.6
Industrial countries	66.7	51.1	53.8	47.3	84.0	77.7	77.3	75.7	44.3	36.2	32.2	39.9
Eastern European countries	0.6	2.2	1.5	1.6	1.7	2.2	2.1	1.9	2.3	1.7	1.2	0.9
(ASEAN)	(0.6)	(2.8)	(2.6)	(2.6)	(0.1)	(9.0)	(0.9)	(0.9)	(1.6)	(2.4)	(2.2)	(3.1)
Total share of imports <sup>a</sup>	4.5	4.1	4.7	4.4	17.4	27.2	30.5	33.7	4.0	6.2	7.3	7.4

*ISIC 324 Footwear*

## Imports from:

Far East	3.0	29.3	32.9	38.1	5.0	5.6	5.4	8.1	27.4	67.0	74.3	60.3
Southern Europe	16.8	19.9	15.0	10.7	5.8	12.4	11.8	11.9	4.7	2.4	1.5	3.9
Latin America	3.5	15.2	13.5	15.7	0.3	1.5	2.7	2.3	0.0	1.2	0.4	2.3
Other developing	1.0	1.5	2.0	3.3	1.5	2.0	2.5	3.7	2.7	3.6	3.2	8.0
Industrial countries	74.2	31.0	33.2	28.4	83.4	73.9	73.7	62.5	64.5	25.6	20.5	25.4
Eastern European countries	1.5	3.1	3.4	3.8	4.0	4.6	3.9	2.5	0.7	0.2	0.1	0.1
(ASEAN)	(0.2)	(0.2)	(1.2)	(1.6)	(0.2)	(0.4)	(0.4)	(0.5)	(0.1)	(0.4)	(0.2)	(1.3)
Total share of imports <sup>a</sup>	13.3	26.9	38.9	35.7	19.7	37.5	40.9	47.9	2.4	7.1	7.2	9.8

<sup>a</sup>Total share of imports in apparent consumption.



States, the European Community, and Japan by principal suppliers in the late 1970s.

It is clear that despite the presumed intent to protect DC suppliers, the DCs on the whole continued to lose their share both of total markets as domestic suppliers and of other countries' markets. In some markets, notably U.S. textiles and footwear, the growth rate of imports as a share of apparent consumption declined, but at the high levels already reached, this may have been in part a consequence of market trends as penetration into high-quality markets became more difficult. The DCs also failed to make significant gains in their mutual trade except in clothing in Japan where their share of imports recovered to the 1970 level.

The primary impact of protection ought to have been to reduce the share of imports from the Far East, but this was true only to a minor degree in the EC in clothing, textiles, and footwear after 1976. In the United States the Far Eastern countries' share of clothing and textiles fluctuated, but it continued to rise in footwear. In Japan the Far Eastern exporters also lost clothing and textile shares but gained in footwear. In all three geographic markets, the Far Eastern exporters gained in other products.

It is impossible to determine the extent to which these trends resulted from protection and the extent to which they were the result of changing supply conditions. Where the elasticity of supply is high as in the Far East, entrepreneurs diversify exports geographically, move "up-market" to higher quality goods in the product group in question, and diversify their product range. The Far Eastern exporters were doing all this from the beginning of the 1970s, and it is impossible to gauge exactly how much the post-1976 protectionism accelerated such diversification.

In Hong Kong the diversification was largely the result of private initiatives, in Taiwan private initiative was supported by public liberalization measures, and Singapore and Korea made major, but very different, policy interventions. Singapore raised real wages between 1978 and 1981 by 10 percent a year to push entrepreneurs up-market and drive out marginal low-labor-productivity firms that were unable to make the move. Real wage increases, reflecting productivity gains, were having the same impact in Korea up to the mid-1970s, but then continued to rise rapidly largely because of the excessively capital- and technical-skill-intensive orientation of government policy. Whereas diversification in Hong Kong, Singapore, and Taiwan came smoothly, Korea's policy, combined with the lack of confidence arising out of political problems and failure to liberalize the economy, resulted in its lagging behind the other Far Eastern exporters in moving up-market within the relatively labor-intensive production categories (it led to other economic problems as well).

The principal expansion of labor-intensive exports came from three ASEAN countries—Thailand, Malaysia, and the Philippines—and from Southern Europe. The “old” developing country exporters—India and Pakistan—failed to take marked advantage of the protection against the Far Eastern countries, and so, on the whole, did Latin America. China began to make a major effort to increase exports at the very bottom of the low-quality, labor-intensive range at the end of the 1970s, and a large number of small new exporters such as Mauritius, Sri Lanka, and Morocco, and even including on a small scale a number of countries from Africa South of the Sahara (Ivory Coast, Botswana, Malawi) also began to export manufactured goods. The latter group benefited from ACP preferential treatment (though as already noted, their competitiveness was limited by lack of access to cheap raw materials under ACP rules). Investment in the “new” exporting countries (if they sought it) was also accelerated by the phenomenon of “quota seekers,” as noted earlier.

These trends do not, however, mean that protection was costless, only that the costs to developing countries were less than might have been expected. Unrestricted markets could have led to even faster export growth because prices would have been lower without distorting rents, and living standards would have risen faster in the DCs and in the Far East. Given the considerable evidence of a high elasticity of substitution in production, up-market movement and other diversifications would have most probably occurred in the Far East in any case, together with investment in the second-echelon countries, so that an even greater effect would have been achieved than with protection and at higher standards of living. The ACP countries could have been assisted at lower cost and on a larger scale than has been the case to date.

### **11.5 Conclusions and Suggestions for Further Work**

Based on the export performance of the developing countries in manufactured goods during the 1970s, it is difficult to infer that increasing protection was the dominant factor at work. To be sure, developing countries would have fared better (except possibly for the established exporters of textiles and clothing who received the rents under VERs) in the absence of protectionist measures. Yet, the overwhelming impression is that despite all the public discussion of protection and the political pressures for it, the effects on imports of manufactures from developing countries of protectionist measures were relatively small. The rate of increase of LDC market shares was sufficiently great that it is difficult to imagine that rates would have been significantly higher in the absence of any protectionist measures.

This leaves economists with an apparent puzzle: on one hand, protec-

tion is decried as necessarily welfare decreasing; yet it is difficult to infer sizeable effects on trade patterns, except possibly among sources of exports, to which we return below. Perhaps the answer lies in noting that the deleterious effects of interventions with free trade that are generally cited refer to the adverse welfare consequences for the protection-imposing countries. Insofar as there was a spread of protectionism in the 1970s, it would appear that the greater welfare losses were to the protecting countries, rather than to the rest of the world. It seems probable that this is the appropriate verdict on the protection of the 1970s: interventions in support of declining industries in the developed countries undoubtedly permitted the survival of some activities longer than would have been economically warranted. The economic costs of the survival may have been high, but they (and the consumption costs of protection) would have been borne by the developed countries themselves.

The geographic incidence of protectionist measures across developing countries remains an interesting and unresolved question. Would Korea have moved up-market in textiles more rapidly or more slowly in the absence of the MFA? Would Mauritius have entered the international textile market sooner or later in the absence of the MFA? Did VERs keep the newly industrialized countries (NICs) of the Far East exporting the same commodities longer than they otherwise would have? How important was the Japanese reduction in exports of the NIC commodities as a buffer to the impact VERs would otherwise have had?

On this score, the evidence is not yet in. Further research on the industrial organization of the exporting industries subject to protection in the NICs would undoubtedly shed further light on the issue. So, too, would research on the behavior of costs of the protected firms in developed countries, and the extent to which the industry structure changed under protection.

While there remain many unsettled questions, it seems reasonable to conclude that, at least in the 1970s, protectionist actions were not sufficient to prevent those developing countries with open economies from significantly increasing their share of world markets. How much more they could have done in the absence of protectionist measures is an open question. However, given the full employment that prevailed in those economies, it is doubtful whether expansion at a significantly more rapid rate could have occurred.

It is to be hoped that the peak of protectionist pressures already passed in the 1970s. Whether in the 1980s LDCs could continue this market penetration in the face of increasing protectionism is a difficult question. The Japanese reduction in net exports in the relevant commodity groups is bound to be less significant than it was. Likewise, there are those who believe that the protectionists may find more effective instruments.

Nonetheless, the experience of the 1970s suggests that the main brunt of protection falls on those adopting it, and that well-run, open developing countries maintain higher rates of economic growth, even in the face of protectionism, than developing countries that choose to protect their internal markets and rely on inner-oriented growth strategies.

## Notes

1. See Frank (1977, chap. 1) for a discussion of the emergence of "strong protectionist pressures" in the 1960s.

2. Increases in protection against primary commodities exported by developing countries, such as sugar and meat, have, paradoxically, received less attention. They are not covered in this paper, but see Duncan and Lutz (1982).

3. This possibility also covers the case when *B*'s exports are simply transshipped through a third country against which there is no quota. Relabeling the origin of clothing and textiles to indicate that they were produced in countries not subject to VERs under the MFA has been a frequent means of evading that agreement.

4. The secret nature of VERs and OMAs (orderly marketing arrangements) makes a detailed evaluation of their provisions impossible. Guesses as to the coverage of these restrictive arrangements center around 5 percent of all manufactured imports from developing countries, but much higher proportions for a number of products—clothing and textiles, footwear, and some electronic goods—in which developing countries have a particular interest (Hindley 1980).

5. An irony of the history of protection in this sector is that U.S. agricultural policy in the 1950s permitted exports of raw cotton—then the main textile fiber—at a lower price than American textile producers paid. This "unfair advantage" was the rationale for the initial textile protection. It, in turn, provided a rationale for the protection of clothing where producers suffered a disadvantage because of textile protection.

6. It is not clear whether industries such as steel represent a comparative advantage activity for these countries, or whether they are largely the creations of distorted policies and hence contributors to Brazil's and Korea's current problems.

7. In the case of "trigger" pricing, developing countries with competitive cost advantages (notably Brazil and Korea) may have had more difficulty entering new markets than they otherwise would have, but there were no legal restrictions.

8. This is as true for Japan as for other countries. For example, the electronics firms that received most government support in Japan were not the ones that were the most innovative and grew most rapidly.

9. Even then, there is the (partial?) offset that VERs gave the rents on import restrictions to the exporting countries.

10. The data are based on a four-digit International Standard Industrial Classification (ISIC), broken down to further subgroups for products of interest to developing countries. This enables production, import, and export data to be combined and comparisons to be made among the industrial countries. Trade data have been transformed from the Standard International Trade Classification (SITC) to ISIC. Production data for 1980 and in some cases 1979 are estimated. Note that these data include primary processed products, notably in the food, beverage, and tobacco category that is often excluded from LDC export data. Jewelry (i.e., precious stones) is excluded throughout.

11. Table 11.4 provides a breakdown of growth rates for the two halves of the decade.

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## Comment     Irving B. Kravis

### The Hughes-Krueger Paradox

The paper by Hughes and Krueger is both informative and provocative. It documents the success of developing countries in expanding their exports of manufactured goods into the markets of the developed countries. It also points out that the developing countries' success in increasing their penetration of manufactured goods markets in the developed countries was achieved despite protective measures taken by the latter. The Hughes-Krueger paradox of increased protective efforts accompanied by increased import volumes is explored briefly in this note. It is suggested that the explanations may be partly in the dynamic restructuring of the world economy that has been in process during the past thirty years and partly in the arithmetic involved in the patterns of industrial country protection. These patterns are identified in terms of the United States, but they probably reflect those of other industrial countries as well.

### Some Key Findings of Hughes and Krueger

To bring out these explanations, attention may be called first to three of the empirical findings of Hughes and Krueger:

1. Despite widespread efforts in the United States and other industrial countries to increase protection, including some efforts directed against products important to the developing countries, the penetration of manufactured goods imports from all sources into the industrial countries increased from 11.6 percent of the absorption of the manufactured goods in 1970 to 17.6 percent in 1980. At the same time the share of developing countries in the absorption of manufactured goods in industrial countries increased from 1.7 percent to 3.4 percent. About half of the developing country gain would have accrued had the developing countries merely maintained their share in the general expansion of imports in domestic markets, but the other half may be regarded as growth at the expense of imports from developed country suppliers (see table 11.4).

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2. The gains in the exports of the developing countries appear to be widely dispersed among developing countries in general, although the Far Eastern developing countries did the best (see table 11.3). Of the four nonoverlapping developing regions given, the lowest growth rate in manufactured exports between 1970 and 1980 was 18.9 percent for Latin America.

3. The commodity composition of developing country manufactured exports to industrial countries shifted toward more sophisticated products (table 11.2). Between 1970 and 1980 the shares in exports of food, beverages, and tobacco and of base metals were down sharply while the largest increases in shares were for fabricated metal products, machinery, and equipment, and for manufactured chemicals, petroleum, coal, and rubber products. However, the share of textile and wearing apparel also increased, though not as much as the machinery and chemical categories just mentioned. Furthermore, these are trade-barrier-distorted increases; there is a strong presumption that developing country exports of textiles and wearing apparel faced larger barriers than their machinery exports. But the shift to machinery and chemicals through high growth rates did take place.

#### The Significance of the Hughes-Krueger Findings

As suggested above, these findings point to and are explained by great structural changes in the world economy on one side, and by the pattern of protection on the other.

The major change in the world economy is the spread of modern economic growth to most of the nations of the world. In 1950 the question could still be raised whether modern economic growth could be expected to spread beyond the countries of Northwestern Europe and their overseas offshoots. In the ensuing years there has not only been an unprecedentedly high rate of expansion in the real gross domestic product per capita of the well-established countries (3.2 percent per annum) but a growth rate in the developing countries that is not quite as high but still remarkable by historical standards (2.8 percent).<sup>1</sup> The rate of growth in the developing countries during this period exceeded that enjoyed by the developed countries in the heyday of their growth in the latter part of the nineteenth and early part of the twentieth centuries. The high growth rates of the last thirty years are also widely diffused. The countries in which the growth rate in real per capita GDP has been in excess of 2 percent per capita contain two-thirds of the world's population. This includes 75 percent of the people living in countries other than the score of industrialized market economies and nearly half of the people living in developing market countries. Most of the remaining people of the world live in countries that have per capita growth rates between 1 percent and 2 percent, still well above historical premodern growth rates.



The Hughes-Krueger results concerning the export performance of developing countries and their success in penetrating the manufactured goods markets of the industrial countries reflects the fact that this growth includes the production and export of manufactured goods. Their data show also that the industrial countries have been adapting their import patterns to these new facts of life. As pointed out above, the industrial countries have accepted both greater import penetration and larger shares in imports from developing countries. Among the three major industrial areas the share of imports coming from developing countries increased substantially in the United States and Japan. The increase in the developing countries' share of total imports taken by the European Community was much smaller (from 12 percent to 14.5 percent) (see table 11.4). For clothing, textiles, and footwear, however, the European Community did considerably better in accepting high import shares from developing countries.

The rapid growth in world GDP, the increased penetration of imports in the markets of the industrialized countries, and the expansion of manufactured goods exports of the developing countries have been associated with an extremely rapid growth in world trade. As the figures in my table C11.1 show, the expansion in world exports since 1963 has been more rapid than the growth of world commodity production. The figures in the table probably tend to underrate the real growth in world exports since current values are deflated by unit values rather than true

**Table C.11.1** Growth in World Commodity Production and Trade, 1963–82  
(average annual percentage changes in volume)

	1963–73	1973–82	1979	1980	1981	1982
All commodities						
Production	6	2	4	1	1	-2
Exports	8½	3	6	1½	0	-2
Agriculture						
Production	2½	2	1	—	3½	2
Exports	4	4	7	5	3	1
Minerals						
Production <sup>a</sup>	5½	½	4½	-1½	-3	-3½
Exports <sup>b</sup>	7	-2½	5	-6	-12	-7
Manufacturing						
Production	7	2½	5	1½	½	-2
Exports	11	4½	5	5	3½	-1½

SOURCE: GATT, *International Trade, 1982/83*, Geneva, 1983.

NOTE: Trade values deflated by unit value index.

<sup>a</sup>Mining.

<sup>b</sup>Includes fuels and nonferrous metals.

export prices. The tendency for unit values to exaggerate the price increase for manufactured exports and thus to underestimate the true value of expansion has been documented.<sup>2</sup>

This is not the place to try to explain the still more rapid growth of trade compared to the unprecedentedly high growth rates for output in general, but it is easy to believe that the rapid growth provides a hospitable environment for trade expansion. Some of the improvement in output is attributable to lower cost and more convenient means of communication and transportation. These changes facilitate the identification of newly emerging low-cost locations and the establishment of production at these new areas of comparative advantage. Some part of the expansion of world trade, indeed perhaps a substantial part, is through the mechanism of the multinational firm. Multinationals are equipped to scan the world more effectively for new advantageous locations and to take fuller advantage of the economies of scale by dividing the production of parts, models, and products among different locations. U.S. majority-owned foreign affiliates (MOFAs) in developing countries, for example, increased their exports from 8.4 percent of their sales in 1966 to 18.1 percent in 1977. The ratio of their 1977 to 1966 exports in current values went up 9.5-fold compared to a 6-fold increase for all firms, including the U.S. MOFAs, other foreign affiliates, and domestic firms.<sup>3</sup>

Another factor giving an impetus to the expansion of world trade since 1973 was the increase in oil prices. Higher prices for undiminished or even (for a time) expanding world oil exports gave the oil exporting countries greatly increased purchasing power in world markets, and stimulated oil importers to supply additional exports that would help meet their extra costs for imported fuel. This tended toward a shift from domestic absorption to exporting which raised the ratio of trade to production. Continued or expanded growth in some developing countries, and in some oil exporting countries as well, was supported by rapid debt expansion.

#### Why Protection Has Not Bitten Harder

The powerful tendencies producing the relative expansion of world trade may help explain the upward movement in imports in general and imports of manufactures from the developing countries by the industrial countries in particular. Other factors are associated with the pattern of protection:

(a) Products and product groups characterized by slow growth in consumption are more likely to be claimants for protection in industrial countries than fast growing products and product groups. The highly publicized list of troubled industries seeking protection might well be dwarfed by a list of product and product groups for which protection has not been sought. The latter would probably be dominated by sectors of

moderate or fast growth products, for which import increases are apt to proceed without objection. Furthermore, the protective measures when applied are usually confined to a subset of commodities within the vulnerable product group, or designed to protect only one or a few geographical market areas rather than the national market, or, finally, (in the "voluntary" arrangements) aimed only at selected countries of origin. (U.S. protection for steel affords examples of these limitations in coverage.)

(b) For these commodities, market destinations, and market origins which are the actual objects of protection, the aim is usually to stop the growth of imports or to limit their growth. When there is a cutback, it is usually to a recent high level, though not necessarily the highest one. These points are illustrated in the papers in this volume. For example, Feenstra's table 2.1 (see chap. 2, this volume) shows that the number of automobiles imported under the voluntary export restraint in 1981-82, although 9 percent lower than the previous year, was 13 percent higher than in 1979 and 17 percent higher than in 1978.

Two reasons may be suggested for the restraints in the degree of protection. One is the desire to adhere to GATT principles and a liberal trading system, to some degree as a matter of principle and to some degree owing to fear of retaliation. The danger of retaliation may be perceived to be particularly high for products like steel and agricultural products, where the main contestants are often large industrial countries, each with considerable power to retaliate against protective measures taken by the other. While it is true that the developing countries have escaped the brunt of the protective drive, except in textiles and wearing apparel, their increased share in industrial country imports of textiles and apparel suggests that the importance of being unimportant is not the only factor operating in favor of the developing countries. As Hughes and Krueger point out, favorable supply capabilities probably have contributed to their success.

Another consideration constraining the resolution of the political struggle over the amount of protection accorded to each industry is a growing perception of the cost of protection. Hughes and Krueger offer the plausible hypothesis that the adverse welfare effects of protection are borne mainly by the protection-imposing country. This is more likely to be the outcome if supply curves in the countries of origin are elastic, and the tendency they describe for exporting countries to escape the effects of protection by shifting shipments toward higher quality goods betokens, in effect, elastic supply curves. Thus in the United States, the effects of protection of intermediate products like steel on the prices of other industries, particularly other export industries or on the prices of consumer goods like automobiles, seem to have commanded the attention of policymakers who have become more concerned with the general competitive position of the U.S. economy than ever before. The related

estimates of the cost to the nation of saving a worker's job in the protected industries have also received wide circulation.

Even if these surmises trying to explain the Hughes-Krueger paradox are correct, there is little cause for complacency. If protection has not stopped import growth, it has surely restrained it and diverted imports away from channels that market forces would produce. Consumers bear extra costs owing to the restraint in import growth, the diversion of imports to other (though related) products, and the substitution of higher cost sources of imports as a result of quotas, some imposed on various sources of supply by various countries of destination and others "voluntarily" agreed to by the countries of origin. There is a trend toward the cartelization of the world economy in which decisions about the location of production for export are made increasingly by international political negotiation rather than by market forces. Often the private firms in an industry collectively play leading roles in the division of markets, either directly or by calling the shots in the official trade battles conducted by diplomats or political officials. In a world clamoring for faster growth, these spreading tendencies are clearly antigrowth in their effect; they diminish the efficiency of the world economy. Furthermore, a continuation of depressed economic conditions can be expected to lead to greater demands for protection and to broader and more deeply cutting measures of protection so that imports from all sources may be more sharply curbed in their growth and even in their level.

Hughes and Krueger did not set out to assess the ability of the developed countries seriously to cut back the import penetration of their markets, including the shares of developing countries. What they have done is to assess the impact of protective measures taken so far and to remind us of the diversity and complexity with which protective measures operate.

## Notes

1. For further assessment and historical comparisons, see I. B. Kravis and R. E. Lipsey, "The Diffusion of Economic Growth in the World Economy, 1950-80," prepared for the Conference on International Comparisons of Productivity, American Enterprise Institute, Washington, D.C., 20 September-1 October 1982.

2. I. B. Kravis and R. E. Lipsey, "Price and Terms of Trade for Developed Country Exports of Manufactured Goods," prepared for the meeting of the International Economic Association, Athens, 31 August-5 September 1981.

3. R. E. Lipsey and I. B. Kravis, "U.S. Owned Affiliates and Host-Country Exports," NBER Working Paper no. 1037. Cambridge, Mass.: National Bureau of Economic Research.

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