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THE COMPETITIVENESS AND COMPARATIVE  
ADVANTAGE OF U.S. MULTINATIONALS,  
1957-1983

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The Competitiveness and Comparative Advantage of U.S. Multinationals,  
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ABSTRACT

The share in world exports of manufactured goods of U.S. multinational firms, including their majority-owned overseas affiliates, has been nearly stable since 1966. This stability, over a period in which the export share of the U.S. as a geographical entity was declining for the most part, suggests that it was not declines in the competitiveness of American firms' management and technology that were responsible for the deterioration of the U.S. trade position. That view is reinforced by the fact that a good deal of the change in U.S. export shares can be explained by changes in U.S. prices relative to those of other countries.

The comparative advantage of both the U.S. and U.S. multinational firms, especially the latter, has been in chemicals, machinery, and transport equipment, industries with relatively fast growth in worldwide exports. The growth of U.S. exports in 1966-77 fell far short of what it would have been if the U.S. had retained its share in each industry. The growth of U.S. multinationals' exports fell a little short of that implied by constant-shares but surpassed that of the U.S. as a country in almost every industry. After 1977, both the U.S. and its multinationals kept up with their constant share growth rates and the U.S. even ran a bit ahead. The multinationals' position as exporters, now supplying almost half their exports from their majority-owned overseas affiliates, seems to have been quite insulated from changes in U.S. policies and circumstances.

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# THE COMPETITIVENESS AND COMPARATIVE ADVANTAGE OF U.S. MULTINATIONALS

1957-1983\*

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## Introduction

In an earlier study it was shown that the share in world manufactured exports of firms located in the U.S. moved differently from the share of U.S. multinational firms, including both their domestic and their overseas operations. The U.S. share fell steadily from the 1950's through the mid-1970's, but the share of U.S. multinational firms did not decline at all or even increased (Lipsey and Kravis, 1985). That contrast suggests that it is important to distinguish between the factors that determine the competitiveness of the U.S. as a production location and those that determine the competitiveness of U.S. firms. The latter might include characteristics such as the firms' management and technology, since the firm characteristics would affect the firms' performance in both home and foreign operations.

Much of the standard analysis of trade developments explains increases or decreases in a country's exports and imports or shares in world trade by

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changes in the country's prices relative to those of its competitors and suppliers and by changes in incomes in its markets. That emphasis on price developments is the reason for the belief that the very high exchange value of the U.S. dollar was a major factor accounting for the large U.S. trade and current account deficits of recent years.

A rival explanation for U.S. trade difficulties that has been offered in recent years is that the problems are internal to U.S. firms; they have lost their technological lead or their management skills and, therefore, alterations in monetary and fiscal policies will not restore the competitiveness of the U.S. (See, for example, Abernathy et al., 1983). The decline of U.S. firms is seen as stemming from defects in the training of managers, from the emphasis in U.S. firms on short-term results, from the deterioration of technical education in this country, or from the declining U.S. lead in research and development investment.

Factors internal to firms are just the ones that have, in the last few years, become the main explanations for the phenomenon of direct investment. They are the elements of the competitiveness and comparative advantage of individual firms that enable them to produce in countries outside the ones where they originated in competition with local firms that have the advantage of familiarity with local product and factor markets and the favor of local governments. In the literature on multinationals (e.g., Dunning, 1981), these are treated as belonging to firms rather than to countries, and as being readily transferable from country to country within, but not between, firms. The more transferable these attributes are geographically, the less they can be the basis for national competitiveness and comparative advantage.

The implication for national trade policy is that factors that contribute

to firm competitiveness and comparative advantage will not necessarily contribute to national competitiveness and comparative advantage. Subsidies to R & D, to innovation, or to management or technical training may enhance the competitiveness of national firms in world markets, but that competitiveness may be exploited by producing outside the home country.

A corresponding implication is that the factors producing firm comparative advantages should be studied by examining measures of the competitiveness and comparative advantage of firms rather than that of their home countries. And any large difference between the fortunes of a country and those of the firms based in it helps us to determine whether the responsibility for changes lies with macroeconomic policy or with the determinants of firm advantages, such as management or technology.

#### The Export Share of the U.S.

Although our main interest in this paper is in the competitiveness of U.S. multinationals, we begin by examining, for comparison, developments in the competitiveness of the U.S. as a country. U.S. export shares of manufactured goods declined from the early or mid-1950's to the early or late 1970's, the date depending on the series used for measurement. The years 1976-78 were the lowest points so far in most series, and there was some recovery after that. Ratios for the years covered by surveys of U.S. investment abroad were as follows:

	U.S. Manufactured Exports as % of Mfd. Exports by			
	All Countries <sup>a</sup>		Developed Countries <sup>a</sup>	
	b	c	b	c
1957 <sup>d</sup>	21.3		25.7	
1966 <sup>d</sup>	16.4		18.7	
1966	17.5		19.4	
1977	13.3		15.1	
1982	14.3		16.5	
1983	13.9	12.2	16.2	15.5
1984		12.3		15.6

<sup>a</sup>The terms "all countries," "World," "developed countries," and "LDCs" as used here and elsewhere in the paper refer to market economies only.

<sup>b</sup>Manufactured exports defined as in notes to Appendix Table U-1a, including manufactured foods and some items from SITC 9.

<sup>c</sup>SITC 5-8, excluding manufactured foods and some other output of manufacturing industries.

<sup>d</sup>Comparable to 1957.

Source: Appendix Tables U-1 and U-1b.

The period from 1977 to 1982 saw a slight reversal of that trend, although it may turn out to be only a temporary one.

### The Role of Prices

Of the two broad explanations for changing export shares suggested above, we explore only very briefly here the role of prices. A measure of the change in U.S. prices relative to those of its main competitors, or what we might call the price competitiveness of the U.S. is shown in Appendix Table U-16. It is an index of U.S. export prices relative to an index of world prices of manufactured exports, based on prices of the U.S. and of six main competitors, weighted by the importance of commodities in U.S. exports as described in

Bushe, Kravis, and Lipsey (1986).

We ask first whether movements in the relative U.S. price level explain annual U.S. shares in exports of manufactures in the period from 1955 through 1983.

$$(1) \text{ Log USExS} = 3.30 + 0.99 \log \text{ PL}_t - 1.08 \log \text{ PL}_{t-1} - 0.19 T \quad \bar{R}^2 = .96$$

$(12.03) \quad (8.57) \quad (9.34) \quad (19.41)$       DW = 1.77  
No.Obs. = 29

USExS = U.S. exports of products in SITC 5-8 as per cent of exports by developed market economies. For period before 1965, shares in exports of SITC 5-8 are extrapolated back by shares in total exports (Appendix Table U-1b).

PL = Export Price index for the U.S. (1975 = 100) relative to export price index for 7 countries, including the U.S.

T = time

Figures in parentheses are t statistics

The export share of the U.S. as a country is explained by a downward trend and by the current and lagged price levels. The equation implies that a higher relative U.S. price level is associated with a higher U.S. export share the year it occurs but a lower share the year after. By the end of the year after the U.S. price increase, the U.S. export share would be below the one preceding the price rise.

A large part of the very high  $\bar{R}^2$  in this equation is accounted for by the trend term. An alternative approach is to explain changes in the U.S. export share by changes in relative prices.

$$(2) \Delta \text{USExS} = 1.10 + 0.58 \Delta \text{PL}_t - 0.69 \Delta \text{PL}_{t-1} \quad \bar{R}^2 = .38$$

$(7.55) \quad (3.54) \quad (4.13)$       DW = 1.70  
No.Obs. = 28

$\Delta$  = variables in the form  $X_t/X_{t-1}$

The equation, explaining a little more than a third of the variation in shares, again indicates that a rise in the relative U.S. export price first

increases the U.S. export share in the year of the price increase and then reduces it the next year. The total decrease in share resulting from the price increase is about 11 per cent of the price change, implying a cumulative elasticity of substitution a little over one.

We can also test whether a high price level has any independent influence on changes in the U.S. export share aside from that of the price change

$$(3) \Delta USExS = 1.15 + 0.47 \Delta PL_t - 0.55 \Delta PL_{t-1} - .00072 PL_t$$

(7.89)	(3.09)	(3.36)	(1.41)	$\bar{R}^2 = .40$
				DW = 2.07 <sup>a</sup>
				No.Obs. = 28

<sup>a</sup>After correction for serial correlation

The price level coefficient is negative even when the current and lagged price changes are included in the equation, suggesting some additional unfavorable effects of high prices. However, the price level adds little to the explanation of trade shares once lagged price changes are included.

These results indicate that a good deal of the competitiveness of the U.S. as a country can be attributed to U.S. price levels and changes in them, relative to the rest of the world. Earlier work on machinery and transport equipment (Kravis and Lipsey, 1981, and Bushe, Kravis, and Lipsey, 1986) has suggested that a more thorough analysis would reveal still longer lags and price elasticities or substitution elasticities further above unity.

These export responses to price levels and price changes include the behavior of U.S. parent companies and must reflect their actions to a considerable extent, since they account for about two thirds of U.S. exports of manufactured goods. We now turn to the analysis of their exporting patterns.



The Competitiveness of U.S. Multinationals

We saw earlier that the U.S. share in world manufactured exports declined between 1957 and 1966 from 21 or 22 per cent to 16-18 per cent. It then dropped to the 13 to 14 per cent range in 1977, where it remained in the early 1980's. The figures are repeated in line 1 to make comparisons with the export record of multinationals easy.

	<u>Shares (%) in World Exports</u>				
	<u>1957</u>	<u>1966</u>	<u>1977</u>	<u>1982</u>	<u>1983</u>
1. U.S. U.S. Multinationals	21.3 <sup>a</sup>	17.5 <sup>b</sup>	13.3	14.3	13.9
2. Parents	NA	11.0	9.2	9.5	9.1
3. MOFAs <sup>c</sup>	5.8 <sup>a</sup>	8.2 <sup>d</sup>	9.7	9.7	10.0
4. Parents and MOFAs	NA	17.7	17.6	17.7	17.7

<sup>a</sup>Not comparable with later years

<sup>b</sup>Figure comparable to 1957 would be 16.4

<sup>c</sup>Exports by majority-owned foreign affiliates (MOFAs) as per cent of exports by all countries except the U.S.

<sup>d</sup>Figure comparable to 1957 would be 7.9

Source: Appendix Table U-1

It can be seen (line 4) that the overall share of U.S.-based multinationals, including exports by parents and majority-owned affiliates (MOFAs),<sup>1</sup> was essentially stable. Exports from the U.S. by multinational parents shared, though to an attenuated degree, the decline between 1966 and 1977 in total U.S. exports. However, the growth of affiliate exports more than offset this decline.

Exports by parent firms from the U.S., after declining as a share of

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<sup>1</sup>Export data are not available for minority-owned affiliates. If it is assumed that their exports were the same percentage of sales as for MOFAs in the same industry and country or region, the export shares including them would be as follows (Table U-1):

world and developed-country exports between 1966 and 1977, varied within fairly narrow ranges:

	Shares (%) of U.S. Multinationals in World Exports of Manufactures			
	Parents from U.S. as % of		Majority-Owned Affiliates in	
	World Exports	Developed-Country Exports	Developed Countries as % of Developed-Country Exports (except U.S.)	LDCs as % of LDC Exports
1957	NA	NA	6.6	2.8
1966	11.0	12.1	8.7	3.6 <sup>a</sup> 4.8
1977	9.2	10.5	10.2	6.5
1982	9.5	10.9	10.0	7.7
1983	9.1	10.6	10.5	7.4

<sup>a</sup>Comparable to 1957

Source: Appendix Table U-1

As is implied by the fact that parent export shares declined less than those of the U.S. as a whole, the share of parent firms in U.S. exports of manufactures rose substantially between 1966 and 1977. Some of that rise was lost between 1977 and 1982.

	Parent Firm Share (%) in U.S. Exports
1966	62.7
1977	69.4
1982	66.2
1983	65.2

Source: Appendix Table U-1

That increased importance of multinational firms as exporters from the U.S. in 1966-77 was apparently not the result of a shift of firms from non-

	1966	1977
All affiliates	9.3	11.4
Parents and all affiliates	18.1	18.8

multinational to multinational status. In fact, the number of firms reporting as multinationals actually decreased slightly from 1966 to 1977, as can be seen in Appendix Table U-10. However, in the period when the multinationals' share decreased, between 1977 and 1982, there was a substantial decline in the population of U.S. multinational firms.<sup>2</sup>

The shares of majority-owned affiliates in exports of both developed and LDC host countries shows a pattern of sharp increases and, for developed countries, rough stability since 1977. The MOFA share in exports of developed countries increased by more than 50 per cent in the 20 years before 1977 and then remained fairly stable through 1983. And the share of U.S. affiliates in LDC exports grew by almost 75 per cent from 1957 through 1977 at a time when the share of these countries in world exports was also increasing substantially,<sup>3</sup> and continued to rise at least through 1982. Thus, in both developed and less developed host countries, there was a period of active development in which the majority-owned affiliates outpaced other host-country

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<sup>2</sup>Part of this reduction in population may be illusory and the growth of parent exports therefore understated. The cutoff point below which full data for affiliates did not have to be reported was increased from \$500,000 in 1977 to \$3 million in 1982. Any parent firm with no affiliates above the cutoff size was exempt from reporting on its own activities. We were able to make an adjustment, quite small, for the effect of this change on affiliate exports, but we are not able to guess the effect on parent exports or other parent variables. The impact on aggregate affiliate measures is limited by the unimportance of affiliates of that size in the totals, but it is conceivable that quite large parents with only marginal overseas production were eliminated from the list even without making any changes in their overseas activities. Thus, we do not know what the decline in parents' share of U.S. exports represents. It could be mostly a statistical artifact, it could represent a turning away from multinationality by U.S. firms, or it could represent a decline in the competitiveness of U.S. multinationals relative to other U.S. firms, or a shift in U.S. comparative advantage away from industries in which U.S. multinationals have their advantages. A conclusion on this issue requires disaggregation by industry and the study of fixed groups of firms.

<sup>3</sup>This result seems to contradict the findings of a paper by Nayyar (1978) to the effect that the share of U.S. majority-owned affiliates in developing-country exports fell from about 10.6 per cent to below 9 per cent in the early 1970's. The growth of affiliate exports to 1974 in Nayyar's data seems very

firms, followed by a period of less dynamic growth (for both the countries and the affiliates), in which the affiliates' exports increased in step with those of other host-country firms.

As is implied by what has been said about parents and affiliates, majority-owned overseas affiliates' shares in exports by U.S. multinationals jumped substantially from 1966 to 1977, and their share of exports by all U.S. firms more than doubled from 1957 to 1977. Then the affiliates' share decreased slightly between 1977 and 1982 before increasing again, to its highest recorded level, in 1983.

	MOFA Share (%) in Exports by	
	<u>U.S. Multinationals<sup>a</sup></u>	<u>All U.S. Firms<sup>a</sup></u>
1957	NA	17.6
1966	38.1	28.9 <sup>b</sup> 27.8
1977	47.7	40.0
1982	46.7	38.7
1983	48.7	40.2

<sup>a</sup>Includes exports of MOFAs

<sup>b</sup>Comparable to 1957

Source: Appendix Table U-1

That switch in the 1977-82 period suggests a move by U.S. multinational firms toward producing in the U.S., perhaps as a response to the low values of the U.S. dollar in the late 1970's and early 1980's, before shifting back toward foreign production as the dollar recovered.

To what may the superior foreign export performance of U.S.-controlled firms be attributed? Several possibilities suggest themselves. One is that

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slow in view of our 1977 census total. Furthermore, he defined aggregate developing country manufactured exports much more narrowly than in our calculations.

American affiliates were sharing in the superior (to the U.S.) export growth of their host countries. This would involve behavior like that of other domestic firms in the host countries. Another is that U.S. parents systematically shifted export operations to foreign bases through diminution or slower growth in U.S. exports. Perhaps in the end the basic factors underlying export sourcing decisions are not very different for these two possible explanations. However, if U.S. affiliate exports merely kept pace with the rate of growth in host country exports, there may be a stronger presumption that the ME was simply responding to the host country's competitive opportunities. Affiliate export performance in host countries superior to that of both local firms and U.S. parents, on the other hand, suggests an active policy of shifting exports and a role in promoting host-country export growth.

#### The Comparative Advantage of U.S. Multinationals

Before examining how different industries contributed to these changes in exports and export shares we use the distribution of exports among industries to identify the comparative advantage of the United States and of its multinational firms. We identify the comparative advantage in terms of the relative distributions of exports. U.S. multinationals, for example, are regarded as having a comparative advantage in the chemical industry relative to the U.S. as a country (or to the world as a whole), if the share of chemicals in their exports is larger than the share of chemicals in U.S. (or world) exports. It would be desirable to use net exports as the criterion for countries, but we have not so far made such calculations for the multinationals, and it is also not as clear for them what the figures would mean. One reason for the uncertainty is that their exports are classified by industry rather than by pro-

duct, and while we consider it reasonable to assume that their exports are within that industry, the assumption that their imports were also in the same industry would be more questionable. Another drawback to this method of assessing comparative advantage is that it ignores distortions in the composition of trade due to government interventions.

The differences between the distributions of U.S. and U.S. multinationals' exports and those of the world and of developed countries in 1966, the first year for which all are available, are given below. They show that the U.S. had comparative advantages relative to the world in chemicals, machinery, particularly non-electrical, and transport equipment. U.S. multinational firms' comparative advantage ran along the same lines, but to an exaggerated degree. Their concentration in chemicals and machinery was slightly greater than that of the U.S. and in transport equipment, much greater, while they exported a smaller proportion of foods, metals, and other manufactured products.

Differences Between Industry Distributions of Exports by the U.S. and U.S. Multinationals and Those of the World<sup>a</sup> and Developed Countries<sup>b</sup> in 1966

	Industry Share (%) in U.S. Exports minus Ind. Share of		Industry Share (%) in U.S. Multinat. Exports minus Ind. Share of		Industry Share (%) in U.S. Multinationals' Exports minus Industry Share in U.S. Exports
	World Exports (1)	Developed Countries Exports (2)	World Exports (3)	Developed Countries Exports (4)	
Foods	-4.3	-.9	-7.3	-3.8	-3.0
Chemicals	2.4	1.7	3.0	2.2	.5
Metals	-3.6	-3.2	-8.2	-7.8	-4.6
Machinery	8.0	6.0	8.8	6.8	.8
Non-elect.	6.9	5.5	NA	NA	NA
Electrical	1.1	.5	NA	NA	NA
Transp. Equip.	5.8	4.5	14.0	12.7	8.2
Other Mfg.	-8.3	-8.1	-10.2	-10.1	-2.0

<sup>a</sup>All market economies    <sup>b</sup>Developed market economies

Source: Appendix Table U-9

The corresponding comparisons for 1982 show a similar pattern for the U.S. However, there were some shifts. The U.S. had less of a comparative advantage in chemicals and transport equipment and more in non-electrical machinery, and larger disadvantages in metals. The breakdown of transport equipment into motor vehicles and equipment and other transport equipment reveals that the U.S. comparative advantage was in the latter subgroup, mainly aircraft and parts. In motor vehicles the U.S. showed comparative disadvantages relative to the world and to developed countries as a group.

Differences Between Industry Distributions of Exports by the U.S. and U.S. Multinationals and Those of the World<sup>a</sup> and of Developed Countries<sup>b</sup> in 1982

	Industry Share (%) in U.S. Exports minus Industry Share of		Ind. Share (%) in U.S. Multinationals' Exports minus Ind.Share of		Industry Share in U.S. Multinationals' Exports (%) minus Industry Share in U.S. Exports
	World Exports	Developed Countries' Exports	World Exports	Developed Countries' Exports	
	(1)	(2)	(3)	(4)	(5)
Foods	-3.2	-1.5	-5.4	-3.6	-2.1
Chemicals	1.5	.9	5.1	4.4	3.6
Metals	-4.5	-4.7	-6.9	-7.1	-2.4
Machinery	10.1	8.7	7.6	6.2	-2.5
Non-elect.	9.0	7.6	3.9	2.5	-5.1
Electrical	1.0	1.1	3.7	3.8	2.6
Transp. Equip.	2.8	1.2	10.0	8.4	7.1
Motor vehicles	-1.2	-2.5	7.7	6.4	8.9
Other transp. equip.	4.0	3.8	2.2	2.0	-1.8
Other Mfg.	-6.8	-4.7	-10.4	-8.4	-3.7

<sup>a</sup>All market economies      <sup>b</sup>Developed market economies  
Source: Appendix Table U-9.

For U.S. multinational firms, a finer breakdown by industry for 1982 than was available for 1966 reveals that they possessed comparative advantages relative to the world as a whole and to developed countries in both electrical and non-electrical machinery. Largely, the industry pattern of their comparative

advantage was similar in 1982 to the earlier one, with some shift towards chemicals and a large decline in their comparative advantage in transport equipment. The breakdown of the transport equipment industry into the two subgroups indicates that U.S. multinationals held comparative advantages in both, and that the margins were larger for motor vehicles than for other transport equipment.

The 1982 comparison between U.S. multinationals and the U.S. as a country (Col. 5) shows that the multinationals' comparative advantage in machinery relative to that of other U.S. firms had disappeared; the U.S. as a production location showed a large comparative advantage relative to U.S. multinationals, although the latter enjoyed a smaller, but noticeable, comparative advantage in electrical machinery relative to the U.S. The multinationals, by 1982, had increased their advantage in chemicals but reduced that in transport equipment relative to the U.S. Within transport equipment, U.S. multinationals had a large comparative advantage in motor vehicles relative to the U.S. but the U.S. as a country had a noticeable comparative advantage in other transport equipment relative to U.S. multinationals. The contrast reflects the fact that the motor vehicle industry is one of the most multinational of U.S. industries in its operations, in the sense that a high proportion of its employment is overseas (Kulchycky and Lipsey, 1984, p. 2) and it does much of its exporting from abroad, while the other transport equipment industry is among the least multinational and does most of its exporting from the U.S. Even among parent firms, other transport equipment companies have small proportions of their employment abroad relative to parents in other industries, and tend to fill export demand from the U.S.

The differences between the comparative advantages of the U.S. and of U.S.



multinationals would show up more strongly if we compared the multinationals, or the parent companies themselves, with non-multinational U.S. companies. However, that comparison is difficult because of incompatibilities in the classification of exports between the product classification for the U.S. and the industry classification we used for the multinationals. That problem is obvious in industries such as chemicals and electrical machinery that are almost completely dominated by multinationals, as can be seen in Appendix Table U-3. where estimated electrical machinery industry exports from the U.S. by U.S. multinational parents and foreign-owned firms in the U.S. are larger than total U.S. exports of electrical machinery.<sup>4</sup> It is clear, in any case, that U.S. parents possess large comparative advantages relative to non-multinational U.S. firms in chemicals and electrical machinery, but that the non-multinational firms have a strong comparative advantage in non-electrical machinery.

A different set of observations on the comparative advantage of the U.S. and of U.S. multinationals can be made by comparing U.S. firms in general and U.S. parents with foreign-owned firms in the U.S. In this case we are comparing U.S. firms not with foreign countries in general but with foreign multinationals, holding constant the production conditions of the U.S.

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<sup>4</sup>The problem is not only one of product and industry classification but also reflects the fact that there is some duplication between the firms listed as U.S. multinationals and those listed as foreign-controlled U.S. firms.

Differences Between Industry Distributions of Exports  
by Foreign Multinationals Operating in the U.S.  
and Those of the U.S. and of U.S. Parents

	Industry Share in Foreign-Owned Firms Exports from the U.S. minus Industry Share in Exports by			
	1977		1982	
	U.S.	U.S. Parents	U.S.	U.S. Parents
Foods	1.6	5.1	-2.1	.9
Chemicals	15.7	13.8	23.3	21.5
Metals	4.6	5.6	1.0	2.2
Machinery				
Non-elec.	-1.2	.8	-8.4	-3.5
Electrical	1.2	-.6	1.3	-3.2
Transport Equip.	-23.0	-29.1	-8.6	-15.6
Other Mfg.	1.2	4.3	-6.6	-2.3

Source: Appendix Table U-8

Data on exports by foreign-owned firms in the U.S. are not available for 1966 but we can make the comparisons for 1977 and 1982. The earlier year may be affected by the fact that many of the foreign-owned operations were new or had been foreign-owned for only a short time.

The most striking characteristic of the exports by foreign-owned U.S. firms in 1977 was the high concentration in chemicals, mainly by German multinationals, and the absence of exports of transport equipment, both areas of U.S. and U.S. firms' comparative advantage. The concentration of exports by the foreign multinationals in chemicals increased substantially between 1977 and 1982. Thus, although chemicals was an industry of U.S. and U.S. multinationals' comparative advantage relative to the rest of the world, there are indications that at least German multinational firms possessed greater firm-specific advantages in this area. The comparative disadvantage of foreign multinationals in transport equipment was still large in 1982 but had diminished greatly, especially relative to the U.S. in general.

Competitiveness Within Industry Groups

The decline in the competitiveness of the U.S. relative to other developed countries and to the world between 1966 and 1982, as manifested in its falling shares of exports, was spread across all the major industry groups.

Changes in U.S. Shares of World and  
Developed-Country Exports of Manufactures  
1982/1966

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	<u>World<sup>a</sup></u>	<u>Developed Country<sup>b</sup></u>
Food and Kindred Products	.82	.77
Chemicals and Allied Products	.75	.79
Metals	.69	.68
Machinery	.84	.90
Non-electrical	.90	.93
Electrical	.78	.88
Transport Equipment	.67	.76
Other Mfg.	.86	.98
All Mfg.	.81	.85

<sup>a</sup>All market economies

<sup>b</sup>Developed market economies

Source: Appendix Table U-7

However, it was smaller in non-electrical machinery than in the other groups. Relative to developed countries, the decline was smaller in the whole machinery industry than in any of the others except miscellaneous manufactures.

As we know from the aggregate data presented earlier, the story was quite different for the worldwide operations of U.S. multinationals, including those of parents and their majority-owned affiliates.

Changes in U.S. Multinationals'<sup>a</sup> Shares  
of World and Developed-Country Exports  
of Manufactures  
1982/1966

	<u>World<sup>b</sup></u>	<u>Developed Country<sup>c</sup></u>
Foods and Kindred Products	1.04	1.08
Chemicals and Allied Products	1.11	1.17
Metals	.94	.97
Machinery	.92	.90
Non-electrical	NA	NA
Electrical	NA	NA
Transport Equipment	.79	.81
Other Mfg.	.94	1.05
All Mfg.	.99	1.01

<sup>a</sup>Parents and majority-owned affiliates

<sup>b</sup>Numerator: exports by parents and all majority-owned affiliates;  
Denominator: exports from all market economies.

<sup>c</sup>Numerator: exports by parents and majority-owned affiliates in  
developed market economies; Denominator: exports from developed  
market economies.

Source: Appendix Table U-7

U.S. multinationals gained in world export shares in food and chemicals and lost shares in the other industries. Even where their world shares declined, they held up better than those of the U.S. as a country. That relationship can be seen clearly in the ratio of the export share changes for U.S. multinationals to those for the U.S. as a country.

Changes in U.S. Multinationals' Export Shares Relative to those in U.S. Export Shares  
1982/1966

	Shares in World Exports	Shares in Developed Country Exports
Food and Kindred Products	1.27	1.40
Chemicals and Allied Products	1.48	1.48
Metals	1.36	1.43
Machinery	1.10	1.00
Transport Equipment	1.18	1.07
Other Mfg.	1.09	1.07
Total Mfg.	1.22	1.19

Source: Previous two text tables

On the average, U.S. multinationals' export shares increased more or decreased less than those of the U.S. by a margin of about 20 per cent. In no industry group did they lose relative to the U.S. as a whole, but in machinery the growth of their exports from developed countries just kept pace with that of the U.S.

In the case of machinery, both U.S. multinationals and the U.S. as a country lost ground, but neither by much. In the case of transport equipment, both the U.S. as a country and U.S. multinationals lost export shares by around a quarter of the 1966 level.

Comparative Advantage, Growth in Demand, and Overall Competitiveness

Changes in the overall competitiveness of a country or of its multinational firms can be factored into several elements. One is the set of changes in competitiveness within industries. A second is their comparative advantage, which determines the extent to which they produce and export in each industry. And a third is the rate at which world trade grows in each industry. The last is partly a reflection of the rate of growth of demand and partly a result of

shifts in the degree to which demand is met by each country's local output in each industry. The first two of these elements have already been touched upon.

The third element has varied a good deal among industries. In the whole period covered, and in each of the sub-periods, world exports of chemicals, electrical machinery, and transport equipment grew more rapidly than manufactured exports in general, while exports of foods and metals grew less and those of non-electrical machinery and other manufacturing clustered close to the average.

	Growth in Exports <sup>a</sup> by Market Economies		
	<u>1977</u> 1966	<u>1982</u> 1977	<u>1982</u> 1966
Food and Kindred Products	4.67	1.40	6.54
Chemicals and Allied Products	5.72	1.72	9.86
Metals	4.62	1.49	6.87
Machinery	5.94	1.67	9.91
Non-electrical	5.34	1.64	8.78
Electrical	7.16	1.71	12.21
Transport Equipment	6.82	1.55	10.56
Other Mfg.	5.21	1.55	8.10
 Total Mfg.	 5.49	 1.57	 8.63

<sup>a</sup>These are values and are affected, of course, by differences among industry groups in price changes as well as in quantity changes. Figures are ratios of terminal-year to initial-year values.

Source: Appendix Table U-6

Both the U.S. and U.S.-owned multinational firms were oriented toward the faster-growing industries in this breakdown, with their below-average weighting of foods and metals and high weights for chemicals, machinery, and transport equipment. This was even more the case for the U.S. multinationals than for the U.S. Thus, if the U.S. and its multinational firms had retained

their shares of exports within these industry groups, their shares of aggregate manufacturing exports would have increased.

We can compare the actual changes in U.S. and U.S. multinational firms exports with those that would have occurred if they had retained their 1966 shares within industries. We refer below to this calculated export growth as "constant share" export growth.

The bias of the U.S. and U.S. multinationals toward fast-growing industry groups is indicated by their high "constant share" growth rates, a little higher for the multinationals than for the U.S. but both above the world growth rate. Actual U.S. exports fell far short of that hypothetical growth and the export growth of multinationals fell short as well, although not by as much. That means that the stability in the U.S. multinationals' share of world exports was the result of a combination of declining shares within at least some industry groups with an orientation toward the faster-growing industries.

	Growth of Manufactured Exports, Actual and Constant Share 1982/1966	
	<u>Actual</u>	<u>Constant Share</u>
All market economies	8.63	
U.S.	7.02	8.99
U.S. multinationals	8.59	9.37

Source: Export growth from preceding text table; distributions of exports from Appendix Tables U-3, U-5, and U-6.

If we divide the whole period into two parts, we get the following comparison:

	Growth of Manufactured Exports, Actual and Constant Share			
	1977/1966		1982/1977	
	Actual	Constant Share	Actual	Constant Share
All market economies	5.49		1.57	
U.S.	4.16	5.65	1.69	1.59
U.S. multinationals	5.43	5.87	1.58	1.60

In the decade from 1966 to 1977, the comparative advantage of both the U.S. and U.S. firms favored above-average export growth, given the rates of growth of the seven industry groups. The prospective margin in the constant-share growth ratio for the U.S. was .16 over the world growth ratio and for U.S. multinationals the margin was .38. In actuality the U.S. fell far below the hypothetical constant share growth rate and far below the world growth rate despite its favorable composition of exports. U.S. multinationals' exports grew at close to the world rate because their export composition was favorable, and the favorable export mix made up for the loss of shares within groups.

Given the industry growth rates over the next five years, the U.S. and U.S. multinational firm export mixes in 1977 would have produced roughly constant shares in total manufactured exports. In fact, U.S. exports grew at a little more than both the world rate and their constant share rate. For U.S. multinationals, actual export growth was close to the world rate, as in the earlier period. However, their growth was below the U.S. rate, as had not been the case for the earlier decade.

If the composition of exports in 1966 had been that of 1982 for the U.S., U.S. multinationals, and the world, and if the industry export growth rates of the 1966-1982 period had been as they were, the comparisons would have come out as follows:



Constant Share Export Growth, 1982/1966  
Assuming 1966 and 1982 Industry  
Distribution of Exports

	<u>1966</u> <u>Export Dist.</u>	<u>1982</u> <u>Export Dist.</u>
U.S.	8.99	9.22
U.S. multinationals	9.37	9.59
All market economies	8.63	8.91

Source: World exports from Table U-6.

In 1982, the U.S. multinationals continued to show the greatest bias toward what had been the fast-growing export sectors of 1966-1982. That bias was stronger than that of the U.S., which was, in turn, more oriented to such sectors than was the world as a whole. However, the rest of the world moved toward the rapidly growing export industries a little faster than either the U.S. as a country or U.S. multinationals.

### Conclusion

The worldwide share of U.S. multinational firms (U.S. parent companies plus their majority-owned affiliates) in manufactures exports has been nearly stable since 1966. We do not know what happened to parent exports from the U.S. before 1966, but the very large growth in affiliate exports makes it probable that the total share of U.S. multinationals increased between 1957 and 1966. The early growth (1957-66) and later stability (1966-77) of overall U.S. multinational export shares occurred while the share of the U.S. as a geographical location declined substantially, from over 20 per cent to 13 or 14 per cent. Since 1977, there have been no clear trends in the shares of all U.S. firms, of parents, and of majority-owned affiliates in the aggregate, although the affiliate share continued to increase in developing countries. Thus, U.S. multinationals conformed to the market performance of local firms,

both in the U.S. and in developed countries abroad during these years. This is in contrast to their rapid expansion of exports prior to 1977. In those years, they increased their exports from virtually all foreign locations at a faster rate than other host-country firms, and their exports from the U.S. faster than non-multinational U.S. firms.

This record is consistent with the view that American management and technology remained competitive, and is at variance with the argument sometimes made that the fall in the share of the U.S. in world manufactures exports was due to management failures and declines in technology. Perhaps the greater integration of the world economy with respect to transport and communications, and hence to the ease of managerial control over activities in distant locations, facilitated the expansion of affiliate exports in the 1957-77 period, but even so, American management should be credited with taking advantage of these opportunities. And since 1977, American-controlled firms abroad have maintained their shares in a rapidly growing world market, with powerful competition from Japan and some other industrial countries and the advent of new competitors.

While we do not attempt to explain fully the decline in the U.S. country share in export markets, we find that a substantial part of the changes in share during a thirty-year period could be accounted for by movements in U.S. export prices relative to those of its main competitors. That finding is further evidence, in our view, that much of the explanation for the export performance of the U.S. as a geographical entity must be looked for in the factors that determine price levels. Over the short run, at least, these are presumably monetary, fiscal, and related policies that affect exchange rates and rates of inflation.

The loss of U.S. shares between 1966 and 1982 extends to each of the major branches of manufacturing. The shares of U.S. multinationals, however,

increased in foods, chemicals, and, relative to developed countries, in other manufactures. They also showed smaller declines than those of the U.S. in most other categories.

The comparative advantage of the U.S. has been in chemicals, machinery, and transport equipment, and this is even more true for U.S. multinationals. These have been fast-growing exports in world markets. They contributed substantially to an export composition weighted in favor of products with relatively strong demand growth. However, the growth of manufactures exports between 1966 and 1977 by all firms located in the U.S. fell short, by almost a third, of what it would have been if the U.S. had maintained a constant share in each industry and thus participated proportionately in the expansion of world trade in each industry. The exports of U.S. multinationals also fell short of constant-share growth, but by less than 10 per cent. Between 1977 and 1982, in contrast to the earlier period, the export growth implied by constant shares for the U.S. and for U.S. multinationals was close to the world and developed-country averages. That is, the composition of exports for both was a little less favorable relative to other countries than it had been before. The growth in U.S. exports in those years was close to or even slightly greater than would have been produced by constant 1977 shares in each industry, while that of U.S. multinationals was slightly less. Thus, in the latest period for which we have data, when U.S. exports kept pace with those of other countries, as they had failed to do in the preceding quarter-century, the differentiation between U.S. multinationals and the U.S. as a country was greatly reduced.

The major conclusion about U.S. multinationals is that they have continued to hold a very steady share in world exports. That has been true while the

U.S. country share was declining and it remained true when U.S. country share rose. The multinationals position in exports thus seems to have been quite insulated from changes in home-country policies or circumstances.

List of References

Bach, Christopher L. (1984), "U.S. International Transactions, Fourth Quarter and Year 1983," Survey of Current Business, Vol. 64, No. 3, March.

\_\_\_\_\_ (1986), "U.S. International Transactions, Fourth Quarter and Year 1985," Survey of Current Business, Vol. 66, No. 3, March.

Bame, Jack J. (1973), "U.S. Balance of Payments Developments: First Quarter 1973," Survey of Current Business, Vol. 53, No. 6, June.

Bushe, Dennis M., Irving B. Kravis, and Robert E. Lipsey (1986), "Prices, Activity, and Machinery Exports: An Analysis Based on New Price Data," Review of Economics and Statistics, Vol. LXVIII, No. 2, May, pp. 248-255.

Di Lullo, Anthony J. (1985), "U.S. International Transactions, Third Quarter 1985," Survey of Current Business, Vol. 65, No. 12, December.

Howenstine, Ned G. (1985), "U.S. Affiliates of Foreign Companies: Operations in 1983," Survey of Current Business, November, pp. 36-50.

Kravis, Irving B. and Robert E. Lipsey (1982), "Prices and Market Shares in the International Machinery Trade," Review of Economics and Statistics, Vol. LXIV, No. 1, February, pp. 110-116.

\_\_\_\_\_ (1986), "The Assessment of National Price Levels," NBER Working Paper 1912, May.

Krueger, Russell C. (1983), "U.S. International Transactions, First Quarter 1983," Survey of Current Business, Vol. 63, No. 6, June.

Kulchycky, Ksenia and Robert E. Lipsey (1984), "Host-Country Regulation and Other Determinants of Overseas Operations of U.S. Motor Vehicle and Parts Companies," NBER Working Paper 1463, September.

Lipsey, Robert E. and Irving B. Kravis (1985), "The Competitive Position of U.S. Manufacturing Firms," Banca Nazionale del Lavoro Quarterly Review, June.

Nayyar, Deepak (1978), "Transnational Corporations and Manufactured Exports from Poor Countries," Economic Journal, March, pp. 59-84.

Parrish, Evelyn M. (1974), "U.S. Balance of Payments Developments: First Quarter 1974," Survey of Current Business, Vol. 54, No. 6, June.

United Nations (1958), Commodity Trade Statistics, Jan.-Dec. 1957,  
Statistical Papers, Series D, Vol. VII, No. 4.

\_\_\_\_\_ (1963), Monthly Bulletin of Statistics, March.

\_\_\_\_\_ (1965?), Statistical Yearbook, 1963.

\_\_\_\_\_ (1972a), Monthly Bulletin of Statistics, April.

\_\_\_\_\_ (1972b), Monthly Bulletin of Statistics, July.

U.S. Bureau of the Census (1985), "Reconciliation of 1984 U.S.-Canadian  
Merchandise Trade Statistics," Release, June 12.

U.S. Department of Commerce (1960), U.S. Business Investments in Foreign  
Countries, by Samuel Pizer and Frederick Cutler, Office of Business  
Economics.

\_\_\_\_\_ (1973a), The Reconciliation of U.S.-Canada Trade  
Statistics, 1970, A Report by the U.S.-Canada Trade Statistics Committee.

\_\_\_\_\_ (1973b), "The Reconciliation of U.S.-Canada  
Trade Statistics: 1971 and 1972," Release, December.

\_\_\_\_\_ (1975), U.S. Direct Investment Abroad, 1966,  
Bureau of Economic Analysis.

\_\_\_\_\_ (1976), Foreign Direct Investment in the  
United States, Report to the Congress, Vol. 2: Report of the Secretary  
of Commerce: Benchmark Survey, 1974.

\_\_\_\_\_ (1981), U.S. Direct Investment Abroad, 1977,  
Bureau of Economic Analysis.

\_\_\_\_\_ (1983), Foreign Direct Investment in the  
United States, 1980, October.

\_\_\_\_\_ (1985a), U.S. Direct Investment Abroad: 1982  
Benchmark Survey Data, Bureau of Economic Analysis, December.

\_\_\_\_\_ (1985b), U.S. Direct Investment Abroad:  
Operations of U.S. Parents and their Foreign Affiliates, Preliminary  
1983 Estimates, Bureau of Economic Analysis, December.

\_\_\_\_\_ (1985c), Foreign Direct Investment in the U.S.:  
Operations of U.S. Affiliates, 1977-80, Bureau of Economic Analysis.

\_\_\_\_\_ (1985d), Foreign Direct Investment in the U.S.:  
Operations of U.S. Affiliates of Foreign Companies, Revised 1982  
Estimates, Bureau of Economic Analysis, December.

\_\_\_\_\_ (1985e), Foreign Direct Investment in the U.S.:  
Operations of U.S. Affiliates of Foreign Companies, Preliminary 1983  
Estimates, Bureau of Economic Analysis, December.

Appendix Table U-1

Indicators of the Shares of the U.S., U.S. Firms, and U.S. Multinational Enterprises in World Exports of Manufactured Goods  
1957, 1966, 1977, 1982, and 1983

	1966			1977	1982	1983
	1957	1957	Later Years			
<u>Exports from the U.S.</u>						
1. % of World Exports	21.3	16.4	17.5	13.3	14.3	13.9
2. % of Developed-Country Exports	25.7	18.7	19.4	15.1	16.5	16.2
<u>Exports by U.S. Firms incl. Majority-Owned Affiliates</u>						
3. % of World Exports	25.8	23.0	24.3	20.9	21.4	21.5
4. % of Developed-Country Exports	30.9	25.8	26.3	22.9	23.5	23.8
<u>Exports by U.S. Firms, incl. All Affiliates</u>						
5. % of World Exports	NA	23.9	25.2	22.4		
6. % of Developed-Country Exports	NA	26.8	27.2	24.2		
<u>Exports by U.S. Multinational Enterprises incl. Majority-Owned Affiliates</u>						
7. % of World Exports	NA	17.4	17.7	17.6	17.7	17.7
8. % of Developed-Country Exports	NA	19.4	19.1	19.1	19.3	19.4
<u>Exports by U.S. Multinational Enterprises, incl. All Affiliates</u>						
9. % of World Exports	NA	17.8	18.1	18.8		
10. % of Developed-Country Exports	NA	19.8	19.4	20.1		
<u>Exports by U.S. Multinationals (Parents) from the U.S.</u>						
11. % of World Exports	NA	10.8	11.0	9.2	9.5	9.1
12. % of Developed-Country Exports	NA	12.3	12.1	10.5	10.9	10.6
13. % of U.S. Exports	NA	65.9	62.7	69.4	66.2	65.2
<u>Exports by U.S. Majority-Owned Affiliates</u>						
14. % of World Exports other than U.S.	5.8	7.9	8.2	9.7	9.7	10.0
15. % of Developed-Country Exports other than U.S.	6.6	8.7	8.7	10.2	10.0	10.5
16. % of Developing-Country Exports	2.8	3.6	4.8	6.5	7.7	7.4
17. % of U.S. Multinational Enterprise Exports	NA	38.1		47.7	46.7	48.7
18. % of U.S. Firms' Exports	17.6	28.9	27.8	40.0	38.7	40.2

Appendix Table U-1 (concluded)

	1966			1977	1982	1983
	1957	Comparable to 1957	Later Years			
<u>Exports by All U.S. Affiliates</u>						
19. % of World Exports other than U.S.	NA	9.0	9.3	11.4		
20. % of Developed-Country Exp. except U.S.	NA	9.9	9.8	11.8		
21. % of Developing-Country Exports	NA	4.2	5.6	8.9		
22. % of U.S. Multinational Enterprise Exports	NA	42.4	42.4	52.4		
23. % of U.S. Firms' Exports	NA	31.5	30.5	44.0		

Notes to Appendix Table U-1

All Data are from Appendix Table U-1a, except as indicated.

- Line 1: Line 3 ÷ Line 1 for 1957 and comparable 1966; for other years, Tables U-3 and U-6
- 2: Line 3 ÷ Line 2 for 1957 and comparable 1966; for other years, Tables U-3 and U-6
- 3: Line 19 ÷ Line 1
- 4: Line 20 ÷ Line 2
- 5: Line 21 ÷ Line 1
- 6: Line 22 ÷ Line 2
- 7: Line 15 ÷ Line 1
- 8: Line 16 ÷ Line 2
- 9: Line 17 ÷ Line 1
- 10: Line 18 ÷ Line 2
- 11: Line 8 ÷ Line 1
- 12: Line 8 ÷ Line 2
- 13: Line 8 ÷ Line 3
- 14: Line 9 ÷ (Line 1 minus Line 3)
- 15: Line 10 ÷ Line 4
- 16: Line 11 ÷ Line 5
- 17: Line 9 ÷ Line 15
- 18: Line 9 ÷ Line 19
- 19: (Line 9 plus Line 12) ÷ (Line 1 minus Line 3)
- 20: (Line 10 plus Line 13) ÷ Line 4
- 21: (Line 11 plus Line 14) ÷ Line 5
- 22: (Line 9 plus Line 12) ÷ Line 17
- 23: (Line 9 plus Line 12) ÷ Line 21



Appendix Table U-1a

Estimates of World (Market Economy) Exports of Manufactures  
and of Exports by U.S. Multinationals  
1957, 1966, 1977, 1982, and 1983  
(Unit: \$ billion)

	1957	1966		1977	1982	1983
		Comparable to	Later			
	1957	1957	Years			
<u>Exports, by Geographical Area<sup>a</sup></u>						
1. World (Market Economies)	63.9	132.4	130.3	715.2	1,120.0	1,118.2
2. Developed countries	53.0	115.8	117.8	630.2	973.8	958.8
3. U.S.	13.6	21.7	22.8	94.9	160.2	155.6
4. Other developed	39.4	94.1	95.0	535.3	813.6	803.2
5. Developing countries	10.9	16.6	12.5	85.0	146.2	159.4
<u>Exports, by Ownership</u>						
6. Foreign-owned companies in the U.S.	0	0		5.0	12.9	11.9
7. All U.S.-owned companies in the U.S. U.S. Multinational enterprises	13.6	21.7	22.8	89.9	147.3	143.7
8. Parents from U.S.	N.A.	14.3		65.9	106.0	101.5
9. Maj.-owned affil., from host countries	2.9	8.8		59.9	92.8	96.5
10. of which, developed	2.6	8.2		54.4	81.5	84.7
11. " " , developing	0.3	0.6		5.5	11.3	11.8
12. Min.-owned affil., from host countries	N.A.	1.2		10.6		
13. of which, developed	N.A.	1.1		8.5		
14. " " , developing	N.A.	.1		2.1		
15. Parents and maj.-owned affil., total	N.A.	23.1		125.7	198.7	198.0
16. " " , developed countries	N.A.	22.5		120.3	187.5	186.2
17. Parents and all affiliates, total	N.A.	23.6		134.5		
18. " " , developed count.	N.A.	22.9		126.9		
<u>U.S.-owned Firms</u>						
19. All U.S.-owned firms & majority-owned affil., total	16.5	30.5	31.6	149.8	240.1	240.2
20. of which, developed countries	16.4	29.9	31.0	144.3	228.8	228.4
21. All U.S.-owned firms and affil., total	N.A.	31.7	32.8	160.4		
22. All U.S.-owned firms and affiliates, developed countries	N.A.	31.0	32.1	152.8		

Notes to Appendix Table U-1a

<sup>a</sup>For 1975 and 1966 comparable to 1957, SITC 0, 1, 4-8, less 041-045. These totals include substantial amounts of non-manufactured products but were the best approximations that could be made for these two years. For other years the definition of manufactured products follows that used in the BEA direct investment surveys. That definition is itself adapted from the U.S. Census Bureau's ESIC. One important difference is that petroleum refining is not included in manufacturing but is placed in a separate petroleum industry that we do not include here.

Sources

- Lines 1-3, 1957 and 1966 (Comp. to 1957): Lipsey and Kravis (1985).  
1966-1983: Appendix Tables U-3 and U-4  
Line 4: Line 2 minus line 3.  
Line 5: Line 1 minus line 2.  
Line 6: 1957-77, Lipsey and Kravis (1985); 1982, U.S. Dept. of Commerce, (1985d), Table G-3, Col. 1; 1983, Howenstine (1985), Table 6, p. 41.  
Line 7: Line 3 minus line 6.  
Line 8: Appendix Table U-2, Line 9.  
Lines 9-11: Appendix Table U-4.  
Lines 12-14: 1957-77, Lipsey and Kravis (1985).  
Line 15: Line 8 plus line 9  
Line 16: Line 8 plus line 10.  
Line 17: Line 12 plus line 15.  
Line 18: Line 13 plus line 16.  
Line 19: Line 7 plus line 9.  
Line 20: Line 7 plus line 10.  
Line 21: Line 12 plus line 19.  
Line 22: Line 13 plus line 20.

Appendix Table U-1b

Shares of the U.S. in Market Economy, and DME Manufactured Exports  
Annual Data, 1955-1984

	U.S Exports (\$ million)				U.S. as % of				
	Total Exports	Chemicals	Machinery & Transport Equipment	Other Mfd. Goods	Total Manufactures	World		Devel. Market Econ.	
	SITC 0-9 (1)	SITC 5 (2)	SITC 7 (3)	SITC 6+8 (4)	SITC 5-8 (5)	SITC 0-9 (6)	SITC 5-8 (7)	SITC 0-9 (8)	SITC 5-8 (9)
1984 <sup>a</sup>	212,057	22,388	89,855	31,080	143,323	11.1	12.3	17.2	15.6
1983 <sup>a</sup>	195,969	19,748	82,417	30,412	132,577	10.8	12.2	16.9	15.5
1982 <sup>a</sup>	207,160	19,906	86,954	33,017	139,877	11.2	13.0	17.6	16.2
1981 <sup>a</sup>	228,888	21,148	95,529	37,724	154,401	11.6	13.8	18.4	17.0
1980 <sup>a</sup>	216,592	20,728	84,512	38,854	144,094	10.8	12.7	17.1	15.4
1980 <sup>b</sup>	212,887	22,778	85,637	36,320	144,735	10.7	12.7	16.9	15.4
1979 <sup>b</sup>	173,645	18,665	71,507	26,933	117,105	10.6	12.0	16.2	14.5
1978 <sup>b</sup>	139,999	13,612	60,156	21,136	94,904	10.8	11.7	16.1	14.1
1977 <sup>b</sup>	117,926	10,816	51,027	18,649	80,492	10.5	12.0	16.2	14.5
1976 <sup>b</sup>	113,323	9,958	49,510	17,828	77,296	11.5	13.2	17.6	15.9
1975 <sup>b</sup>	106,157	8,705	45,710	16,609	71,024	12.2	13.7	18.4	16.4
1974 <sup>c</sup>	97,144	8,819	38,188	16,532	63,539	11.6	13.1	17.9	15.7
1973 <sup>c</sup>	70,246	5,749	27,869	11,121	44,739	12.3	12.3	17.3	14.8
1972	48,979 <sup>d</sup>	4,133 <sup>c</sup>	21,533 <sup>c</sup>	8,103 <sup>c</sup>	33,769	11.9	12.5	16.5	14.9
1971 <sup>b</sup>	43,492 <sup>e</sup>	3,836 <sup>d</sup>	19,460 <sup>d</sup>	7,159 <sup>d</sup>	30,455	12.5	13.4	17.3	16.0
1970 <sup>f</sup>	42,590	3,826	17,882	7,662	29,370	13.7	14.5	19.0	17.4
1969 <sup>f</sup>	37,460	3,380	16,400	7,020 <sup>h</sup>	26,800	13.8	15.2	19.4	18.1
1968	33,950 <sup>g</sup>	3,290 <sup>b</sup>	14,450 <sup>b</sup>	5,900 <sup>h</sup>	23,640	14.3	15.8	20.3	18.9
1967	31,150 <sup>g</sup>	2,800 <sup>i</sup>	12,570 <sup>i</sup>	5,390 <sup>i</sup>	20,760	14.6	15.9	20.9	19.1
1966	29,900 <sup>g</sup>	2,680 <sup>j</sup>	11,160 <sup>j</sup>	5,320 <sup>j</sup>	19,160	14.8	15.8	21.2	18.9
1965	27,003 <sup>g</sup>	2,402	10,016	4,870	17,288	14.1	15.7	21.1	19.2
1964	26,280 <sup>k</sup>					15.3		22.4	
1963	22,920 <sup>g</sup>					14.9		22.1	
1962	21,450 <sup>k</sup>					15.2		22.6	
1961	20,790 <sup>k</sup>					15.5		23.0	
1960	20,410 <sup>k</sup>					16.0		23.9	
1959	17,470 <sup>k</sup>					15.1		23.2	
1958	17,760 <sup>k</sup>					16.5		25.0	
1957	20,690 <sup>l</sup>					18.5		27.6	
1956	18,950 <sup>l</sup>					18.3		27.6	
1955	15,430 <sup>l</sup>					16.5		25.5	



Notes to Appendix Table U-1b

- <sup>a</sup>UN, Monthly Bulletin of Statistics, Feb. 1986, Special Table D (Rev. 2)
- <sup>b</sup>UN, International Trade Statistics Yearbook, 1983, Vol. I, Special Table B (Rev. 1)
- <sup>c</sup>UN, International Trade Statistics Yearbook, 1981, Vol. I, Special Table C (Rev. 1)
- <sup>d</sup>UN, International Trade Statistics Yearbook, 1980, Vol. I, Special Table C (Rev. 1)
- <sup>e</sup>UN, International Trade Statistics Yearbook, 1976, Vol. I, Special Table B2 (Rev. 1)
- <sup>f</sup>UN, International Trade Statistics Yearbook, 1974, Vol. I, Special Table B (Rev. 1)
- <sup>g</sup>UN, International Trade Statistics Yearbook, 1972-73, Table B (Rev. 1)
- <sup>h</sup>UN, Monthly Bulletin of Statistics, April 1974, Special Table B (Rev. 1)
- <sup>i</sup>UN, Monthly Bulletin of Statistics, April 1973, Special Table C (Rev. 1)
- <sup>j</sup>UN, Monthly Bulletin of Statistics, April 1972, Special Table C (Rev. 1)
- <sup>k</sup>UN, International Trade Statistics Yearbook, 1969, Table B
- <sup>l</sup>UN, International Trade Statistics Yearbook, 1966, Table B.

Columns 6-9 are columns 1 and 5 divided by columns 10, 11, 18, and 19.

Appendix Table U-2

Estimate of U.S. Manufacturing Parent Exports of All Products  
and of Their Own Products  
1966, 1977, 1982, and 1983  
(Unit: \$ million)

By U.S. parents to	1966		1977		1982		1983	
	Reported by Affil- iates	Parents	Reported by Affil- iates	Parents	Reported by Affil- iates	Parents	Reported by Affil- iates	Parents
Maj.-owned affil.								
1. all prod.	5,343		25,769	24,330	38,262	38,992	40,120	40,728
2. own prod.	4,958			23,089		37,003		38,651
Other affil.								
3. all prod.			2,492	2,353	1,830	1,865	2,131	2,077
4. own prod.				2,233		1,770		1,971
All affil.								
5. all prod.		5,974	28,260	26,683	40,092	40,857	42,251	42,891
6. own prod.		5,544		25,322		38,773		40,622
Unaff. foreigners								
7. all prod.		8,356		39,194		65,110		58,581
8. own prod.		7,960		38,163		63,397		57,040
All aff. and unaff. foreigners								
9. all prod.		14,330		65,877		105,967		101,472
10. own prod.		13,504		63,485		102,170		97,662

Sources to Appendix Table U-2:

- Line 1, 1966: U.S. Department of Commerce (1975), Table E-1, p. 82  
1977: Reported by affiliates: U.S. Department of Commerce (1981),  
Table II. T1, p. 185.  
1982: Reported by Affiliates, U.S. Dept. of Commerce (1985),  
Table II.P1, Col. 6.  
1977 and 1982: Reported by parents: Line 5 multiplied by the  
ratio of Line 1 to Line 5 for data reported by affiliates.
- Line 2, 1966: U.S. Department of Commerce (1975), Table E-1, p. 82.  
1977 and 1982: Line 1 multiplied by the estimated ratio of exports  
of own products to exports of all products. Ratio is  
estimated as .949. It is derived from .9741 (Line 8/Line 7)  
multiplied by .928/.953, the 1966 ratio of  $\frac{\text{Line 2/Line 1.}}{\text{Line 8/Line 7.}}$
- Line 3, 1977, Reported by affiliates: U.S. Dept. of Commerce (1981),  
Table II.T1  
Reported by parents: Line 5 minus Line 1.  
1982, Reported by affiliates: U.S. Dept. of Commerce (1985),  
Table II.P1, Col. 9.  
Reported by parents: Line 5 minus Line 1.
- Line 4, 1977 and 1982: Line 3 multiplied by the ratio used for Line 2.
- Line 5, 1966: Table U-3a, Col. 8.  
1977, Reported by affiliates: U.S. Department of Commerce (1981),  
Table II, T1, p. 185, Col. 3.  
Reported by parents: U.S. Department of Commerce (1981),  
Table II. T1, p. 185, Col. 13.  
1982, Reported by affiliates: U.S. Dept. of Commerce (1985),  
Table II.P1, Col. 3.  
Reported by parents: U.S. Dept. of Commerce (1985),  
Table II.P1, Col. 13.
- Line 6, 1966: Line 2 multiplied by the ratio of line 5 to line 1.  
1977 and 1982: Line 2 plus Line 4.
- Line 7, 1966: U.S. Department of Commerce (1975), Table E-1, p. 82.  
1977: U.S. Department of Commerce (1981), Table II.T1, p. 185,  
Col. 11.  
1982: U.S. Department of Commerce (1985), Table II.P1, Col. 11.
- Line 8, 1966: U.S. Department of Commerce (1975), Table E-1, p. 82.  
1977: Line 7 multiplied by the ratio for exports to unaffiliated  
foreigners of exports of own products to exports of all  
products (.9737) from U.S. Department of Commerce (1981),  
Table II. T3, p. 187, Col. 12 & 13.  
1978: Line 7 multiplied by the same ratio as for 1977.
- Line 9: Line 5 plus Line 7.
- Line 10: Line 6 plus Line 8.

Appendix Table U-3

Exports from the U.S. by U.S. Multinationals (Parent Firms) and by All Firms,  
By Industry Group, 1966, 1977, 1982, and 1983  
(Unit: \$ million)

Exports by	Total Mfg.	Foods	Chemicals	Metals	Machinery		Transport Equip.	Other Mfg.	
					Total	Non- Elect.			
1966									
1.	22,827	1,985	2,909	2,717	6,559	4,759	1,800	4,480	4,177
2.	14,330	663	2,041	1,306	4,348	NA	NA	3,743	2,230
3.	8,497	1,322	868	1,411	2,211	NA	NA	737	1,947
1977									
1.	94,890	7,194	11,421	7,115	29,291	19,857	9,434	22,466	17,403
2.	65,877	2,683	9,130	4,271	20,147	12,446	7,701	19,640	10,005
3.	29,013	4,511	2,291	2,844	9,144	7,411	1,733	2,826	7,398
4.	3,557	327	987	429	1,095	700	395	25	695
5.	25,456	4,184	1,304	2,415	8,049	6,711	1,338	2,801	6,703
1982									
1.	160,169	10,692	21,389	12,715	54,392	37,180	17,212	31,676	29,305
2.	105,967	3,884	16,065	7,119	35,612	19,378	16,234	28,438	14,849
3.	54,202	6,808	5,324	5,596	18,780	17,802	978	3,238	14,456
4.	12,883	597	4,722	1,153	3,459	1,905	1,554	1,441	1,510
5.	41,319	6,211	602	4,443	15,321	15,897	-576	1,797	12,946
1983									
1.	155,568	11,070	20,985	11,148	50,023	32,375	17,648	32,452	29,890
2.	101,472	4,950	15,184	4,977	33,204	16,725	16,479	29,253	13,905
3.	54,096	6,120	5,801	6,171	16,819	15,650	1,169	3,199	15,985
4.	11,910	542	4,601	1,189	3,234	1,696	1,538	1,011	1,333
5.	42,186	5,578	1,200	4,982	13,585	13,954	-369	2,188	14,652

Exporter definitions:

1. U.S.
2. Parent firms
3. Other firms in U.S.
4. Foreign-owned firms
5. Non-multinational U.S. firms

Sources: U.S. Exports: For 1966-1982, data from United Nations trade tapes at the 4-digit SITC level converted to industry data by a concordance at that level and combined with estimates in Appendix Table U-14. For 1983, extrapolated from 1982 using data at the 1-digit and, to some extent, 2-digit levels from various issues of the UN Monthly Bulletin of Statistics

Parent Firm Exports, by Industry of Parents

1966: Appendix Table U-3a

1977: U.S. Department of Commerce (1982), Table II.T 1, Col. 11, plus Col. 13

1982: U.S. Department of Commerce (1985a), Table II.P 1, Col. 11 plus Col. 13

1983: U.S. Department of Commerce (1985b), Table 57

Foreign-Owned Firm Exports, by Industry of Affiliate

1977: U.S. Department of Commerce (1985c), Table G-3, Col. 1, p. 164

1982: U.S. Department of Commerce (1985d), Table G-3, Col. 1

1983: U.S. Department of Commerce (1985e), Table G-3, Col. 1



Appendix Table U-3a

Parent Exports from the U.S., by Industry Group, 1966  
(\$ million)

	By Industry of Affiliate			By Industry of Parent			Est. Parent Exports		
	Maj.-owned Affil.		Parent Exports to Unaffil. Foreigners	Income Sales of all Maj.-owned Affil.		Est. Sales of all Affil.	to All to All Affil. and Unaff. Foreigners		
	Total Sales	Total Income		(3)	(4)		(5)	(6)	(7)
Total Manuf.	47,375	48,087	8,356	5,343	65,143	57,190	64,173	5,974	14,330
Food products	5,644	5,697	464	198	6,130	5,764	6,073	199	663
Chem. & allied prod.	7,421	7,543	1,155	812	10,054	9,069	9,891	886	2,041
Primary & fabric. metals	3,904	3,946	922	313	8,045	6,480	7,959	384	1,306
Machinery	10,902	11,118	2,599	1,574	15,318	13,517	15,020	1,749	4,348
Transport equipment	11,156	11,232	1,934	1,614	14,316	12,683	14,219	1,809	3,743
Other manuf.	8,348	8,552	1,283	832	11,280	9,678	11,011	947	2,230

Source: U.S. Department of Commerce (1975)

Col. 1: Table L-3, Line 1, p. 199

" 2: Table J-18, Line 1, p. 181

" 3: Table E-1, Col. 7, p. 82. Of these, 396 were of others' products

" 4: Table E-1, Col. 3, p. 82. Of these, 384 were of others' products

" 5: Table J-24, Line 1, p. 187

" 6: Table L-11, Line 1, p. 207

" 7: Col. 5 multiplied by the ratio of Col. 1 to Col. 2

" 8: Col. 4 multiplied by the ratio of Col. 7 to Col. 6

" 9: Col. 3 plus Col. 8.

Appendix Table U-4

Exports of Majority-Owned Manufacturing Affiliates,  
by Industry Group of Affiliate and Destination  
(Unit: \$ million)

Destination	Industry Group							
	Total	Foods	Chemicals	Metals	Machinery		Transport Equipment	Other Mfg.
					Non- Elect.	Elect.		
1957								
To U.S. by product	1,029	14	93	117	70	23	94	618
from Canada & Europe	978	3	73	117	70	22	94	599
from LDCs	51	11	20	0		1	0	19
To U.S., by industry	1,093	14	93	171	70	23	94	618
from Canada & Europe	1,017	3	73	156	70	22	94	599
from LDCs	76	11	20	25	0	1	0	19
To Other Countries, by ind.	1,819	161	168	255	196	103	693	243
from Canada & Europe	1,606	66	168	253	190	97	614	218
from LDCs	213	95	0	2	6	6	79	25
To All Countries	2,912	175	261	436	266	126	787	861
from Canada & Europe	2,623	69	241	409	260	119	708	817
from LDCs	289	106	20	27	6	7	79	44
1966								
To U.S.	2,679	188	171	47	444		1,819	
from Developed Countries	2,460	88	144	45	417		952-1,092	737-877
from LDCs	219	100	27	2	27		1,766	
To Other Countries	6,138	478	853	340	2,045		948-1,088	678-818
from Developed Countries	5,779	321	784	268	2,023		4	59
from LDCs	359	157	69	72	22		2,422	
To All Countries	8,817	666	1,025	388	1,416 <sup>a</sup>	1,074 <sup>a</sup>	1,607-1,747	673-813
from Developed Countries	8,239	406	928	315	2,440		2,383	
from LDCs	558	257	96	74	49		1,603-1,743	637-777
1977 (Unadjusted)								
To U.S.	17,601	545	692	1,065	1,246	2,160	9,206	2,688
from Developed Countries	14,845	319	612	846	1,116	496	9,000	2,456
from LDCs	2,756	225	80	218	130	1,664	206	232
To Other Countries	42,172	2,684	7,755	2,029	9,216	4,133	9,665	6,690
from Developed Countries	39,443	2,214	7,371	1,795	8,920	3,426	9,463	6,253
from LDCs	2,730	470	384	235	296	707	202	437
To All Countries	59,773	3,229	8,447	3,094	10,462	6,293	18,871	9,378
from Developed Countries	54,288	2,533	7,983	2,641	10,036	3,922	18,463	8,709
from LDCs	5,486	696	464	453	426	2,371	408	669
1977 (Adjusted for Coverage)								
To U.S.	17,629	546	693	1,067	1,246	2,160	9,206	2,688
from Developed Countries	14,869	320	613	847	1,118	497	9,014	2,460
from LDCs	2,760	225	80	218	130	1,667	206	232
To Other Countries	42,239	2,688	7,767	2,032	9,231	4,140	9,680	6,701
from Developed Countries	39,506	2,218	7,383	1,798	8,934	3,431	9,478	6,263
from LDCs	2,734	471	385	235	296	708	202	438
To All Countries	59,869	3,234	8,461	3,099	10,479	6,303	18,901	9,393
from Developed Countries	54,375	2,537	7,996	2,645	10,052	3,928	18,493	8,723
from LDCs	5,495	696	465	454	427	2,375	409	670

Appendix Table U-4 (continued)

Destination	Industry Group							
	Total	Foods	Chemicals	Metals	Machinery		Transport Equipment	Other Mfg.
					Non-Elect.	Elect.		
1982 (Unadjusted)								
To U.S.	26,244	570	2,043	740	3,073	4,630	12,190	2,998
from Developed Countries	20,099	431	1,598	500	2,601	780	11,693	2,585
from LDCs	6,144	139	445	239	471	3,850	587	413
To Other Countries	65,588	4,524	15,341	3,121	13,347	5,646	12,558	11,052
from Developed Countries	60,564	3,806	14,490	2,764	12,596	4,362	12,240	10,306
from LDCs	5,024	718	851	357	751	1,285	318	745
To All Countries	91,832 <sup>b</sup>	5,094	17,383	3,861	16,419	10,277	24,739	14,050
from Developed Countries	80,663	4,237	16,088	3,264	15,197	5,142	23,933	12,891
from LDCs	11,168	857	1,296	596	1,222	5,135	905	1,158
1982 (Adjusted for Coverage)								
To U.S.	26,511	576	2,064	748	3,104	4,677	12,314	3,028
from Developed Countries	20,303	435	1,614	505	2,627	788	11,812	2,611
from LDCs	6,206	140	450	241	476	3,889	593	417
To Other Countries	66,254	4,570	15,497	3,153	13,483	5,703	12,686	11,164
from Developed Countries	61,179	3,845	14,637	2,792	12,724	4,406	12,364	10,411
from LDCs	5,057	725	860	361	759	1,298	321	753
To All Countries	92,765	5,146	17,560	3,900	16,586	10,381	24,990	14,193
from Developed Countries	81,482	4,280	16,251	3,297	15,351	5,194	24,176	13,022
from LDCs	11,281	866	1,309	602	1,234	5,187	914	1,170
1983 (Unadjusted)								
To U.S.	31,540	480	2,168	750	3,778	5,117	15,920	3,328
from Developed Countries	24,338	339	1,808	649	2,671	930	15,098	2,844
from LDCs	7,202	142	360	101	1,107	4,187	822	484
To Other Countries	63,995	4,230	15,634	2,851	13,758	5,228	11,957	10,337
from Developed Countries	59,513	3,594	14,886	2,589	13,154	3,980	11,691	9,620
from LDCs	4,482	636	748	262	604	1,249	266	717
To All Countries	95,535	4,709	17,802	3,601	17,537	10,345	27,877	13,666
from Developed Countries	83,851	3,933	16,694	3,238	15,825	4,910	26,789	12,464
from LDCs	11,684	778	1,108	363	1,711	5,436	1,088	1,201
1983 (Adjusted for Coverage)								
To U.S.	31,860	485	2,190	758	3,816	5,169	16,082	3,362
from Developed Countries	24,585	342	1,826	656	2,698	939	15,251	2,873
from LDCs	7,275	143	364	102	1,118	4,230	830	489
To Other Countries	64,645	4,273	15,793	2,880	13,898	5,281	12,078	10,442
from Developed Countries	60,117	3,630	15,037	2,615	13,288	4,020	11,810	9,718
from LDCs	4,528	642	756	265	610	1,262	269	724
To All Countries	96,505	4,757	17,983	3,638	17,715	10,450	28,160	13,805
from Developed Countries	84,703	3,973	16,864	3,271	15,986	4,960	27,061	12,591
from LDCs	11,803	786	1,119	367	1,728	5,491	1,099	1,213

<sup>a</sup>Source gives only total machinery (2,490). The breakdown between non-electrical and electrical machinery was estimated assuming that the ratio of exports to income (7,016 for non-electrical machinery and 5,319 for electrical machinery) was identical in the two subgroups. The export ratios in 1977 were 36.1% for non-electrical machinery and 33.4% for electrical machinery (U.S. Department of Commerce, 1981, Tables III F.3 and III.H.2).

<sup>b</sup>Of which 90,898 were goods and 934 were services (Table III.E11).

Notes to Appendix Table U-4

- 1957: U.S. Department of Commerce (1960),  
By industry, to countries other than U.S., p. 36.  
To U.S., by product, Table 26, Manufactures and semimanufactures  
plus meat products.  
Foods = meat products  
Metals = aluminum  
Transport equipment = motor vehicles, aircraft, and equipment  
Other = Newsprint and pulp; Scientific instruments, Rubber  
products, and Other.
- To U.S., by industry, total from Table 57 allocated between Canada  
and Europe using total for all countries from Table 58 and allocated  
by industry using product distribution and assuming that difference  
between product and industry total consisted of fabricated metals  
other than aluminum.
- To All Countries, by industry, breakdown between Canada and Europe  
for all manufacturing from Table 58 and industry breakdown sum of  
exports to U.S. and exports to other countries.
- The share of metals is probably overstated in comparison to data for  
later years because of the inclusion of publicly-owned companies,  
50% or more owned by U.S. citizens, but with no controlling U.S.  
interest.
- 1966: U.S. Department of Commerce (1975), Tables L-1 through L-6.
- 1977: U.S. Department of Commerce (1981), Tables III.H4 and III.H5. All  
affiliate export totals from the source multiplied by 1.0016, the  
ratio of sales of all nonbank affiliates (\$649,749 mill.) to sales  
of reporting nonbank affiliates (\$648,708 mill.), from U.S. Dept.  
of Commerce (1981), Table A, p. 2.
- 1982: U.S. Department of Commerce (1985a), Tables III.E2, III.E4, and III.E5.  
All affiliate export totals from the source multiplied by 1.010155,  
the ratio of sales of all nonbank affiliates (\$949,213 mill.) to  
sales of reporting nonbank affiliates (\$939,671 mill.), from U.S.  
Dept. of Commerce (1985), Table 1, p. 2.
- 1983: U.S. Department of Commerce (1985b), Tables 37 and 38, with same  
adjustment for coverage as for 1982.

Appendix Table U-5

Exports of U.S. Parents and their Majority-Owned Affiliates,  
by Industry Group and Destination  
1966, 1977, 1982, and 1983  
(Unit: \$ million)

	Total Mfg.	Foods	Chemicals	Metals	Machinery		Transport Equipment	Other Mfg.	
					Total	Non- Elect.			Elect.
PARENTS AND ALL MAJORITY-OWNED AFFILIATES									
1966	23,147	1,329	3,066	1,694	6,838	NA	NA	6,442	3,780
1977	125,746	5,917	17,591	7,370	36,929	22,925	14,004	38,541	19,418
1982	198,732	9,030	33,625	11,019	62,579	35,964	26,615	53,428	29,042
1983	197,977	9,707	33,167	8,615	61,369	34,440	26,929	57,413	27,710
PARENTS AND MAJORITY-OWNED AFFILIATES IN DEVELOPED COUNTRIES									
1966	22,569	1,069	2,969	1,621	6,788	NA	NA	6,434	3,685
1977	120,252	5,220	17,126	6,916	34,127	22,498	11,629	38,133	18,748
1982	187,449	8,164	32,316	10,416	56,157	34,729	21,428	52,614	27,871
1983	186,175	8,923	32,048	8,248	54,150	32,711	21,439	56,584	26,496

Source: Appendix Tables U-3 and U-4

Appendix Table U-6

Exports of Manufactures by All Market Economies and by  
Developed Market Economies, by Broad Industry Groups,  
1966, 1977, 1982, and 1983  
(Unit: \$ million)

	Total Mfg.	Foods	Chemicals	Metals	Total	Machinery		Transport Equipment	Other Mfg.
						Non- Elect.	Elect.		
<u>All Market Economies</u>									
1966	130,343	16,979	13,421	20,237	27,096	18,201	8,895	17,962	34,648
1977	715,220	79,293	76,740	93,560	162,482	98,796	63,686	122,569	180,576
1982	1,119,996	111,074	132,365	138,937	267,347	158,752	108,595	189,643	280,630
1983	1,118,196	104,589	135,079	134,434			462,412 <sup>a</sup>		281,682
<u>Developed Market Economies</u>									
1966	117,843	11,253	13,004	17,851	26,772	18,071	8,701	17,846	31,117
1977	630,216	50,809	72,578	84,057	153,849	96,587	57,262	119,666	149,257
1982	973,840	79,145	121,440	122,824	246,104	152,254	93,850	180,448	223,879
1983	958,833	74,426	125,108	111,986			424,122		223,191

<sup>a</sup>Corresponding total for 1982, 457,990

<sup>b</sup>Corresponding total for 1982, 426,552

Source: For 1966-1982, data from UN trade tapes, at the 4-digit SITC level converted to industry data by a concordance at that level and combined with estimates in Appendix Table U-14. For 1983, extrapolated from 1982 using data at the 1-digit and, to some extent 2-digit levels from the UN Monthly Bulletin of Statistics.

Appendix Table U-7

Shares (%) of the U.S. and of U.S. Multinational Firms  
in Market Economy and Developed Market Economy Exports

	Total Mfg.	Foods	Chemicals	Metals	Machinery			Transport Equipment	Other Mfg.
					Total	Non- Elect.	Elect.		
SHARE OF ALL MARKET ECONOMIES' EXPORTS									
U.S.									
1966	17.6	11.7	21.7	13.4	24.3	26.1	20.2	24.9	12.1
1977	13.3	9.1	14.9	7.6	18.3	20.1	14.8	18.3	9.6
1982	14.3	9.6	16.2	9.2	20.3	23.4	15.8	16.7	10.4
1983	13.9	10.6	15.5	8.3	NA		17.8 <sup>a</sup>		10.6
U.S. Multinational Firms									
1966	17.8	7.8	22.8	8.4	25.4	NA	NA	35.9	10.9
1977	17.6	7.5	22.9	7.9	23.0	23.7	22.0	31.4	10.8
1982	17.7	8.1	25.4	7.9	23.4	22.7	24.5	28.2	10.3
1983	17.7	9.3	24.6	6.4	NA		25.7 <sup>b</sup>		9.8
SHARE OF DEVELOPED MARKET ECONOMIES' EXPORTS									
U.S.									
1966	19.5	17.6	22.4	15.2	24.5	26.3	20.7	25.1	13.4
1977	15.1	14.2	15.7	8.5	19.0	20.6	16.5	18.8	11.6
1982	16.5	13.5	17.6	10.4	22.1	24.4	18.3	19.0	13.1
1983	16.3	14.9	16.8	10.4	NA		19.4 <sup>c</sup>		11.2
U.S. Parents and Affiliates in Developed Market Economies									
1966	19.2	9.5	22.8	9.2	25.4	NA	NA	36.1	11.8
1977	19.1	10.3	23.6	8.3	22.2	23.3	20.3	31.9	12.6
1982	19.4	10.3	26.6	8.9	22.8	22.8	22.8	29.2	12.4
1983	19.5	12.0	25.6	7.7	NA		26.1 <sup>d</sup>		11.9

<sup>a</sup>Corresponding figure for 1982 is 18.8

<sup>b</sup>Corresponding figure for 1982 is 25.3

<sup>c</sup>Corresponding figure for 1982 is 20.2

<sup>d</sup>Corresponding figure for 1982 is 25.5

Source: Appendix Tables U-3, U-5, and U-6.

Appendix Table U-8

Industry Distribution of Exports from the U.S. by U.S. Multinational Companies,  
Foreign Companies, and Other U.S. Firms, 1966, 1977, 1982, and 1983

	Total Mfg.	Foods	Chemicals	Metals	Machinery		Transport Equipment	Other Mfg.
					Non- Elec- trical	Elec- trical		
<u>1966</u>								
U.S.	100.0	8.7	12.8	11.9	20.8	7.9	19.6	18.3
U.S. Parents	100.0	4.6	14.2	9.1		30.3	26.1	15.6
Other Firms	100.0	15.6	10.2	16.6		26.0	8.7	22.9
U.S. Parents as % of All U.S.	62.8	33.4	70.2	48.1		66.3	83.5	53.4
<u>1977</u>								
U.S.	100.0	7.6	12.0	7.5	20.9	9.9	23.7	18.3
U.S. Parents	100.0	4.1	13.9	6.5	18.9	11.7	29.8	15.2
For. Firms in U.S.	100.0	9.2	27.7	12.1	19.7	11.1	0.7	19.5
Other Firms	100.0	16.4	5.1	9.5	26.4	5.3	11.0	26.3
U.S. Parents as % of All U.S.	69.4	37.3	79.9	60.0	62.7	81.6	87.4	57.5
<u>1982</u>								
U.S.	100.0	6.7	13.4	7.9	23.2	10.8	19.8	18.3
U.S. Parents	100.0	3.7	15.2	6.7	18.3	15.3	26.8	14.0
For. Firms in U.S.	100.0	4.6	36.7	8.9	14.8	12.1	11.2	11.7
Other Firms	100.0	15.0	1.5	10.8	38.5	0 <sup>a</sup>	4.3	31.3
U.S. Parents as % of All U.S.	66.2	36.3	75.1	56.0	52.1	94.3	89.8	50.7
<u>1983</u>								
U.S.	100.0	7.1	13.5	7.2	20.8	11.3	20.9	19.2
U.S. Parents	100.0	4.9	15.0	4.9	16.5	16.2	28.8	13.7
For. Firms in U.S.	100.0	4.6	38.6	10.0	14.2	12.9	8.5	11.2
Other Firms	100.0	13.2	2.8	11.8	33.1	0 <sup>b</sup>	5.2	34.7
U.S. Parents as % of All U.S.	65.2	44.7	72.4	44.6	51.7	93.4	90.1	46.5

<sup>a</sup>Calculation from Appendix Table U-3 actually comes out as -1.4%.

<sup>b</sup>Calculation from Appendix Table U-3 actually comes out as -0.9%.

Source: Appendix Table U-3



Appendix Table U-9

Industry Distribution of Exports by the U.S., U.S. Multinationals,  
The World, and Developed Countries, 1966, 1977, 1982, and 1983

	Total Mfg.	Foods	Chemicals	Metals	Machinery			Transport Equipment	Other Mfg.
					Total	Non- Elec- trical	Elec- trical		
<u>1966</u>									
World	100.0	13.03	10.30	15.53	20.78	13.96	6.82	13.78	26.58
Devel. Countries	100.0	9.55	11.03	15.15	22.72	15.34	7.38	15.14	26.41
U.S.	100.0	8.69	12.75	11.90	28.73	20.85	7.88	19.62	18.30
U.S. Multinat.	100.0	5.74	13.25	7.32	29.54	NA	NA	27.83	16.33
<u>1977</u>									
World	100.0	11.09	10.73	13.08	22.71	13.81	8.90	17.14	25.25
Devel. Countries	100.0	8.06	11.52	13.34	24.42	15.33	9.09	18.99	23.68
U.S.	100.0	7.58	12.04	7.50	30.87	20.93	9.94	23.68	18.34
U.S. Multinat.	100.0	4.71	13.99	5.86	29.37	18.23	11.14	30.65	15.44
<u>1982</u>									
World	100.0	9.92	11.82	12.41	23.87	14.17	9.70	16.93	25.06
Devel. Countries	100.0	8.13	12.47	12.61	25.27	15.63	9.64	18.53	22.99
U.S.	100.0	6.68	13.35	7.94	33.96	23.21	10.75	19.78	18.30
U.S. Multinat.	100.0	4.54	16.92	5.54	31.49	18.10	13.39	26.88	14.61
<u>1983</u>									
World	100.0	9.35	12.08	12.02		41.29			25.17
Devel. Countries	100.0	7.80	13.11	11.23		44.46			23.40
U.S.	100.0	7.12	13.49	7.17	32.16	20.81	11.34	20.86	19.21
U.S. Multinat.	100.0	4.90	16.75	4.35	31.00	17.40	13.60	29.00	14.00

Source: Appendix Tables U-3, U-5, and U-6

<sup>a</sup>For 1982, the breakdown of transport equipment, from the same sources, was as follows:

	Motor Vehicles and Equipment	Other Transport Equipment
World	11.81	5.13
Developed Countries	13.16	5.37
U.S.	10.63	9.15
U.S. Multinationals	19.55	7.34

Appendix Table U-10

The Universe of U.S. Parent Companies  
1966, 1977, and 1982

	Number of Reporting Parent Companies			Assets of Reporting Parent Companies (\$ million)			Employment of Reporting Parent Companies (thousands)	
	1966	1977	1982	1966	1977	1982	1977	1982
All Industries	3,354	3,540 <sup>a</sup>	2,245 <sup>b</sup>	623	2,128	3,754	18,885	18,705
Manufacturing	1,872	1,842	1,215	211	634	1,018	11,775	10,533
Food & kindred prod.	121	112	71	16	48	80	1,017	1,011
Chemicals & allied prod.	242	194	166	28	97	179	1,208	1,365
Primary & fabricated metals	270	277	170	33	87	115	1,484	976
Machinery, exc. elect.		323	213		83	133	1,546	1,458
Electrical & electronic equip. }	537	223	149	44	47	127	1,274	1,620
Transportation equip.	92	85	59	43	132	191	2,289	1,687
Other manuf.	610	628	387	47	139	193	2,957	2,416
Transp. comm., public util.	163	102	85	64	182	342	1,772	2,040
Trade	528	375	216	19	84	145	2,472	2,626
Wholesale		295	168		27	43	271	397
Retail		80	48		57	102	2,201	2,229
Finance & insurance	312	714	367	265	965	1,690	NA	NA
Banks		111	133		585	1,012	NA	NA
Others		603	234		380	677	862	1,004
Mining & smelting	62	29	11	5	7	4	65	15
Petroleum	145	158	143	51	219	487	891	1,225
Other ind.	472	320	208	9	37	70	1,048	1,262
Services		238	160		21	53	740	994

Sources and Notes to Appendix Table U-10

Sources

- Col. 1: U.S. Dept. of Commerce (1975), Table P-1, p. 232
- 2: U.S. Dept. of Commerce (1981), Table C, pp. 10-11
- 3: U.S. Dept. of Commerce (1985), Table 6, pp. 13-14
- 4: U.S. Dept. of Commerce (1975), Table 0-1, p. 226
- 5: Same as Col. 2
- 6: Same as Col. 3
- 7: U.S. Dept. of Commerce (1981), Table II.S1, p. 182.
- 8: U.S. Dept. of Commerce (1985), Table II.01, p. 150

Notes

<sup>a</sup>Number of complete BE 10A reports. There were also 1,175 reporters exempt because they owned no affiliates with more than \$500 thousand in assets, sales, or net income. (U.S. Dept. of Commerce, 1981, p. 2.)

<sup>b</sup>Number of complete BE 10A reports. There were also 1,412 reporters exempt because they owned no affiliates with more than \$3 million in assets, sales, or net income. (U.S. Dept. of Commerce, 1985, p. 2.)

Appendix Table U-11

Adjustments to U.S. Export Data, Total and by Product  
(Unit: \$ million)

U.S.-Can. Recon- ciliation Adjust- ments Total (1)	Adj. for U.S. Nonrec. Exp. on Canada (2)	Differences Between U.S. Exports on B of P Basis and U.S. Exports on Census Basis										Under- statement of auto- motive exports to Canada (14) (15)			
		Foods, feeds, beverages		Industrial Supplies & Materials		Machinery except consumer type (9)		Transp. equip. except auto- motive (10)		Auto- motive vehicles, parts, & engines to Canada (11)			Consumer goods exc. auto- motive (12)		Total of Products (13)
		Agri. (4)	Non-agric. (fish, distilled bev., etc.) (5)	Agric. (6)	Total (7)	Fuels & lubricants (8)	Total (9)	auto- motive (10)	to Canada (11)	exc. auto- motive (12)	Total of Products (13)				
1985	5,198	-214	32	0	1,893	0	1,285	325	1,759	465	5,545				
1984	4,962	125	14	56	1,817	0	944	299	1,474	501	5,230				
1983	5,014	4	65	58	1,658	-62	987	296	1,595	543	5,393				
1982	4,481	4,167	15	0	2,134	0	925	213	1,170	526	5,202				
1981	5,108	5,038	220	55	2,649	291	990	365	1,429	518	6,226				
1980	5,103	4,936	367	41	1,704	170	1,234	344	1,371	384	5,477				
1979	4,662	4,503	357	31	1,069	0	1,207	126	1,704	360	4,879				
1978	2,118	2,166	98	24	237	0	457	66	1,121	158	2,168				
1977	2,027	1,950	107	26	136	0	413	41	1,249	114	2,092				
1976	1,546	1,571	101	16	123	-31	377	57	856	106	1,641				
1975	1,148	1,204	143	5	134	-11	313	57	554	84	1,294				
1974	1,250	1,345	138	10	127	-41	416	65	463	115	1,346				
1973	1,158	1,042	96	14	139	-14	286	50	535	86	1,226				
1972	608	655	0	5	58	0	135	-12	366	73	635	875			
1971		538										550	450		
1970		517										550	450		

Sources: Col. (1) and (3)-(12):  
 1984 & 85: Bach (1986)  
 1983: DiLullo (1984)  
 1982: Bach (1984)  
 1970-81: Krueger (1983),  
 Col. (2): U.S. Bureau of the Census (1985).

Col. 13: Sum of Cols. 4-7 and 9-12.  
 14: Parrish (1974).  
 15: Bame (1973).

Appendix Table U-12

Correction of U.S. Exports for Understatement of Exports to Canada, 1970  
By Broad Commodity Group and Type of Correction  
(Unit: \$ million)

SITC	Type of Correction						Total Correction
	Reclassi- fication	Trade Defini- tion	Valua- tion	Nonreceipt of Docu- ments	Transp. Charges	Errors & Timing & Other	
	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6 & Type 7	
<b>Non-Manuf.</b>							
0		-121		+17		+1	-103
2	+1	-143	-2	+17	-11	+5	-133
3		-79			-70	-1	-150
9 exc.fire arms	<u>-8</u>	<u>      </u>	<u>-1</u>	<u>+1</u>	<u>      </u>	<u>+9.4</u>	<u>+1.4</u>
Total Non-Mfg.	-7	-343	-3	+35	-81	+14.4	-385
<b>Mfrs.</b>							
4				+1			+1
5				+46		-3	+43
6	+4		-1	+75	-3	-2	+73
67	(-0.2)			(+10.2)		(-1.1)	(+8.9)
68	(-1.3)			(+5.7)		(-0.2)	(+4.2)
69	(+29.6)		(-0.7)	(+8.7)	(-2.9)	(-0.2)	(+34.5)
71	+1.2	-1.4	+0.6	+95.6	-19.7	+13.8	90.1
72	+9.6			+20.0	-6.4	-0.9	22.3
73	-2.4	-13.0		+158.7	--	-2.3	141.0
8	-5	-1	-1	+86	--	-2	77
951 fire arms	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<u>-0.6</u>	<u>-.6</u>
Total Mfd.	+7	-15.4	0.6	482.3	-29.1	+3.0	+449
Total	--	-358.4	-2.4	517.3	-110.1	+17.4	+64

Source: U.S. Dept. of Commerce (1973a).

Appendix Table U-13

Estimate of Manufactured Goods' Share of Correction for  
Understatement of U.S. Exports to Canada  
(Unit: \$ million)

	Reconciliation Adjustment on U.S. Exports to Canada			Total U.S. Exports: B. of P. Basis Minus Census Basis		Manuf. Goods' Share of Correction (per cent) (6)
	Total (1)	Mfd. Prod. (2)	For non- receipt of doc. by U.S. (3)	Sum of product differences (4)	Differences for mfd. products (5)	
1985	5,198			5,545	5,759	103.0
1984	4,962		5,253	5,230	5,049	96.5
1983	5,014		5,101	5,393	5,144	95.4
1982	4,481		4,167	5,202	4,983	95.8
1981	5,108		5,038	6,226	5,715	91.8
1980	5,103		4,936	5,477	4,908	89.6
1979	4,662		4,503	4,879	4,497	92.2
1978	2,118		2,166	2,168	2,063	95.2
1977	2,027		1,950	2,092	1,979	94.6
1976	1,546		1,571	1,641	1,566	95.4
1975	1,148		1,204	1,294	1,158	89.5
1974	1,250		1,345	1,346	1,237	91.9
1973	1,158		1,042	1,226	1,124	91.7
1972	608	555	655	635	625	92.0
1971		487	538			98.3
1970	64	444	517 <sup>a</sup>			93.2

<sup>a</sup>Of which mfd. prod., 482.3.

Sources:

Cols. 1 and 3: Appendix Table U-11, Cols. 1 and 2

Col. 2: Appendix Table U-15

" 4: Appendix Table U-11, Col. 13

" 5: Appendix Table U-11, Col. 13 minus Cols. 4, 6, and 8.

" 6: 1973-1984, Col. 5 ÷ Col. 4

1971-1972, (Col. ÷ Col. 3) raised to the level of the 1970  
figure in this column

1970, ratio for nonreceipt of documents only (482.3)

(517.3)

from Appendix Table U-12

Appendix Table U-14

Estimate of Industry Distribution of Adjustment for  
Understatement of U.S. Exports to Canada  
(Unit: \$ million)

All Mfd. Products (1)	SITC 5 & 6				SITC 71 & 72			SITC 73 <sup>a</sup> Trans- port Equip. (8)
	Total (2)	Of which		Total (5)	Of which			
		SITC 5 Chemicals (3)	SITC 67-69 Metals (4)		SITC 71 Non-elect. Mach. (6)	SITC 72 Elect. Mach. & Equip. (7)		
1985								
1984	5,069	1,200	534	372	915	805	110	1,718
1983	4,866	1,090	485	338	891	784	107	1,706
1982	3,992	1,090	485	338	710	625	85	1,061
1981	4,625	1,141	507	354	735	647	88	1,333
1980	4,423	827	368	256	877	772	105	1,385
1979	4,152	649	289	201	915	805	110	1,557
1978	2,062	198	88	61	193	170	23	1,129
1977	1,845	118	52	37	351	309	42	1,138
1976	1,499	127	56	39	344	303	41	834
1975	1,078	102	45	32	242	213	29	509
1974	1,236	139	62	43	382	336	46	485
1973	956	99	44	31	223	196	27	456
1972	603	71	32	22	137	124	13	360
1971	529	45	23	26	120	116	4	325
1970	482	121	46	25	68	46	22	206

<sup>a</sup>Including automotive engines.

Notes to Appendix Table U-14

Col. 1: Appendix Table U-13, Col. 2 multiplied by Col. 5.

Col. 2: 1973-84, [Appendix Table U-11, (Col. 7 plus Col. 12 minus Col. 8) ÷ Col. 13], multiplied by Col. 1 of this table and then reduced to match the estimated 1972 level.

1971-72, Appendix Table U-15, share of SITC 5 and 6 in total correction for manufactured goods, multiplied by Col. 1 of this table.

1970, Appendix Table U-12.

Cols. 3 and 4: 1973-84, Col. 2, allocated between Chemicals and Metals by the 1972 ratio from Appendix Table U-15.

1971-72, Appendix Table U-15, shares of SITC 5 and 67-69 in correction for SITC 5 and 6, multiplied by Col. 2 of this table and, for metals, reduced to match the 1970 level.

1970: Appendix Table U-12.

Col. 5: 1972-84, Appendix Table U-11, Col. 9 ÷ Col. 13, multiplied by Col. 1 of this table.

1971, extrapolated from 1972 by corrections for SITC 72 plus one half of corrections for SITC 71 from Appendix Table U-15.

1970, Appendix Table U-12, corrections for SITC 72 plus one half of corrections for SITC 71.

Col. 6: Estimated at 88 per cent of Col. 5 (average of 1970-72 from Appendix Table U-15).

7: Estimated at 12 per cent of Col. 5 (average of 1970-72 from Appendix Table U-15).

Col. 8: 1972-84 [Appendix Table U-11 (Col. 10 plus Col. 11) ÷ Col. 13] multiplied by Col. 1 of this Table.

1971, Appendix Table U-15, share of SITC 73 plus half of share of SITC 71 in total correction for manufactures, multiplied by Col. 1 of this Table.

1970, Appendix Table U-12, correction for SITC 73 plus one half of correction for SITC 71.



Appendix Table U-15

Correction of U.S. Exports for Understatement of  
Exports to Canada, 1970-72  
(Unit: \$ million)

SITC	U.S.			Reconciled			Corrections		
	1970	1971	1972	1970	1971	1972	1970	1971	1972
Non-Manuf.									
0	615.2	593.3	720.7	511.2	537.9	665.3			
2	545.8	532.4	574.6	412.8	469.6	543.4			
3	309.6	326.6	408.7	161.1	174.6	212.1			
9 excl. 951 (Firearms)	270.4	303.9	361.2	275.2	288.0	311.1			
Total Non-Mfg.	1,741.0	1,756.2	2,065.2	1,360.3	1,470.1	1,731.9	-380.7	-286.1	-333.3
Manuf.									
1	9.2	10.4	11.5	9.3	10.8	10.9			
4	22.8	26.7	21.3	24.1	27.7	23.4			
5	619.3	659.4	764.5	661.7	681.0	793.5	+42.4	+21.6	+29.0
6	1,162.4	1,301.2	1,580.6	1,234.4	1,321.3	1,616.8	+72.0	+20.1	+36.2
67	(264.5)	(271.0)	(302.6)	(273.4)	(271.3)	(302.5)	(+8.9)	(+.3)	(-.1)
68	(129.3)	(140.0)	(162.1)	(133.5)	(140.1)	(163.1)	(+4.2)	(+.1)	(+1.0)
69	(252.4)	(276.0)	(338.0)	(286.9)	(322.1)	(375.6)	(+34.5)	(+46.1)	(+37.6)
71	1,864.1	2,124.6	2,614.5	1,954.0	2,211.3	2,695.6	+89.9	+86.7	+81.1
72	614.8	740.9	890.6	637.0	744.7	903.8	+22.2	+3.8	+13.2
73	2,447.4	3,069.9	3,688.5	2,588.4	3,326.1	3,983.2	+141.0	+256.2	+294.7
8	588.0	651.1	755.0	664.0	710.6	854.7			
951 (Firearms)	15.0	25.5	23.7	14.4	25.5	23.7			
Total Mfg.	7,343.0	8,609.7	10,350.2	7,787.3	9,097.0	10,905.6	+444.3	+487.3	+555.4
TOTAL	9,084.0	10,365.9	12,415.4	9,147.6	10,567.1	12,637.5	+63.6	+201.2	+222.1

Source: U.S. Department of Commerce (1973b)

Appendix Table U-16

Relative U.S. Price Levels

Index of U.S. Export Prices  
Relative to  
Major Industrial Exporters  
(1975 = 100)

	(1)
1953	113.6
1954	116.4
1955	117.5
1956	121.3
1957	124.7
1958	128.3
1959	131.8
1960	133.7
1961	133.6
1962	135.5
1963	135.6
1964	135.2
1965	133.9
1966	133.5
1967	137.9
1968	143.5
1969	144.5
1970	137.6
1971	134.6
1972	123.8
1973	109.8
1974	103.5
1975	100.0
1976	104.4
1977	101.8
1978	91.8
1979	87.0
1980	86.9
1981	102.5
1982	115.4 <sup>a</sup>
1983	123.2 <sup>a</sup>

<sup>a</sup>Extrapolated from 1981 by U.S. GDP price level relative to those of 9 other industrial countries. These are absolute price levels for each year. For further explanation, see Table 1 of Kravis and Lipsey (1986). Figures for 1981-83 are:

1981	97.6
1982	109.8
1983	117.3

Sources:

Col. 1: Index of U.S. export prices for commodities of SITC 5-8, weighted by 1975 U.S. exports, relative to those of 7 other developed countries, also weighted by 1975 U.S. exports. For a further description of the data, see Bushe, Kravis, and Lipsey (1986).