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U.S.-OWNED AFFILIATES AND HOST-COUNTRY EXPORTS

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ABSTRACT

U.S.-owned manufacturing affiliates in foreign countries tended to become more export-oriented between 1966 and 1977. The shift toward exporting characterized affiliates in most industries and most countries. The bulk of U.S.-owned production abroad continues to be for local sale in most industries and areas. Exporting to the U.S. remains a small part of affiliate activities in almost all cases. The most export-oriented were subsidiaries in machinery industries in Southeast Asia which were also the only ones outside Canada that sold a substantial part of their production in the U.S.

In most industries and most countries U.S.-owned companies led the rise in exports and increased their shares in the exports of their host countries. This role of U.S. subsidiaries was particularly notable in Southeast Asia, and in those countries was concentrated in the machinery industry. The increasing share of U.S. affiliates in host-country exports was quite a general phenomenon, however, and high rates of affiliate export growth were associated with rapid growth of host country GDP and exports.

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Introduction

The purpose of this paper is to examine the role of exporting in the activities of U.S.-owned manufacturing companies in foreign countries, the role of these U.S.-owned manufacturing affiliates in exports of manufactured products by their host countries, and the changes that have taken place in the decade between the most recent and previous censuses of U.S. direct investment abroad. The completion of the 1977 census (U.S. Department of Commerce, 1981) and the fairly close comparability with the earlier one (U.S. Department of Commerce, 1975) which covered the year 1966 make possible a new examination of this issue.

The effects of direct investment on trade, particularly those of direct investment in manufacturing, are usually analyzed in terms that suggest that it is a substitute for exports from the home country. That may be because capital movements in general, whether direct or portfolio, are thought of as substitutes for trade, along the lines of the Mundell (1957) analysis. Or it may be because, as in the more recent analyses specifically of direct investment, such investment is thought of as involving a decision by the parent company as to whether to serve an essentially fixed host-country market by exporting from the home country or by host-country production.¹ However, the empirical examinations of the relation of home-country exports to direct investment have almost all searched in vain for any evidence of such substitution.²

¹For example, Bergsten, Horst, and Moran (1973), Swedenborg (1979), U.S. Tariff Commission (1973), and Weinblatt and Lipsey (1980).

²In addition to the studies in footnote 1, see Lipsey and Weiss (1981).

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Another side of the concern with trade effects of direct investment has been the fear among host countries that foreign-controlled subsidiaries are prevented by their parent companies from competing with them outside the host-country market, and that foreign ownership therefore impedes the development of export industries. That issue has been discussed and studied extensively in Canada in particular³ although the advantage of such a policy to a parent maximizing its worldwide income is not obvious. On the other hand, countries welcoming direct investment from abroad often look on it as an aid to establishing or increasing exports because the foreign owners bring previously unavailable technology, established marketing facilities, or entree to the parents' home markets. In the United States, at present, one of the chief concerns of trade policymakers is that host countries are squeezing U.S. exports out of third-country markets by forcing U.S.-owned affiliates to export as the price for host-country permission to invest or to take over existing firms. Again, Canada is a particular focus of this concern although export requirements are increasingly applied in developing countries.

Production for Export and for Local Sale

U.S.-owned manufacturing affiliates have always had as their main markets the host countries within which they operate. In 1966, over 80 per cent of sales were within the host countries, and the proportion of local sales was over 90 per cent for affiliates in developing countries.

³An early example is the study by Safarian (1966).

U.S.-Owned Manufacturing Affiliates
Local sales as % of total sales

	Countries		
	All	Developed	Developing
1957	84	82	95
1966	81	80	92
1977	69	67	82

Source: Table 1

Although U.S.-owned foreign production has been heavily concentrated in developed countries (about 85 per cent of sales in both 1966 and 1977) the number of manufacturing affiliates in developing countries was almost 30 per cent of the total in 1966. Since affiliates in developing countries were almost all producing for local markets, the proportion of all affiliates engaged almost entirely in host-country sales must have been very large.

Although host-country sales remained the predominant business of manufacturing affiliates in 1977, there had clearly been a major shift in their activity. The share of exports in total sales rose from 16 per cent in 1957 to 19 per cent in 1966 and to 31 per cent in 1977, and this shift took place in both developed and developing countries (Table 1). In the former group the rise in exporting took place in every one of the 15 countries for which we could make the calculation (Table A-1). It was small in a few cases (only Sweden among the European countries, and Japan, Australia, and South Africa), but it was large in almost all the European countries, roughly 50 per cent in the EEC and in other Europe, taken as groups. There was not such complete unanimity among the developing countries even though the overall rise in the export ratio was very large: from 8 to 18 per cent (Table 1). There was a very large increase in the export ratio for the group of countries called "Other Asia and Pacific, except India, Indonesia and the Philippines," prin-

Table 1

U.S. Majority-Owned Manufacturing Affiliates^a
 Relations Among Sales, Exports, and Exports to the U.S.
 1957, 1966, and 1977

	Exports as Per Cent of Total Sales			Exports to the U.S. as Per Cent of					
	1957	1966	1977	Total Sales			Total Exports		
	1957	1966	1977	1957	1966	1977	1957	1966	1977
All Countries	15.9	18.6	30.8	6.0	5.6	9.1	37.5	30.4	29.4
Developing countries	17.7	20.4	33.1	6.6	6.1	9.1	36.9	29.9	27.3
Canada	16.0	16.1	29.9	10.5	13.2	26.1	65.7	81.7	87.2
Europe	21.6	25.8	37.7	3.0	2.1	2.3	13.9	8.3	6.1
Developing countries	5.3	8.4	18.1	2.6	3.2	9.1	49.0	37.9	50.2
Latin America	4.2	6.2	9.7	1.7	2.2	3.6	40.2	35.6	37.3
Other Asia ^b	20.7	23.2	57.0	6.3	9.8	32.2-	30.2	42.5	56.4-
Other Asia, n.e.c.	18.2 ^c	42.3 ^d	74.9 ^d	11.4 ^c	<25.9 ^d	36.2 44.2- 50.2 ^d	62.5 ^c	<46.3 ^d	63.5 58.9- 67.0

^aExcept 25 per cent-owned and over in 1957.

^bExcluding Japan and Middle East.

^cExcluding India and the Philippines.

^dExcluding India, Indonesia, and the Philippines.

Source: Table A-1 and U.S. Department of Commerce (1960), p. 110.

cipally Hong Kong, Singapore, Malaysia, Taiwan, and South Korea, as well as a rise in the importance of that group among the developing countries. Affiliates in these countries had been comparatively export-oriented even in 1957 and 1966 (42 per cent of sales) and by 1977, three quarters of their sales were for export.

For U.S. affiliates in developed countries, the share of exports to the United States in total exports diminished sharply between 1957 and 1966, and slightly between 1966 and 1977. In the last year their exports to the U.S. were almost 10 per cent of their total sales. Only for affiliates in Canada was the U.S. a major market and of growing importance (a quarter of sales in 1977). This high ratio was partly attributable to the trade in automobiles and parts resulting from the U.S.-Canadian auto agreement. U.S. affiliates in developing countries did shift their exports to the United States in the last ten years (38 to 50 per cent of exports) but the U.S. market still accounted for less than 10 per cent of sales in 1977. Even that was a large rise from 1957. The chief exceptions once again were the small Asian countries, for whom exports to the U.S. reached well over half of exports in 1977 and almost half of their total sales, at least four times the 1957 share.

In general, then, exporting to the United States has been a relatively minor, though expanding, activity of U.S. manufacturing affiliates in foreign countries for the last twenty years. The major exceptions to this generalization are the affiliates in the small Asian countries, for which the United States has been a major market, accounting for roughly half of their sales, and those in Canada. The chief trends in affiliate activity over the twenty years have been the rise in export orientation of affiliates in most parts of the world, but particularly in the small

Southeast Asian countries, the shift away from exporting to the United States by European affiliates, and the shift towards the United States as a market by those in Canada and in Asian developing countries.

A quick glance at the country data of Table A-1 suggests that country size is a factor accounting for the degree of export orientation of affiliates. Among European countries, the highest export ratios were among the smaller countries: Belgium-Luxembourg, the Netherlands, Ireland, Sweden, and Switzerland, although Sweden was no longer among that group in 1977. The largest countries, France, Germany, Italy, and the U.K., had below-average export ratios for Europe in both years. Among the developing countries, export ratios were low for India and the larger Latin American countries, and high for the small Asian countries, but there were major differences in trade policy as well as in size which may have influenced these ratios.

A more formal analysis of the country characteristics determining the export propensities of U.S.-owned affiliates is given by the equations summarized in Table 2. In these equations, the ratios of exports to sales for the total of U.S.-affiliates in an industry in a country are related to measures of country size and population density. These are variables that are known to be related to the trade propensity of a country (Kravis and Lipsey, 1982, and Kuznets, 1964).⁴

⁴The equation derived for use in Kravis and Lipsey, 1982, was:

$$\ln OP = .4047 - .00121 \ln POP + .0004 \ln POP D$$

(12.71) (3.59) (10.98)

$$\bar{R}^2 = .7419$$

where OP = $\frac{\text{Exports} + \text{Imports}}{\text{GDP}}$
POP = Population in millions
POPD = Population per square kilometer

Table 2

U.S.-Owned Manufacturing Affiliates
Equations Relating Ratio of Exports to Total Sales to Country Characteristics

Equation No.	Industry	Year	No. of Obs.	Coefficients			R ²
				Country Characteristics		Constant Term	
				Population ^a	Population per Square Kilometer ^b		
<u>Arithmetic Equations</u>							
1.	All Mfg.	1966	24	-.52 (1.93) ^c	.87 (3.56)	.12 (3.26)	.35
2.	All Mfg.	1977	29	-.58 (1.61)	.14 (3.39)	.33 (6.57)	.32
3.	Chemicals	1966	21	-.47 (1.90)	1.00 (4.34)	.05 (1.31)	.48
4.	Chemicals	1977	27	-.60 (1.44)	.04 (.60)	.26 (4.35)	.02
5.	Non-Elect. Mach.	1977	26	-.67 (1.34)	.14 (2.53)	.38 (5.17)	.22
6.	Elect. Mach.	1977	23	-1.64 (.99)	.15 (3.23)	.35 (4.25)	.36
7.	Chemicals, Non-elect. Mach. & Elect. Mach., Pooled	1977	76	-.68 (2.22)	.13 (4.14)	.31 (8.34)	.23
<u>Log Equations</u>							
8.	All Mfg.	1966	24	-.27 (1.24)	.48 (2.79)	-3.25 (4.09)	.21
9.	All Mfg.	1977	29	-.29 (1.98)	.35 (3.34)	-2.13 (3.21)	.32
10.	Chemicals	1966	19	-.72 (3.51)	.42 (3.26)	-1.73 (2.23)	.48
11.	Chemicals	1977	26	-.60 (3.28)	.40 (3.09)	-1.94 (2.47)	.40
12.	Non-Elect. Mach.	1977	24	-.42 (3.00)	.27 (2.96)	-1.13 (1.73)	.45
13.	Elect. Mach.	1977	23	.05 (.28)	.45 (4.17)	-3.68 (4.28)	.42
14.	Chemicals, Non-elect. Mach. & Elect. Mach., Pooled	1977	73	-.36 (3.40)	.36 (5.37)	-2.11 (4.45)	.37

^aPopulation in thousand millions in arithmetic equations, millions in log equations.

^bPopulation in thousands per square kilometer in arithmetic equations, number per square kilometer in log equations.

^cFigures in parentheses are t-ratios.

Although the relationships are not as strong as those that have been calculated for countries' total export propensities, the direction of the effects is the same on the export behavior of foreign affiliates. The smaller the country, in terms of population, and the higher the population density, the higher the propensity of an affiliate to export. The coefficient for country size is consistent in sign, not statistically significant in most arithmetic equations, but more generally significant in the log equations. That difference suggests that the population effect is stronger among the small countries. The coefficients for density are almost all significant. One interpretation of this relationship is that it reflects economies of scale; otherwise we might expect affiliate sizes to be proportional to market size and each market supplied from an affiliate in that market. Thus, while production for export by multinational firms tends to be located in large markets (Kravis and Lipsey, 1982), those affiliates that do locate in small markets tend to export a large part of what they produce. The data are apparently not dominated by large numbers of plants, too small to be economical, lured or coerced to undesirable locations in small markets by tariffs or other restrictions or subsidies, although such plants undoubtedly exist. If they were typical, we would expect a positive relationship between market size and export propensity. However, it may be that location in small markets is partly induced by government actions, that firms making that choice build larger plants than warranted by the market size in order to gain some economies of scale, and that such plants then tend to be export oriented because of the mismatch between their size and the size of their markets. In any case, the relationship is strong enough that it would have to be allowed for in any attempt to judge the effects of host-country policy on affiliate export behavior.

If we compare increases in exports from 1966 to 1977 with increases in total sales (Table A-1), we see another aspect of the importance of exports to the growth of U.S. manufacturing affiliates. The increase in exports was over a third of the total rise in sales for affiliates in all countries and a somewhat higher fraction for those in developed countries. This source of growth in sales was particularly important for the smaller European countries: well over half the total in Belgium-Luxembourg, the Netherlands, Ireland, and Switzerland. Exports were a much less important source of sales growth for Japanese and other non-European developed country affiliates and for those in developing countries, again with the exception of the small Asian countries. For them, the share of export growth in the increase in sales was over three-quarters. In only one country--India--was there no contribution from exports to the increase in sales. In fact, India was the one case of an absolute decline in the value of exports by U.S. affiliates.

To some extent, the differences between affiliates in developed countries and those in developing areas may have reflected the industry composition of activities in the two types of host countries. Affiliates in developed countries were more heavily involved with sales of machinery and transportation equipment and those in developing countries with sales of food products and chemicals (Table 3). However, there was considerable convergence in the industry composition of sales in the two groups of countries: in particular from the large fall in importance of food products and rise in machinery sales among affiliates in the developing countries.

Affiliates producing food products in developed countries have generally been among the less export-oriented groups within manufacturing. In developing countries, however, they were far above average as exporters

Table 3

Industry Distribution of Sales of U.S. Majority-Owned Manufacturing Affiliates
1957, 1966, and 1977

	Total Sales			Per Cent Distribution		
	1957	1966	1977	1957	1966	1977
<u>All Countries</u>						
Total Manufacturing	18,331	47,375	194,200	100.0	100.0	100.0
Food products	2,487	5,644	21,756	13.6	11.9	11.2
Chemicals	2,411	7,421	32,396	13.2	15.7	16.7
Primary and fabricated metals	1,548	3,904	11,560	8.4	8.2	6.0
Machinery	3,950	10,902	47,059	21.5	23.0	24.2
Transportation equipment	4,228	11,156	48,685	23.1	23.5	25.1
Other	3,707	8,348	32,744	20.1	17.6	16.9
<u>Developed Countries</u>						
Total Manufacturing	15,617	40,486	163,922	100.0	100.0	100.0
Food products	1,811	4,169	17,148	11.6	10.3	10.5
Chemicals	1,835	5,897	25,930	11.8	14.6	15.8
Primary and fabricated metals	1,399	3,407	9,893	9.0	8.4	6.0
Machinery	3,660	10,009	40,450	23.4	24.7	24.7
Transportation equipment	3,685	10,112	43,205	23.6	25.0	26.4
Other	3,227	6,892	27,296	20.7	17.0	16.7
<u>Developing Countries</u>						
Total Manufacturing	2,714	6,889	30,278	100.0	100.0	100.0
Food products	676	1,475	4,607	24.9	21.4	15.2
Chemicals	576	1,523	6,466	21.2	22.1	21.4
Primary and fabricated metals	149	498	1,667	5.5	7.2	5.5
Machinery	290	892	6,612	10.7	12.9	21.8
Transportation equipment	543	1,044	5,461	20.0	15.2	18.0
Other	480	1,457	5,465	17.7	21.1	18.0

Source: U.S. Department of Commerce (1960), (1975), and (1981).

in 1966 but a little below average in 1977 (Tables 1 and 4). Over that period affiliates in developing countries shifted away from exporting and came to resemble in this respect, those in developed countries, which shifted toward a higher ratio of exports to sales.

For no country were exports to the U.S. a large part of total sales of food product affiliates, and they were an important part of total exports (a third or more) only for developing countries, particularly the Philippines (Table A-2). Reliance on the U.S. as a market for exports declined for both groups of countries.

U.S.-owned affiliates in the Chemicals and Allied Products industry in developed countries were much more dependent on exports than those in developing countries in 1966 (Table 5). After 1966 the chemical affiliates doubled their export propensities. The shift towards exporting took place in Europe and "Other Asia," while export propensities decreased in Canada and Latin America. For affiliates in Belgium and the Netherlands exports were about three-quarters of total sales and more than that for the increase in sales between 1966 and 1977. For the six countries of the original EEC almost half of the increase in sales went into exports (Table A-3).

In none of the major areas listed in Table 5 was exporting to the U.S. an important part of the chemical industry affiliates' activities. Even Canadian affiliates sold only 6 or 7 per cent of their output in the U.S., although these sales accounted for a substantial part of Canadian affiliates' exports. There was, furthermore, a shift away from the U.S. as an export market by affiliates in general, the main element of which was the rise in importance of the European affiliates, which sent only a very small share of their exports to the U.S.

Table 4

U.S. Majority-Owned Food Manufacturing Affiliates
Relations Among Sales, Exports, and Exports to the U.S.
1966 and 1977

	Exports as Per Cent of Total Sales		Exports to the U.S. as Per Cent of			
			Total Sales		Total Exports	
	1966	1977	1966	1977	1966	1977
All Countries	11.8	14.8	3.3	2.5	28.2	16.9
Developed countries	9.8	14.8	2.1	1.9	21.5	12.6
Canada	8.0	6.2	2.8	2.5	35.1	40.0
Europe	10.6	20.9	1.3-	1.8	12.1-	8.6
			1.9		18.1	
Developing countries	17.4	15.4	6.8	4.9	38.9	32.4
Latin America	15.6	12.4	5.3-	2.7	3.4-	21.4
			8.2		5.2	
Other Asia ^a	30.8	29.2-	<17.6	20.1-	<57.1	68.7 ^b
		38.0		26.1		

NA = Not available.

^aExcluding Japan and the Middle East.

^bMainly the Philippines.

Source: Table A-2.

Table 5

U.S. Majority-Owned Chemical Manufacturing Affiliates
Relations Among Sales, Exports, and Exports to the U.S.
1966 and 1977

	Exports as Per Cent of Total Sales		Exports to the U.S. as Per Cent of			
			Total Sales		Total Exports	
	1966	1977	1966	1977	1966	1977
All Countries	13.8	26.1	2.3	2.1	16.7	8.2
Developed countries	15.7	30.8	2.4	2.4	15.5	7.7
Canada	11.8	8.7	6.8	6.4	58.1	72.8
Europe	20.3	39.9	0.7	1.6	3.3	4.0
Developing countries	6.3	7.2	1.8	1.2	28.1	17.2
Latin America	6.3	5.5	1.5-2.1	1.0	24.7-33.3	18.8
Other Asia ^a	4.2-7.9	15.3	<3.7	<2.7	NA	12.5-14.9

NA = Not available.

^aExcluding Japan and Middle East.

Source: Table A-3.

As can be seen in Table 2, both country size and density were related to export propensities of chemical affiliates. The country size coefficients were much larger negative values than those for the other industries or for all manufacturing, suggesting that economies of scale may be particularly important in this industry.

Although the data for primary and fabricated metals are thin, it appears that the same phenomenon of increasing export orientation was present. For all affiliates, worldwide, the share of exports in sales rose from about 10 per cent in 1966 to more than one quarter in 1977 (Table 6). There were large increases in the importance of exports in every country for which data were published, with the sole exception of the Netherlands, for which the share declined in the face of a more than tenfold increase in sales (Table A-4) although it remained above average for Europe. The export orientation of affiliates in developing countries, mainly Latin America, was similar to that of developed area affiliates in 1977 except that they were more dependent on the United States as a market while European affiliates exported very little to the United States. On the other hand, U.S. companies in Canada sent almost all their exports to the United States in 1977, considerably above the half or so in 1966.

Machinery production is the most export-oriented of the industry groups we distinguish among U.S.-owned producers in foreign countries. Almost a quarter of sales were exported in 1966 and over a third in 1977 (Table 7). In Europe, and for developed countries in general, the proportion exported was over 40 per cent. Machinery affiliates in developing countries shifted their orientation very sharply. In 1966 they sold their output almost entirely in the local markets but by 1977 they were exporting over 40 per cent of their production: the same fraction as that of affiliates in the

Table 6

U.S. Majority-Owned Primary and Fabricated Metals Manufacturing Affiliates
Relations Among Sales, Exports, and Exports to the U.S.
1966 and 1977

	Exports as Per Cent of Total Sales		Exports to the U.S. as Per Cent of			
	1966	1977	Total Sales		Total Exports	
	1966	1977	1966	1977	1966	1977
All Countries	9.9	26.8	1.2	9.2	12.1	34.4
Developed countries	NA	26.7	NA	8.6	NA	32.0
Canada	3.3	25.6	1.7	21.3	51.9	83.1
Europe	16.1	28.1	1.1	1.5	6.9	5.5
Developing countries	NA	27.2	NA	13.1	NA	48.1
Latin America	NA	19.4	NA	9.5	NA	49.3
Other Asia ^a	NA	66.3	NA	NA	NA	NA

^aExcluding Japan and Middle East.

Source: Table A-4.

Table 7

U.S. Majority-Owned Machinery Manufacturing Affiliates
Relations Among Sales, Exports, and Exports to the U.S.
1966 and 1977

	Exports as Per Cent of Total Sales		Exports to the U.S. as Per Cent of			
	1966	1977	Total Sales		Total Exports	
			1966	1977	1966	1977
All Countries	22.8	35.6	4.1	7.2	15.6	20.3
Developed countries	24.4	41.9	4.2	4.0	17.1	11.5
Canada	8.8	15.8	6.3	9.2	71.4	58.3
Europe	33.5	41.2	3.5	2.9	10.5	6.9
Developing countries	5.5	42.3	3.0	27.1	55.1	64.1
Latin America	2.3	15.2	0.3	7.4	11.8	48.6
Other Asia ^a	20.9	84.3- 86.2	NA	57.3-58.8	NA	66.5-69.8
Other Asia, n.e.c. ^b	NA	79.9-100.0	NA	62.0-69.1	NA	66.3-80.0

^aExcluding Japan and the Middle East.

^bExcluding India, Indonesia, and the Philippines.

Source: Table A-5.

developed countries. Affiliates in developed countries (except for Canada) never sold much of their total output in the United States, and the proportion declined sharply. However, those in the developing countries had more than half their export sales in the United States in 1966 and almost two-thirds in 1977. By the latter year, the U.S. was taking over a quarter of their output.

As in other industries, affiliates in Belgium-Luxembourg and the Netherlands were the most active exporters in the EEC, sending more than half of their sales outside their host countries, as did those in Switzerland (Table A-5). Among affiliates in developing countries those in Brazil and Mexico increased the proportions of export sales sharply and also shifted export sales towards the United States. The major development by far in the machinery industry was the rise of production by U.S.-owned affiliates in the small Southeast-Asian countries, fifteen-fold or more, and the multiplication of exports by more than 50 times, from a negligible amount in 1966 to one and three-quarters billion dollars in 1977. By 1977 between half and three-quarters of this production was exported. Over three-quarters of the exports were sent to the United States, which accounted for well over half of machinery sales by these countries.

For 1977, machinery sales and exports by U.S.-owned affiliates can be divided between non-electrical and electrical machinery. Affiliates in the developed countries dominate the former group while developing countries play a large role in the latter (Table A-6). The affiliates producing non-electrical machinery in Europe are strongly export-oriented (Table 8), with those in the smaller countries exporting from 50 to 60 per cent of their sales (Sweden and the Netherlands) to over 80 per cent (Belgium-Luxembourg),

Table 8

U.S. Majority-Owned Non-Electrical and Electrical Machinery Manufacturing Affiliates
Relations Among Sales, Exports, and Exports to the U.S., 1977

	Exports as Per Cent of Total Sales		Exports to the U.S. as Per Cent of			
			Total Sales		Total Exports	
	Non- Elect. Mach.	Elect. Mach.	Non- Elect. Mach.	Elect. Mach.	Non- Elect. Mach.	Elect. Mach.
All Countries	36.8	33.7	4.4	11.6	11.9	34.3
Developed countries	38.3	27.6	4.3	3.5	11.1	12.6
Canada	18.8	12.5	11.3	6.8	60.2	55.0
Europe	45.4	33.1	3.2	2.2	7.0	6.7
Developing countries	19.4	53.7	5.9	37.6	30.5	70.2
Latin America	13.2	17.2	1.5	13.1	11.2	76.2
Other Asia ^a	70.8	85.8-87.8	40.7	59.1-60.8	57.6	67.3-70.8
Other Asia, n.e.c. ^b	92.9	78.9-100.0	54.4	62.6-70.5	58.6	68.1-81.7

^aExcluding Japan and the Middle East.

^bExcluding India, Indonesia, and the Philippines.

Source: Table A-6.

and even those in the larger countries, 35 to 45 per cent. Among affiliates in developing countries most exported less than 20 per cent of their output, but those in "Other Asia," the small Southeast Asia countries, exported almost all their output: over 90 per cent. The United States took over half the exports and the sales of these countries but was not a major market for affiliates in the other developing countries or in the developed countries.

In electrical machinery and equipment European affiliates' export ratios were again fairly high, averaging a third of sales, with the United States a minor market. Sales by developing country affiliates were more important than in any other of our industry groups and again the main actors were affiliates in "Other Asia." They exported almost 90 per cent of their sales, mostly to the United States, and had a share of total export sales almost half as large as that of developed-country affiliates, a higher proportion than in any other industry.

The relation of country size and density to affiliate export propensities in the two machinery industries is described in equations 5 and 6 of Table 2. The significance of the density coefficients may particularly reflect the high export ratios of the affiliates in the small Southeast Asian countries.

Transportation equipment affiliates were almost entirely involved in the production of motor vehicles and parts. What little investment there was in other types of transportation equipment, such as aircraft and parts, was almost all in Canada. Affiliates in Canada and Europe were export-oriented in 1966, and shifted further in that direction by 1977 (Table 9). Canadian affiliates doubled the share of exports in sales to more than half

Table 9

U.S. Majority-Owned Transportation Equipment Manufacturing Affiliates
 Relations Among Sales, Exports, and Exports to the U.S.
 1966 and 1977

	Exports as Per Cent of Total Sales		Exports to the U.S. as Per Cent of			
	1966	1977	Total Sales		Total Exports	
	1966	1977	1966	1977	1966	1977
All Countries	24.2	38.8	NA	19.9	NA	48.8
Developed countries	26.6	42.7	NA	20.8	NA	48.8
Canada	26.2	50.6	24.6	48.9	93.9	96.6
Europe	32.8	42.2	NA	2.4	NA	5.8
Developing countries	0.8	7.5	NA	3.8	NA	50.5
Latin America	0.8	7.3	NA	NA	NA	NA
Other Asia ^a	NA	12.3	NA	<12.4	NA	NA

^aExcluding Japan and Middle East.

Source: Table A-7.

and those in European countries also increased the export share substantially. Affiliates in developing countries concentrated entirely on their home markets in 1966 and, while they increased the export share, still exported less than 10 per cent of sales in 1977. Only Canadian and Mexican affiliates depended on the United States as a market for exports (Table A-7); the European affiliates shipped less than 6 per cent of their sales to the United States.

Summarizing the industry data, we find several common characteristics and developments. Affiliates in all five industries worldwide became more export-oriented. However, even in the most export-oriented industries, the affiliates in the aggregate sold mainly in their own countries -- the bulk of U.S.-owned foreign production was still for local sale in 1977. The exceptions were machinery in Southeast Asia and in some of the smaller European countries, as well as motor vehicles in Canada.

Exports to the U.S. were a small part of total sales in almost all industries: the main exceptions were machinery producing affiliates in the developing countries of Asia. In other words, exporting to the U.S. was probably not a major reason for the establishment or development of U.S. production abroad in most cases.

Another way of looking at the same set of data is given by Table 10 which brings together the industry data by geographical area. There are some geographical distinctions that run across industries. The affiliates in "Other Asia" were generally the most export-oriented and, in the industries for which we have data, tended to shift their sales toward exporting. They were also the most dependent on the U.S. as a market, over 50 per cent of sales for machinery affiliates, the only case in the table of dependence on the U.S. market for a majority of sales.

Table 10

U.S. Majority-Owned Manufacturing Affiliates, by Area and Industry
Relation Among Sales, Exports, and Exports to the U.S.
1977 and Change, 1966 to 1977

	Exports as Per Cent of Total Sales		Exports to the U.S. as Per Cent of			
	1977	Change: 1966-77	Total Sales		Total Exports	
			1977	Change: 1966-77	1977	Change: 1966-77
Canada						
Foods	6.2	-1.8	2.5	-.3	40.0	-4.9
Chemicals	8.7	-3.1	6.4	-.4	72.8	+14.7
Metals	25.6	+22.3	21.3	+19.6	83.1	+31.2
Machinery, total	15.8	+7.0	9.2	+2.9	58.3	-13.1
Transportation Equipment	50.6	+24.4	48.9	+24.3	96.6	+2.7
Europe						
Foods	20.9	+10.3	1.8	+.2 ^a	8.6	-6.5 ^a
Chemicals	39.9	+19.6	1.6	+.9	4.0	+.7
Metals	28.1	+12.0	1.5	+.4	5.5	-1.4
Machinery, total	41.2	+7.7	2.9	-.6	6.9	-3.6
Transportation Equipment	42.2	+9.4	2.4	NA	5.8	NA
Latin America						
Foods	12.4	-3.2	2.7	-4.1 ^a	21.4	+17.1 ^a
Chemicals	5.5	-.8	1.0	-.8 ^a	18.8	-10.2 ^a
Metals	19.4	NA	9.5	NA	49.3	NA
Machinery, total	15.2	+12.9	7.4	+7.1	48.6	+36.8
Transportation Equipment	7.3	+6.5	NA	NA	NA	NA
Other Asia, excluding Japan & Middle East						
Foods	33.6 ^a	+2.8	23.1	NA	68.7	NA
Chemicals	15.3	+9.3 ^a	NA	NA	13.7 ^a	NA
Metals	66.3	NA	NA	NA	NA	NA
Machinery, total	90.0 ^a	+69.1	58.6 ^a	NA	68.2 ^a	NA
Transportation Equipment	12.3	NA	NA	NA	NA	NA

^aAverage of range.

Source: Tables 4 through 9.

Affiliates in Europe were also quite oriented toward exports and in all the five industries increased their export propensities. In none of these major industry groups was the U.S. the market for more than three per cent of the sales or more than seven per cent of the exports of these affiliates. Thus they are the outstanding example of the irrelevance of the U.S. market to U.S.-owned foreign affiliates.

At the other end of the scale, Latin American affiliates were the most dependent on their domestic markets, and do not seem to have moved as much toward more export orientation over the decade or so shown in the table as did affiliates in other areas. The U.S. was not a major market for Latin American affiliates, but did take a large part of their small exports in some cases.

Canadian affiliates other than those in the transportation equipment industry - mainly autos - despite the high degree of openness of the Canadian economy, concentrated their sales in their home market, although there was some trend toward increasing export shares. While the United States was not the dominant market for sales, it was the chief market for export by these affiliates, taking more than half of exports in every industry group but one.

The Role of U.S. Affiliates in Host-Country Exports

The rapid growth in exports of manufactured goods by foreign affiliates of U.S. companies reflects, to some extent, the growth of the economies in which they are located and the worldwide rise in trade relative to output. To some degree the growth of the host-country economies and of their exports may have reflected the growth of the foreign affiliates. Although it was not possible to assemble industrial statistics for many countries comparable to U.S. data on the operations of foreign affiliates, we did attempt to try to learn what role the U.S. affiliates played in the trade and the growth in trade of their host countries.

The adjustments made to the trade statistics to reach some comparability with the affiliate data are described in an appendix, but there are a few points to be mentioned in connection with the text tables. The 1977 trade data could be fairly well adjusted to match the industry classification used for the U.S. affiliate export data, although there were considerable differences among countries in the completeness of this adjustment. These more fully corrected trade data are used for the columns labeled "Corrected data, 1977." Since much less detail was available in trade statistics for 1966 the adjustments made in the trade data to match the U.S. Department of Commerce industry classification used for the investment data were less complete. Therefore, for comparisons between 1966 and 1977 we made an alternative adjustment of the 1977 data which maximized comparability with the trade data for 1966 rather than with the affiliate data for 1977. These 1977 trade data are used for the calculations of "Exports: 1977/1966, All firms" and for the comparisons of affiliate with total trade labeled "Comparable Data."

U.S. manufacturing affiliates accounted for about 10 per cent of 1977 exports of manufactures by "market economies" other than the U.S., which we shall henceforth refer to as world exports (Table 11). The move towards greater export orientation, referred to earlier, is reflected here in the fact that exports by U.S. affiliates grew faster than host-country exports in every one of the regions in Table 11 or, in other words, that the share of affiliates in exports increased in each one. A somewhat surprising aspect of the table is that U.S. affiliates were considerably more important in the exports of developed countries, even aside from Canada, where they accounted for a majority of exports, than in the developing countries. U.S. affiliates had the largest share of exports in Singapore -- over a fifth -- and possibly in a couple of other Southeast Asian countries, although in those cases we may have failed to adjust the SITC export data sufficiently (Table B-1). The U.S. shares were also large -- 15 per cent or so, in the U.K., Belgium, the Netherlands, Brazil, and Mexico, and even larger in Ireland.

In no area, aside from Canada, were U.S. affiliates responsible for a large part of the growth in exports, the shares in growth being 10 per cent or less. In individual countries, however, the ratio reached the range of 15-20 per cent and even higher in Indonesia and the Philippines. In many, but not all cases, the major export success stories were also associated with relatively high shares of U.S. firms in both exports and export growth. This was the case, for example, for Belgium-Luxembourg, the Netherlands, Ireland, Spain, Brazil, and Mexico (Table B-1). Several of these, it may be recalled, were also the countries in which U.S. affiliates were particularly export-oriented.

The rates of growth of individual countries' exports of manufactured goods were related to their overall rates of growth in output, as measured

Table 11

All Manufacturing Industries
Relation of Exports by U.S. Majority-Owned Affiliates to Total Host-Country Exports
1966 and 1977

	Ratio of 1977 to 1966 Exports		Exports by U.S. Affiliates as % of Total Exports			U.S. Affiliates' Share (%) in Growth of Exports, 1966 to 1977 ^b
	U.S. Affil- iates	All Firms ^a	Comparable Data 1966 ^b	Comparable Data 1977 ^b	Corrected Data 1977	
All Countries	6.8	5.7	8.0	9.5	9.9	9.9
Developed countries	6.6	5.6	8.8	10.3	10.3	10.6
Canada	5.9	4.6	45.2	57.6	57.6	61.0
Europe	7.0	5.4	7.4	9.6	9.7	10.1
Developing countries	9.5	6.0	3.5	5.5	7.2	6.0
Latin America	6.5	5.1	5.6	7.2	10.4	7.6
Other Asia ^c	14.1	9.2	3.9	6.0	6.8	6.2

^aNot fully adjusted to coverage of affiliate data.

^bDenominator not fully adjusted to coverage of affiliate data.

^cExcluding Japan and Middle East.

Source: Table B-1.

by real GDP. Even after that relationship is taken into account, the growth of manufactured exports was also related to the growth of exports by U.S.-owned manufacturing affiliates, as shown in the following equation:

$$\frac{\text{Mfd. Exports } 77}{\text{Mfd. Exports } 66} = \frac{-6.82}{(2.96)} + \frac{.09}{(3.37)} \frac{\text{Aff. Exp. } 77}{\text{Aff. Exp. } 66} + \frac{8.44}{(5.01)} \frac{\text{RGDP } 77}{\text{RGDP } 66}$$

$$\bar{R}^2 = .67$$

where Mfd. Exports = Value of the country's total manufactured exports
Aff. Exp. = Value of exports by U.S.-owned manufacturing affiliates
RGDP = Real GDP, from Summers, Kravis and Heston (1980)

The lines of causation must be very mixed. The growth of total output, other things equal, presumably produced growth in exports, but the ability to export may also have affected the rate of growth of output. The growth of exporting by U.S.-owned affiliates presumably affected the rate at which a country's exports grew, but whatever national factors, such as productivity increases or price stability, encouraged export growth in general, must also have aided the growth of exports of the U.S. affiliates. We can say, however, that the equation is compatible with the idea that the growth of affiliate exports was an influence in increasing host-country exports.

The food products industry differed from manufacturing in general in several respects. For the world as a whole and in three of the four main areas the share of U.S. affiliates in exports declined (Table 12). That share was no more than 6 per cent or so in both 1966 and 1977 in all areas except Canada, and U.S. firms' shares in export growth were small. Even the U.S. firms' export shares in individual countries, aside from a few, were generally below 5 per cent. By and large, this was not an

Table 12

Food Products
Relation of Exports by U.S. Majority-Owned Manufacturing Affiliates
to Total Host-Country Exports
1966 and 1977

	Ratio of 1977 to 1966 Exports		Exports by U.S. Affiliates as % of Total Exports			U.S. Affiliates' Share (%) in Growth of Exports, 1966 to 1977 ^b
	U.S. Affil- iates	All Firms ^a	Comparable Data		Corrected Data 1977	
			1966 ^b	1977 ^b		
All Countries	4.8	6.8	4.7	3.4	5.5	3.1
Developed countries	6.2	4.4	3.4	4.8	6.3	5.1
Canada	2.6	2.8	28.0	25.8	25.8	24.6
Europe	9.0	4.9	2.6	4.7	6.2	5.3
Developing countries	2.7	4.5	2.7	1.6	3.8	1.3
Latin America	2.4	4.6	4.3	2.3	4.5	1.7
Other Asia ^c	3.2	5.7	2.8	1.5	3.6	1.3

^aNot fully adjusted to coverage of affiliate data.

^bDenominator not fully adjusted to coverage of affiliate data.

^cExcluding Japan and Middle East.

Source: Table B-2.

industry in which U.S. firms played a major role in exporting.

In the chemicals and allied products industry, a more substantial object of U.S. direct investment, opposite trends appeared in developed and developing countries, the latter a minor factor in U.S. investment. For the world as a whole, particularly in Europe, and probably in "Other Asia," exports by U.S. affiliates grew much more rapidly than chemical industry exports in general (Table 13). U.S. firms accounted for about 1/8 of total exports by 1977, or, on a less completely adjusted basis, 14 per cent, as compared with 10 per cent in 1966. The usual set of countries showed large U.S. affiliate shares in exports and export growth: Belgium, the Netherlands, and probably Ireland among the European countries (almost a third or more of export growth), and Brazil, Mexico, and the Philippines among developing countries, along with Argentina. U.S.-owned firms remained an important source of Canadian exports but their share decreased very sharply, and the same was true for affiliates in Latin America and in developing countries as a group. Despite the decline in their role in exports of some areas, U.S.-owned chemical industry affiliates accounted for about 15 per cent of the growth of the industry's exports from the world, the developed countries as a group, and from Canada and Europe separately. To some extent this decline in U.S. affiliates' shares in developing countries' chemical exports reflects the rise in importance of Asian countries in which U.S. affiliates' shares were low. But there was also a large decline in U.S. companies' share in exports by developing American countries despite the increasing role in exports by Brazil and Mexico and the slight decrease in Argentina. There was clearly a substantial fall in the U.S. affiliates' shares in other developing American

Table 13

Chemicals
Relation of Exports by U.S. Majority-Owned Manufacturing Affiliates
to Total Host-Country Exports
1966 and 1977

	Ratio of 1977 to 1966 Exports		Exports by U.S. Affiliates as % of Total Exports			U.S. Affiliates' Share (%) in Growth of Exports, 1966 to 1977 ^b
	U.S. Affil- iates	All Firms ^a	Comparable Data		Corrected Data 1977	
			1966 ^b	1977 ^b		
All Countries	8.2	6.3	10.4	13.5	12.4	14.1
Developed countries	8.6	6.2	9.9	13.8	12.7	14.6
Canada	2.1	4.5	49.5	23.3	23.3	15.7
Europe	10.8	6.2	8.5	14.9	13.8	16.1
Developing countries	4.8	9.3	19.4	10.1	9.5	8.9
Latin America	3.6	8.0	30.6	13.8	13.6	11.4
Other Asia ^c	9.3-17.4	10.8	5.9-11.1	9.6	8.4	9.4-9.9

^aNot fully adjusted to coverage of affiliate data.

^bDenominator not fully adjusted to coverage of affiliate data.

^cExcluding Japan and Middle East.

Source: Table B-3.

countries not reported separately in the investment data.⁴

Primary and fabricated metals was an industry in which U.S.-owned affiliates accounted for only small shares of exports except in Canada (Table 14). In all other countries for which separate affiliate data are published the shares were below 10 per cent and mostly below 5 per cent (Table B-4). However, the story of increasing shares in host-country exports was repeated in this industry in every area and every single country for which we have data. Since the 1977 shares remained low the U.S. affiliates did not account for a large part of the growth in exports for any of the countries aside from Canada, in which their share in export growth was about 35 per cent.

Machinery, the most important industry group for U.S. direct investment abroad, has traditionally been the preserve of exporters from developed countries. Between 1966 and 1977, however, there was an enormous increase in exports by developing countries -- to perhaps about thirty times the earlier level (Table 15). The exports of U.S. affiliates reflected these trends, those from developed countries rising to a little under six times the earlier level while those from developing countries reached almost 60 times the 1966 level. Another way of describing the change is that the share of exports by U.S. firms (other than from the U.S.) supplied from developing countries rose from less than 2 per cent to about 17 per cent (Table B-5).

Another contrast between the developed and developing countries in machinery exports was that while U.S. affiliates' exports from developing countries increased about twice as fast as exports in general, those in

⁴There may also be a statistical problem in the treatment as chemical industry exports of aluminium oxide from Jamaica.

Table 14

Primary and Fabricated Metals
 Relation of Exports by U.S. Majority-Owned Manufacturing Affiliates
 to Total Host-Country Exports
 1966 and 1977

	Ratio of 1977 to 1966 Exports		Exports by U.S. Affiliates as % of Total Exports			U.S. Affiliates' Share (%) in Growth of Exports, 1966 to 1977 ^b
	U.S. Affil- iates	All Firms ^a	Comparable Data 1966 ^b	Corrected Data 1977	1977	
All Countries	8.0	4.6	2.2	3.9	3.8	4.3
Developed countries	8.4	4.8	2.2	3.8	3.7	4.2
Canada	17.1	2.9	4.2	24.4	24.3	34.9
Europe	6.5	4.6	2.4	3.4	3.3	3.7
Developing countries	>6.3	3.4	<2.6	4.9	4.7	5.8
Latin America	NA	3.1	NA	8.5	8.3	NA
Other Asia ^c	NA	7.2	NA	1.9	1.8	NA

^aNot fully adjusted to coverage of affiliate data.

^bDenominator not fully adjusted to coverage of affiliate data.

^cExcluding Japan and Middle East.

Source: Table B-4.

Table 15

Machinery
Relation of Exports by U.S. Majority-Owned Manufacturing Affiliates
to Total Host-Country Exports
1966 and 1977

	Ratio of 1977 to 1966 Exports		Exports by U.S. Affiliates as % of Total Exports			U.S. Affiliates' Share (%) in Growth of Exports, 1966 to 1977 ^b
	U.S. Affil- iates	All Firms ^a	Comparable Data		Corrected Data 1977	
			1966 ^b	1977 ^b		
All Countries	5.9	NA	NA	12.7	NA	NA
Developed countries	5.7	6.1 ^d	12.5	11.8	11.3	11.1
Canada	4.1	4.2	36.2	35.2	35.2	35.0
Europe	6.0	5.5 ^d	12.4	13.5	12.6	12.7
Developing countries	57.1	<29.9	<16.3	31.1	NA	>31.7
Latin America	34.8	NA	NA	40.7	NA	NA
Other Asia ^c	69.4-70.9	<29.0	<13.6	32.5-33.2	NA	>33.2

^aNot fully adjusted to coverage of affiliate data.

^bDenominator not fully adjusted to coverage of affiliate data.

^cExcluding Japan and Middle East.

^dIncomplete data for host-country exports.

Source: Table B-5.

developed countries rose a little less quickly than exports of the industry as a whole (Table 15). However, in the European countries, affiliate exports rose faster than those of the average firm; what brought down the share of affiliates for developed countries in the aggregate was mainly the large growth of Japanese machinery exports, in which U.S. firms played a very small role. U.S. affiliates accounted for a little over 10 per cent of the increase in developed country exports but for almost a third of the rise in developing countries, and around half or more for such countries as Mexico, Malaysia, and Singapore.

The separation between non-electrical and electrical machinery, possible only for 1977 in the case of affiliate exports, identifies these developments more clearly. While the role of developing countries increased in both types of machinery from the very low levels of 1966, it was in electrical machinery that the change was greatest. Exports by developing countries reached over 10 per cent of world exports as compared with only about 2 1/2 per cent for non-electrical machinery (Table B-6).

The position of U.S.-owned affiliates was also different in the two industries. In Europe, and in the developed countries as a group, U.S. affiliates had a larger share of exports in non-electrical machinery than in electrical machinery (Table 16) and some of these shares in European countries were as high as a quarter or more (Table B-6). In the developing countries, on the other hand, U.S. affiliates not only accounted for a larger share of exports than in developed countries but had a particularly large role in electrical machinery and equipment. Their share was a third in developing countries as a group, almost 60 per cent in Latin America, and over a third in Other Asia, the area of most rapid export growth (Table 16). There were wide disparities in the U.S. companies' positions even among Asian countries. U.S. affiliates accounted for only

Table 16

Non-electrical and Electrical Machinery and Equipment
Relation of Exports by U.S. Majority-Owned Affiliates
to Total Host-Country Exports, 1977,
and Growth of Host-Country Exports, 1966 to 1977

	Growth of Total Exports, 1977/1966		Exports by U.S.-Owned Affiliates as Per Cent of Total Exports	
	Non-electrical Machinery	Electrical Machinery & Equipment	Non-electrical Machinery	Electrical Machinery & Equipment
All Countries			13.5	9.8
Developed countries			13.3	6.8
Canada	4.9	3.0	30.5	47.7
Europe	5.3 ^a	6.2 ^a	14.2	9.7
Developing countries	NA	NA	20.4	34.4
Latin America	NA	NA	28.4	59.6
Other Asia ^b	NA	NA	14.8	36.3-37.1

^aIncomplete data for total host-country exports.

^bExcluding Japan and Middle East.

Source: Table B-6.

about 10 per cent or less of electrical machinery exports from Korea but for more than half of those from Malaysia and Singapore.

In both types of machinery, high U.S. companies' shares in exports were generally associated with high growth rates of exports, although there were some exceptions. India, Korea, and Japan enjoyed high rates of growth in both types of machinery but U.S. firms did not play any major part in them.

Because the U.S. transportation equipment industry, or at least its overseas operations, is highly concentrated among companies, a large part of the data are suppressed, and we can get only hints of export developments. We show ratios of U.S. firms to all firms in two ways in Table 17 and Table B-7, one with all transport equipment in the denominator and the other with only motor vehicles and equipment in the denominator. The former matches the description of the industry given by the Department of Commerce but, since a very large proportion of overseas activities are those of motor vehicle companies, we also calculate the second set of ratios, assuming in effect that motor vehicles are the only overseas operation, or at least the only exporting operation in the transportation equipment industry. We know that the assumption is not strictly correct -- there are aircraft manufacturing affiliates in Canada, for example -- and they are probably responsible for the one ratio of U.S. affiliate exports to total exports that is greater than 100 per cent (Table 17). However, even in Canada motor vehicles and equipment accounted for 83 per cent of the assets of U.S. transportation equipment affiliates and the proportion was over 98 per cent in the rest of the world.

As was the case for machinery, the rate of growth of exports by U.S.-owned transportation equipment affiliates was far greater in developing countries than in developed countries (Table 17). In Europe and Canada, the share of U.S. affiliates in exports was fairly constant, but overall among developed

Table 17

Transportation Equipment
Relation of Exports by U.S. Majority-Owned Manufacturing Affiliates
to Total Host-Country Exports,
1966 and 1977

	Ratio of		Exports by U.S. Affiliates as Per Cent of				U.S. Affiliates'	
	1977 to 1966 Exports		Total Exports		Corrected Data,		Share (%) in	
	All Firms ^a		Comparable Datab		1977		Growth of Exports,	
	SITC 73e	SITC 732	SITC 73	SITC 732	SITC 73	SITC 732	SITC 73	1966 to 1977
	Plus	Plus	Plus	Plus	Plus	Plus	Plus	
	711.4,	711.5	711.4,	711.5	711.4,	711.5	711.4,	Plus
	711.5	711.5	711.5	1966 1977	711.5	711.5	711.5	711.5
U.S. Affiliates	7.0	NA	NA	NA	18.3	25.6	NA	NA
All Countries	6.9	7.4	7.7	20.4	18.9	29.1	25.9	18.6
Developed countries	8.7	8.7	10.1	83.3	83.1	105.0	89.6	83.1
Canada	5.9	6.0	6.0	15.8	15.4	21.6	20.9	15.3
Europe	51.0	NA	NA	NA	NA	NA	NA	NA
Developing Countries	47.8	NA	NA	NA	NA	NA	NA	NA
Latin America		NA	NA	NA	37.7	48.0	NA	NA
Other Asia ^c		NA	NA	NA	1.4	3.7	NA	NA

^aNot fully adjusted to coverage of affiliate data.
^bDenominator not fully adjusted to coverage of affiliate data.

^cExcluding Japan and Middle East.

^d1966 Figure was 0.

^eSITC 73 is Transport Equipment.

SITC 732 is Road Motor Vehicles.

SITC 711.4 is Aircraft Engines

SITC 711.5 is Internal Combustion Engines other than for Aircraft.

Source: Table B-7.

countries it fell sharply. Again, as in the machinery industry, the main reason for the decline was the rise as an exporter of Japan, a country with no U.S.-majority-owned affiliates in this industry (although there were minority-owned firms).

The developing countries can be thought of as having had virtually no transportation equipment exports in 1966. The share was still very small in 1977. In Latin America U.S. firms were important as exporters in both Brazil and Mexico, but probably not as important in Argentina, the only other exporter of consequence. In Asia other than Japan U.S.-majority-owned firms were not a large factor in the growth of exports, which was quite substantial in several of the countries. In this industry, therefore, we cannot observe any clear relation between the U.S. role in exporting and the rate of export growth.

The same data analyzed above are summarized to highlight the characteristics of each of the four major world areas in Table 18. In Europe and "Other Asia," U.S.-owned companies led the rise in exports in most industries and increased their share of the exports of their host countries. This major role was particularly notable in "Other Asia," although even there it was concentrated in machinery. The same area was the one with the greatest overall increase in manufactured exports.

The Latin American case is not so clear because of missing data. U.S. firms increased their share of total manufacturing exports even though in the two industries for which we have the full set of data the U.S. firms' share fell. However, the share of U.S. firms was very high in machinery and transport equipment, and their exports grew very rapidly in these industries. It seems likely, therefore, that they played a large role in the growth of Latin American export in these industries. That was cer-

Table 18

Relation of Exports by U.S. Majority-Owned Manufacturing Affiliates
to Host Country Exports, by Area and Industry

	Ratio of 1977 to 1966 Exports		Exports by U.S. Affiliates as % of Total Exports		U.S. Affiliates' Share (%) in Growth of Exports, 1966 to 1977 ^a
	U.S. Affiliates	All Firms	Comparable Data		
			1966 ^a	1977 ^a	
Canada					
All Manufacturing	5.9	4.6	45.2	57.6	61.0
Foods	2.6	2.8	28.0	25.8	24.6
Chemicals	2.1	4.5	49.5	23.3	15.7
Metals	17.1	2.9	4.2	24.4	34.9
Machinery	4.1	4.2	36.2	35.2	35.0
Transp. Equip.	8.7	8.7	83.3	83.1	83.1
Europe					
All Manufacturing	7.0	5.4	7.4	9.6	10.1
Foods	9.0	4.9	2.6	4.7	5.3
Chemicals	10.8	6.2	8.5	14.9	16.1
Metals	6.5	4.6	2.4	3.4	3.7
Machinery	6.0	5.5	12.4	13.5	12.7
Transp. Equip.	5.9	6.0	21.6	20.9	20.8
Latin America					
All Manufacturing	6.5	5.1	5.6	7.2	7.6
Foods	2.4	4.6	4.3	2.3	1.7
Chemicals	3.6	8.0	30.6	13.8	11.4
Metals	NA	3.1	NA	8.5	NA
Machinery	34.8	NA	NA	40.7	NA
Transp. Equip.	47.8	NA	NA	48.0	NA
Other Asia^b					
All Manufacturing	14.1	9.2	3.9	6.0	6.2
Foods	3.2	5.7	2.8	1.5	1.3
Chemicals	9.3-17.4	10.8	5.9-11.1	9.6	9.4-9.9
Metals	NA	7.2	NA	1.9	NA
Machinery	69.4-70.9	<29.0	<13.6	32.5-33.2	>33.2
Transp. Equip.	c	NA	NA	3.7	NA

^aDenominator not fully adjusted to coverage of affiliate data

^bExcluding Japan and Middle East.

^c1966 Figure was 0

Source: Tables 11-17.

tainly the case for the major machinery exporters, Brazil and Mexico, and to a smaller extent, Argentina.

In Canada, the country with the smallest increase in exports, the U.S. role stayed constant or decreased in all industries except metals. In that one case the exports by U.S. affiliates increased so much that the U.S. share in manufactures exports as a whole also increased. In general, however, Canada was the country in which the U.S. role changed the least, although one reason may have been the fact that it was so great to begin with. The share of U.S. companies in exports in 1966 was over 80 per cent in transportation equipment, almost half in chemicals, and over a third in machinery. Even after the declines they remained close to a quarter or more in all five industry groups.

In general it appears that U.S.-owned affiliates were leaders in the growth of exports in many areas and countries in the sense that their exports grew faster than those of their host countries and faster than those of other producers in the same industries in their host countries. Thus they increased their share in host-country exports and in their industries' exports. There was no indication that their presence inhibited the growth of host-country exports and some evidence that they promoted the growth of exports. On the whole, the developing countries and industries in which they played a major role were among the more successful in increasing exports during these years.

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Appendix

The data on the exports and sales of U.S.-owned manufacturing affiliates were taken, essentially as published, from U.S. Department of Commerce (1960), (1975), and (1981). There was a change in coverage that might have affected our results. The 1957 data cover all direct investments, defined as companies "...the voting securities of which were owned to the extent of 25 percent or more by persons, or groups of affiliated persons, ordinarily resident in the United States..." plus "Foreign corporations, the voting stock of which was publicly held within the United States to an aggregate extent of 50 percent or more, but distributed among stockholders so that no one investor, or group of affiliated investors, owned as much as 25 percent," plus sole proprietorships, partnerships, and branches of U.S. corporations. The 1966 and 1977 data cover only majority-owned branches and subsidiaries of U.S. companies. We therefore may understate slightly the growth in U.S. affiliate sales and exports between 1957 and the two later years.

The major statistical adjustments were those to make the host-country export data as comparable as possible to the U.S. affiliate data and to make the host-country export data as comparable as possible between 1966 and 1977. Since these two objectives were often in conflict we calculated two sets of values for 1977. One was our best estimate of host-country exports comparable to the export data for U.S.-owned affiliates. It was derived mainly from the data on "Exports by Industrial Origin" given in the 1978 and 1979 UN Yearbook of International Trade Statistics, with some modifications to fit the U.S. Department of Commerce industry classification, as described below. The second set of values was taken from export data by SITC given in the volumes of the same source for 1966 and 1969 and in the

UN Monthly Bulletin of Statistics, Tables on World Trade by Commodity Classes and Regions, April and July 1972 and later issues. We adjusted these to industry classifications as well as we could, using as a guide the UN Classification of Commodities by Industrial Origin, Statistical Papers, Series M, No. 43, Rev. 1, 1971. There were quite a few problems in making this adjustment, however. One was that no country's data contained the full detail needed to adjust the trade figures completely. A second was that there was a great deal of variation from country to country in the degree of detail provided, and the comparisons among countries for any one year therefore are not completely consistent. The third is that much less detail was available for 1966 than for 1977 and the match with industry data therefore poorer for country export estimates comparable between the two years than for the 1977 estimates based on industry data.

Because of the many country differences in the commodity detail provided, the following description of the adjustments is not applicable to every country. Some judgment had to be used in applying the desired adjustments, listed below, to the actual data.

Adjustments to industry data

1. Food and kindred products

- 1977: SITC 0 (Food and Live Animals)
 + SITC 1 (Beverages and Tobacco)
 - SITC 001 (Live animals)
 - SITC 025 (Eggs)
 - SITC 031 (Fish, fresh & simply preserved)
 - SITC 041-045 (Cereals)
 - SITC 051 (Fruits, fresh, and nuts, fresh or dried)
 - SITC 054 (Vegetables, fresh, frozen, or simply prepared)

1. (continued)

1977: (continued)

- SITC 0711 (Coffee, green or roasted)
- SITC 0721 (Cocoa beans, raw or roasted)
- SITC 074 (Tea and maté)
- SITC 075 (Spices)
- SITC 121 (Tobacco, unmanufactured)
- + SITC 4 (Animal and vegetable oils and fats)

1966: SITC 0 (Food and live animals)

- + SITC 1 (Beverages and tobacco)
- SITC 041-045 (Cereals)
- + SITC 4 (Animal and vegetable oils and fats)

2. Chemicals

World and Area Exports

1977: SITC 5 (Chemicals)

- + SITC 2312 (Synthetic rubber)
- + SITC 65161 (Yarn of continuous synthetic fibres)
- + SITC 65164 (Yarn of discontinuous synthetic fibres)
- + SITC 6517 (Yarn and thread of regenerated [artificial]
fibres)

1966: SITC 5

Country Exports: Trade Data

1977 & 1966: SITC 5

- + SITC 231.2, 231.3, 231.4 (Synthetic rubber and rubber
substitutes, Reclaimed rubber
and Waste and scrap of unhardened
rubber)

2. (continued)

Country Exports: Trade Data

1977 & 1966: (continued)

+ SITC 266 (Synthetic and regenerated [artificial] fibres)

+ SITC 651.6 + 651.7 (Yarn and thread of synthetic and
regenerated [artificial] fibres)

Country Exports: Industry Data

1977: Chemicals

- SITC 332 (Petroleum products)

- SITC 62 (Rubber manufactures, n.e.c.)

3. Primary and Fabricated Metals

World and Area Exports

1977: SITC 691-695, 698, 812 (Other manufactured metal products)

+ SITC 67 (Iron and steel)

+ SITC 68 (Nonferrous metals)

+ SITC 696 (Cutlery)

+ SITC 697 (Household equipment of base metals)

1966: SITC 691-695, 698, 812 (Other manufactured metal products)

+ SITC 67 (Iron and steel)

+ SITC 68 (Nonferrous metals)

Country Exports

1977 & 1966: SITC 67 (Iron and steel)

+ SITC 68 (Nonferrous metals)

+ SITC 69 (Manufactures of metal, n.e.s.)

+ SITC 812 (Sanitary, plumbing, heating and lighting fixtures
and fittings)

4. Machinery

World and Area Exports

1977: SITC 7 (Machinery & transport equipment)

- SITC 731 (Railway vehicles)
- SITC 732 (Road motor vehicles)
- SITC 733 (Road vehicles other than motor vehicles)
- SITC 734 (Aircraft)
- SITC 735 (Ships & boats)

Country Exports: Trade Data

1977 & 1966: SITC 71 (Machinery, other than electric)

- + SITC 72 (Electrical machinery, apparatus, & appliances)
- SITC 711.4 (Aircraft engines)
- SITC 711.5 (Internal combustion engines, other than
for aircraft)

Country Exports: Industry Data

1977: Metal Manufacturing Industry

- SITC 69 (Manufactures of metal, n.e.c.)
- SITC 73 (Transport equipment)
- SITC 711.4 (Aircraft engines)
- SITC 711.5 (Internal combustion engines, other than
for aircraft)
- SITC 812 (Sanitary, plumbing, heating, and lighting
fixtures and fittings)
- SITC 86 (Professional, scientific and controlling instruments;
Photographic and optical goods; Watches and clocks)

5. Nonelectrical machinery

World and Area Exports

- 1977: SITC 711 (Power generating machinery, other than electric)
+ SITC 712 (Agricultural machinery and implements)
+ SITC 714 (Office machines)
+ SITC 715 (Metalworking machinery)
+ SITC 717 (Textile and leather machinery)
+ SITC 718 (Machinery for special industries)
+ SITC 719 (Machinery and appliances, other than electrical,
and machine parts, n.e.s.)
- SITC 711.42 (Aircraft engines)
- SITC 711.5 (Internal combustion engines, other than for aircraft)

Country Exports

- 1977 & 1966: SITC 71 (Machinery, other than electric)
- SITC 711.4 (Aircraft engines)
- SITC 711.5 (Internal combustion engines, other than for
aircraft)

6. Electrical machinery

World, Area, and Country Exports

- 1977 & 1966: SITC 72 (Electrical machinery, apparatus, and
appliances)

7. Transport equipment

World, Area, and Country Exports

- 1977 & 1966: SITC 73 (Transport equipment)
+ SITC 711.42 (Aircraft engines)
+ SITC 711.5 (Internal combustion engines, other than for
aircraft)

8. Motor vehicles

World, Area, and Country Exports

1977 & 1966: SITC 732 (Road motor vehicles)

+ SITC 711.5 (Internal combustion engines, other than for
aircraft)

Table A-1
Manufactures
Sales and Exports by U.S. Majority-Owned Manufacturing Affiliates
1966 and 1977
(\$ million)

	Sales				Exports					
	Total		Local		Total ^a		To U.S.		To Other Countries	
	1966	1977	1966	1977	1966	1977	1966	1977	1966	1977
All countries	47,375	194,200	38,558	134,427	8,817	59,773	2,761	17,601	6,138	42,172
Developed	40,486	163,922	32,247	109,634	8,239	54,288	2,460	14,845	5,779	39,443
Canada	14,883	46,929	12,484	32,878	2,399	14,051	1,961	12,258	438	1,793
Europe	21,738	104,267	16,128	64,920	5,610	39,347	465	2,405	5,145	36,943
EEC (9)	19,945	95,359	14,728	58,514	5,217	36,845		2,220		34,624
UK	8,275	26,599	6,182	18,261	2,093	8,338	173	565	1,920	7,773
EEC (6)	11,456	66,796	8,402	39,782	3,054	27,014	205	1,469 ^b	2,849	25,545 ^b
Belg.-Lux.	1,101	7,553	539	2,080	562	5,473	41	147 ^b	521	4,956 ^b
France	3,114	15,998	2,562	10,798	552	5,200	27	224	525	4,976
Germany	4,795	29,359	3,581	19,042	1,214	10,317	77	810	1,137	9,506
Italy	1,542	6,866	1,263	5,020	279	1,846	37	153	262	1,713
Neth.	904	7,371	477	2,842	427	4,529	22	135	404	4,394
Other Europe	2,007	10,872	1,544	6,875	463	3,997	88	371	376	3,425
Denmark	114	471	95	241	19	230	*	(D)	20	(D)
Ireland	100	1,142	49	229	51	913	<25	133	<28	781
Norway	124	411	91	256	33	155	(D)	7	<33	147
Spain	469	4,129	458	3,334	11	795	3	44	8	751
Sweden	315	1,534	216	1,036	99	498	<14	28	<98	470
Switzerland	607	1,266	401	623	206	643	38	74	168	568
Other	278	1,919	235	1,156	43	763	<43	(D)	<43	(D)
Japan	720	3,132	651	2,806	69	326	18	90	51	236
Other Developed	3,145	9,593	2,983	9,031	162	562	16	92	145	471
Australia	2,207	7,154	2,100	6,777	107	377	16	(D)	91	(D)
New Zeal.	181	499	179	460	2	39	*	1	2	39
S. Africa	758	1,940	705	1,794	53	146	*	(D)	53	(D)
Developing	6,889	30,278	6,311	24,792	578	5,486	219	2,756	359	2,730
Latin America	5,861	24,217	5,499	21,876	362	2,341	129	874	233	1,467
South & Cent.	5,758	23,874	5,451	21,678	307	2,196	103	780	203	1,416
Argentina	1,302	2,466	1,181	2,276	121	190	(D)	>13	(D)	>137
Brazil	1,283	11,218	1,244	10,224	39	994	<34	261	<39	734
Colombia	305	992	287	953	18	39	4	12	14	27
Mexico	1,548	4,679	1,499	4,191	49	488	23	305	26	184
Venezuela	729	2,793	728	2,783	1	10	*	(D)	1	(D)
Other Asia ^c	896	5,125	689	2,204	207	2,921	88	1,648-	120	1,062-
								1,854		1,173
India	274	467	255	450	19	17	<19	2	<8	14
Indonesia	0	262	0	155	0	107	0	5	0	102
Philippines	336	1,010	269	750	67	260	32	146	35	115
Other	286	3,386	165	849	121	2,537	<56	1,495-	<85	831-
								1,701		942
Hong Kong		745		145		600		231-365		235-369
Malaysia		445		106		339		203		136
Singapore		882		60		822		548		274
South Korea		187		59		128		68		59
Taiwan		782		224		558		444		114
Other		346		255		91		> 1		>13

Notes to Table A-1

(D) = Suppressed by source to avoid disclosure

* = Less than \$500,000

^aObtained by subtracting local sales from total sales and may not agree precisely with sum of exports to U.S. and to other countries.

^bExcluding Luxembourg

^cExcluding Japan and Middle East

Source: U.S. Department of Commerce (1975) and (1981).

Table A-2
Food and Kindred Products
Sales and Exports by U.S. Majority-Owned Manufacturing Affiliates
1966 and 1977
(\$ million)

	Sales				Exports							
	Total		Local		Total ^a		To U.S.		To Other Countries			
	1966	1977	1966	1977	1966	1977	1966	1977	1966	1977		
All countries	5,644	21,756	4,978	18,527	666	3,229	188	545	478	2,684		
Developed	4,169	17,148	3,760	14,615	409	2,533	88	319	321	2,214		
Canada	1,636	5,483	1,505	5,143	131	340	46	136	85	204		
Europe	2,194	10,032	1,962	7,939	232	2,093	28-42	181	181-204	1,912		
EEC (9)	(D)	9,142	(D)	7,108	(D)	2,034	(D)	161	(D)	1,873		
UK	907	2,789	840	2,455	67	334	18	(D)	49	(D)		
EEC (6)	1,081	5,956	940	4,487	142	1,469	10	(D)	132	(D)		
Belg.-Lux.	96	331	86	229	10	102	*	*	10	102		
France	282	1,313	263	1,097	19	216	3	(D)	16	(D)		
Germany	429	1,973	403	1,641	26	332	(D)	(D)	(D)	(D)		
Italy	150	798	120	729	20	69	2	2	18	67		
Neth.	125	1,541	50	791	75	750	(D)	(D)	(D)	(D)		
Other Europe	206	1,287	182	997	24	290	(D)	(D)	(D)	(D)		
Denmark	17	181	(D)	88	*	93	*	(D)	(D)	(D)		
Ireland	(D)	217	(D)	79	(D)	138	(D)	0	(D)	138		
Norway	(D)	0	(D)	0	0	0	0	0	0	0		
Spain	105	407	103	387	2	20	<3	(D)	(D)	(D)		
Sweden	(D)	(D)	(D)	(D)	*	5	0	*	*	5		
Switzerland	(D)	(D)	(D)	(D)	(D)	(D)	<7	5	(D)	(D)		
Other	16	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)		
Japan	44	1,633	44	1,533	0	0	0	0	0	0		
Other Developed	295		249		46	100	<13	2	(D)	98		
Australia	226		900		188	839	38	61	<13	2	(D)	59
New Zeal.	16		73		(D)	53	<2	20	*	*	<2	20
S. Africa	53		(D)		(D)	(D)	(D)	20	*	*	(D)	20
Developing	1,475	4,607	1,218	3,912	257	695	100	225	157	470		
Latin America	1,281	3,870	1,081	3,389	200	481	68-105	103	130-140	378		
South & Cent.	1,271	3,696	1,074	3,296	198	400	68	(D)	130	(D)		
Argentina	286	261	178	252	108	9	(D)	1	(D)	8		
Brazil	198	1,488	182	1,182	16	306	(D)	(D)	(D)	(D)		
Colombia	51	157	51	154	*	3	0	2	*	1		
Mexico	327	752	309	735	18	17	<17	(D)	(D)	(D)		
Venezuela	186	565	186	560	0	5	0	(D)	0	(D)		
Other Asia ^b	182	471-612	126	292-433	56	179	<32	123	<27	56		
India	(D)	5	(D)	5	(D)	*	0	0	(D)	*		
Indonesia	0	5	0	5	0	0	0	0	0	0		
Philippines	161	379	110	213	51	166	(D)	118	(D)	48		
Other	<22	82-223	<17	67-208	<22	15	<22	7	<22	8		
Hong Kong		(D)		(D)		0		0		0		
Malaysia		(D)		(D)		1		0		1		
Singapore		5		0		5		5		*		
South Korea		(D)		(D)		(D)		0		(D)		
Taiwan		(D)		(D)		(D)		0		(D)		
Other		(D)		(D)		(D)		2		(D)		

Notes to Table A-2

(D) = Suppressed by source to avoid disclosure

* = Less than \$500,000

^aObtained by subtracting local sales from total sales when both were available and may not agree precisely with sum of exports to U.S. and to other countries.

^bExcluding Japan and Middle East

Source: U.S. Department of Commerce (1975) and (1981).

Table A-3
Chemicals and Allied Products
Sales and Exports by U.S. Majority-Owned Manufacturing Affiliates
1966 and 1977
(\$ million)

	Sales				Exports					
	Total		Local		Total ^a		To U.S.		To Other Countries	
	1966	1977	1966	1977	1966	1977	1966	1977	1966	1977
All countries	7,421	32,396	6,396	23,949	1,025	8,447	171	692	853	7,755
Developed	5,897	25,930	4,969	17,947	928	7,983	144	612	784	7,371
Canada	1,724	4,886	1,521	4,459	203	427	118	311	85	116
Europe	3,417	18,652	2,724	11,198	693	7,454	23	299	670	7,155
EEC (9)	(D)	17,059	(D)	9,953	(D)	7,106	(D)	281	(D)	6,826
U.K.	1,365	3,945	1,152	2,848	213	1,097	(D)	64	(D)	1,033
EEC (6)	1,733	12,646 ^b	1,309	7,019 ^b	424	5,627 ^b	13	189 ^b	411	5,438 ^b
Belg.-Lux.	209	2,018 ^b	89	549 ^b	120	1,469 ^b	(D)	40 ^b	(D)	1,429 ^b
France	475	2,774	394	2,139	81	635	3	24	79	610
Germany	464	3,625	415	2,500	49	1,125	(D)	58	(D)	1,067
Italy	316	1,584	278	1,270	38	314	(D)	15	(D)	300
Neth.	269	2,645	133	561	136	2,084	2	52	134	2,032
Other Europe	319	2,061 ^c	263	1,332 ^c	56	729 ^c	(D)	167	(D)	562
Denmark	(D)	194 ^c	15	45 ^e	(D)	149 ^c	*	29 ^f	(D)	122 ^c
Ireland	24	274	(D)	41	(D)	223	(D)	0 ^g	(D)	233
Norway	(D)	(D)	(D)	4	(D)	(D)	0	(D)	(D)	(D)
Spain	122	806	121	728	1	78	0	3	1	75
Sweden	68	285	50	203	18	82	*	1	18	81
Switzerland	33	161	22	90	11	71	(D)	3	(D)	68
Other	46	338 ^d	44	221	2	113 ^d	0	(D)	2	(D)
Japan	302	725	286	713	16	12		1		11
							3		29	
Other Developed	454	1,666	438	1,576	16	90		1		90
Australia	349	1,281	337	1,208	12	73	(D)	1	(D)	73
New Zeal.	20	82	20	76	0	6	0	*	*	6
S. Africa	85	303	81	292	4	11	*	0	4	11
Developing	1,523	6,466	1,427	6,002	96	464	27	80	69	384
Latin America	1,291	5,278	1,210	4,986	81	292	20-27	55	54-61	237
South & Cent.	1,232	5,199	1,190	4,947	42	252	13	28	29	224
Argentina	226	577	218	544	8	33	(D)	2	(D)	31
Brazil	273	2,450	271	2,416	2	34	1	1	1	33
Colombia	89	297	83	284	6	13	(D)	(D)	(D)	(D)
Mexico	405	1,091	391	1,017	14	78	6	21	9	52
Venezuela	112	454	112	453	0	1	0	(D)	0	(D)
Other Asia ^e	191	911	<183	772	8-15	139	<7	<25	8	114-136
India	78	180	75	177	3	3	(D)	0	(D)	3
Indonesia	0	58	0	58	0	0	0	*	0	1
Philippines	58	270	56	247	2	23	*	3	2	20
Other	56	403	<52	290	3-10	113	<7	<22	<6	91-112
Hong Kong		120		80		40		*		42
Malaysia		58		51		7		0		6
Singapore		(D)		(D)		2		0		2
South Korea		4		3		1		0		*
Taiwan		78		25		53		(D)		(D)
Other		(D)		(D)		(D)		(D)		(D)

Notes to Table A-3

(D) = Suppressed by source to avoid disclosure

* = Less than \$500,000

^aObtained by subtracting local sales from total sales when both were available and may not agree precisely with sum of exports to U.S. and to other countries.

^bExcluding Luxembourg

^cIncluding Luxembourg

^dIncluding Norway

^eExcluding Japan and Middle East

^fIncluding Luxembourg (local sales assumed to be \$2 million)

^gAssumed to be 0. The amount could be as high as \$11 million.

Source: U.S. Department of Commerce (1975) and (1981).

Table A-4
 Primary and Fabricated Metals
 Sales and Exports by U.S. Majority-Owned Manufacturing Affiliates
 1966 and 1977
 (\$ million)

	Sales				Exports								
	Total		Local		Total ^a		To U.S.		To Other Countries				
	1966	1977	1966	1977	1966	1977	1966	1977	1966	1977			
All countries	3,904	11,560	3,516	8,466	387	3,094	47	1,065	340	2,029			
Developed	3,407	9,893	3,092	7,252	315	2,641	(D)	846	(D)	1,795			
Canada	1,598	3,476	1,546	2,585	52	891	27	740	25	151			
Europe	1,619	6,071	1,358	4,363	261	1,708	18	93	243	1,613			
EEC (9)		5,677		4,148	234-239	1,529		75	224	1,454			
UK	781	1,535	636	1,167	144	368	9	26	135	342			
EEC (6)	648	4,077 ^b	557	2,957 ^b	90	1,120 ^b	1	31 ^b	89	1,091 ^b			
Belgium	63	342 ^b	56	150 ^b	7	192 ^b	*	2 ^b	7	191 ^b			
France	154	488	145	359	9	129	*	4	9	126			
Germany	207	2,124	176	1,650	31	474	*	24	31	449			
Italy	172	368	159	278	12	90	*	1	12	90			
Neth.	53	755	22	520	31	235	*	*	31	235			
Other Europe	191	459 ^c	164	239	26	220 ^c	8	36 ^c	18	181 ^c			
Denmark	(D)	32 ^c	(D)	8 ^c	0	24 ^c	0	*	*	21 ^c			
Ireland	5	33	<5	16	<5	17	<5	(D)	*				
Norway	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)			
Spain	44	100	44	86	(D)	14	*	(D)	0	(D)			
Sweden	11	97	8	(D)	<3	(D)	<3	(D)	<3	(D)			
Switzerland	(D)	(D)	(D)	(D)	0	(D)	0	0	(D)	(D)			
Other	11	(D)	(D)	4	(D)	(D)	(D)	(D)	*	(D)			
Japan	} 189 ^d	58	} 188 ^d	54	0	4	0	} 13	0	} 31			
Other Developed		288		248	(D)	40	(D)						
Australia		130		129	138	(D)	28		(D)		(D)	(D)	(D)
New Zeal.		(D)		0	(D)	0	(D)		0		0	(D)	0
S. Africa		47		122	47	110	*		12		*	1	*
Developing	498	1,667	424	1,214	<72	453	(D)	218	(D)	235			
Latin America	337	1,435	331	1,157	(D)	278	(D)	137	(D)	141			
South & Cent.	(D)	1,397 ^d	(D)	1,134 ^d	(D)	263 ^d	(D)	(D)	(D)	(D)			
Argentina	57	83	57	71	*	12	0	2	*	10			
Brazil	110	540	(D)	507	(D)	33	0	(D)	(D)	(D)			
Colombia	23	37	22	32	*	5	0	(D)	*	(D)			
Mexico	94	309	93	277	(D)	32	(D)	(D)	(D)	(D)			
Venezuela	16	112	16	111	0	1	0	0	0	*			
Other Asia ^e	150	104	84	35	(D)	69	(D)	<69	(D)	<69			
India	(D)	0	(D)	0	0	0	0	0	0	0			
Indonesia	0	4	0	4	0	0	0	0	0	0			
Philippines	13	(D)	13	(D)	0	(D)	0	0	0	(D)			
Other	<137	53-100	<71	5-31	(D)	22-69	(D)	<69	(D)	<69			
Hong Kong		(D)		2		(D)		*		(D)			
Malaysia		3		3		0		0		0			
Singapore		50		(D)		(D)		(D)		(D)			
South Korea		0		0		0		0		0			
Taiwan		0		0		0		0		0			

Notes to Table A-4

(D) = Suppressed by source to avoid disclosure

* = Less than \$500,000

^aObtained by subtracting local sales from total sales and may not agree precisely with sum of exports to U.S. and to other countries.

^bExcluding Luxembourg

^cIncluding Luxembourg

^dSouth America plus Mexico and Panama

^eExcluding Japan and Middle East

Source: U.S. Department of Commerce (1975) and (1981).

Table A-5
Machinery
Sales and Exports by U.S. Majority-Owned Manufacturing Affiliates
1966 and 1977
(\$ million)

	Sales				Exports					
	Total		Local		Total		To U.S.		To Other Countries	
	1966	1977	1966	1977	1966	1977	1966	1977	1966	1977
All countries	10,902	47,061	8,412	30,306	2,489	16,755	444	3,406	2,045	13,349
Developed	10,009	40,450	7,569	26,492	2,440	13,958	417	1,612	2,023	12,346
Canada	2,942	6,705	2,683	5,645	259	1,060	185	617	74	442
Europe	6,269	30,318	4,168	17,816	2,101	12,502	220	868	1,881	11,634
EEC (9)	>5,816	27,512	3,832	15,913	>1,986	11,599	(D)	814	(D)	10,805
UK	2,155	6,867	1,352	4,020	803	2,847	84	262 ^a	719	2,634 ^b
EEC (6)	3,645	20,173 ^e	2,465	11,778 ^f	1,180	8,415 ^d	(D)	507	(D)	7,908 ^d
Belg.-Lux.	(D)	2,169 ^e	(D)	579 ^f	(D)	1,576 ^d	30	98	(D)	1,478 ^d
France	(D)	5,559	(D)	3,530	(D)	2,029	15	84	(D)	1,946
Germany	1,333	8,467	951	5,348	382	3,119	(D)	221	362	2,898
Italy	636	2,625	461	1,712	174	913	24	74	150	838
Neth.	172	1,388	(D)	609	(D)	779	(D)	30	69	748
Other Europe	277	3,242	159	1,926 ^g	118	1,190 ^h	(D)	100 ⁱ	(D)	1,090
Denmark	16	147	13	95 ^g	3	355 ^h	*	32	3	35
Ireland	(D)	290	2		(D)		(D)	(D)	(D)	(D)
Norway	(D)	(D)	(D)	(D)	(D)	(D)	*	1	(D)	(D)
Spain	(D)	1,148	(D)	(D)	(D)	>290	(D)	6	4	(D)
Sweden	(D)	(D)	(D)	(D)	(D)	>257	(D)	17	55	>242
Switzerland	49	425	36	124	13	302	(D)	27	(D)	275
Other	(D)	(D)	31	(D)	(D)	>43	(D)	(D)	(D)	>40
Japan	305	1,695	265	1,453	40	242	9	127	31	270
Other	493	1,732	452	1,578	41	154	3		38	
Australia	377	1,206	(D)	1,138	(D)	68	3	(D)	(D)	(D)
New Zeal.	(D)	47	(D)	46	0	1	0	*	*	*
S. Africa	(D)	478	79	394	(D)	84	*	(D)	(D)	(D)
Developing	892	6,612	843	3,815	49	2,797	27	1,794	22	1,003
Latin America	736	3,890	719	3,298	17	592	2	288	15	303
South & Cent.	(D)	3,794	(D)	3,265	17	529	2	(D)	15	(D)
Argentina	104	360	103	283	1	77	(D)	4	(D)	73
Brazil	252	2,470	245	2,150	7	320	(D)	(D)	(D)	140-191
Colombia	(D)	61	30	59	(D)	2	*	0	(D)	2
Mexico	246	672	242	545	4	127	(D)	90	(D)	37
Venezuela	(D)	166	(D)	164	0	2	0	*	0	1
Other Asia ^j	148	2,549	117	219-397	31	2,150-2,197	0-25	1,461-1,500	0-7	76-723
India	(D)	>67	(D)	>58	(D)	9	*	2	(D)	7
Indonesia	0	58	0	(D)	0	>4	0	4	0	(D)
Philippines	29	76	(D)	48	(D)	28	0	<25	(D)	(D)
Other	<119	2,162-2,348	(D)	113-291	<31	1,877-2,194	(D)	1,455-1,494	(D)	426-690
Hong Kong		453		40-50		403-413		274-284		130-149
Malaysia		316-335		<52		264-335		203		61-132
Singapore		774		20-30		744-754		519-529		225
South Korea		111-126		<56		57-124		55-68		45-223
Taiwan		>483		41		>442		>390		>52
Other		(D)		0		(D)		(D)		(D)

Notes to Table A-5

(D) = Suppressed by source to avoid disclosure

* = Less than \$500,000

^aIncluding exports of electrical machinery by Ireland to the U.S.

^bIncluding exports of electrical machinery by Luxembourg to countries other than the U.S.

^cExcluding Luxembourg

^dExcluding exports of electrical machinery by Luxembourg to countries other than the U.S.

^eExcluding sales of electrical machinery by Luxembourg

^fExcluding local sales of non-electrical machinery by Luxembourg

^gIncluding local sales of non-electrical machinery by Luxembourg. Sales of electrical machinery were less than \$500,000.

^hIncluding exports of non-electrical machinery by Luxembourg to the U.S. and exports of electrical machinery by Luxembourg to countries other than the U.S.

ⁱIncluding exports of non-electrical machinery by Luxembourg to the U.S. and excluding exports of electrical machinery by Ireland to the U.S.

^jExcluding Japan and Middle East

Source: Table A-6 and U.S. Department of Commerce (1975).

Table A-6
 Non-Electrical and Electrical Machinery and Equipment
 Sales and Exports by U.S. Majority-Owned Manufacturing Affiliates
 1977
 (\$ million)

	Machinery Excluding Electrical					Electrical Machinery and Equipment				
	Sales		Total ^a	Exports		Sales		Total ^a	Exports	
	Total	Local		To U.S.	To Other Countries	Total	Local		To U.S.	To Other Countries
All countries	28,406	17,944	10,462	1,246	9,216	18,655	12,362	6,293	2,160	4,133
Developed	26,215	16,179	10,036	1,116	8,920	14,235	10,313	3,922	496	3,426
Canada	3,550	2,884	666	401	265	3,155	2,761	394	216	177
Europe	20,025	10,928	9,097	640	8,457	10,293	6,888	3,405	228	3,177
EEC (9)	19,043	10,369	8,674	611	8,083	8,469	5,544	2,925	203	2,722
UK	4,868	2,614	2,254	166	2,089	1,999	1,406	593	96 ^d	545 ^e
EEC (6)	13,940	7,711 ^c	6,229 ^f	432 ^c	5,797	6,233 ^c	4,067	2,186 ^l	75	2,111 ^c
Belg.-Lux.	1,156 ^b	142 ^c	999 ^f	76 ^c	923	1,015 ^c	437	577 ^l	22	555 ^c
France	4,313	2,578	1,735	82	1,654	1,246	952	294	2	292
Germany	5,677	3,460	2,217	187	2,030	2,790	1,888	902	34	868
Italy	1,637	1,057	580	57	523	988	655	333	17	315
Neth.	1,172	474	698	30	667	216	135	81	*	81
Other Europe	1,202	603 ^e	613 ^g	42 ^e	570	2,040 ^e	1,415	577	58 ^a	520
Denmark	3	3	0	0	*	144 ^e			32	35
Ireland	217	21 ^e	209 ^g	13 ^e	196	73	71	146 ^k	(D)	31
Norway	(D)	(D)	2	0	2	(D)	(D)	(D)	1	(D)
Spain	273	246	27	3	25	875	(D)	(D)	3	(D)
Sweden	528	271	257	16	242	(D)	110	(D)	1	(D)
Switzerland	89	17	72	6	66	336	106	230	21	209
Other	(D)	(D)	43	4	40	(D)	(D)	(D)	(D)	(D)
Japan	1,532	1,320	212		198	163	133	30		72
Other	1,108	1,047	61	75		624	531	93	52	
Australia	778	726	52	(D)	(D)	428	412	16	<16	<16
New Zeal.	19	19	0	0	*	28	27	1	*	*
S. Africa	310	302	8	*	8	168	92	76	(D)	(D)
Developing	2,191	1,766	425	130	296	4,421	2,049	2,372	1,664	707
Latin America	1,899	1,649	250	28	222	1,991	1,649	342	260	81
South & Cent.	1,899	1,649	250	28	222	1,895 ^j	1,616 ^j	279 ^j	(D)	(D)
Argentina	273	201	72	4	68	87	82	5	*	5
Brazil	1,379	1,228	151	11	140	1,091	922	169	<169	<51
Colombia	4	3	1	0	1	57	56	1	0	1
Mexico	213	187	26	13	13	459	358	101	77	24
Venezuela	28	27	1	*	1	138	137	1	0	*
Other Asia ⁱ	243	71	172	99	73	2,306	148-	1,978-	1,362-	577-
India	61	58	3	*	3	>6	(D)	326	2,025	1,401
Indonesia	0	0	0	0	0	58	(D)	6	2	4
Philippines	0	0	0	0	0	76	48	28	<25	(D)
Other	182	13	169	99	70	1,980-	100-	1,708-	1,356-	356-
Hong Kong	53	<10	43-53	43-53	<19	2,166	278	1,991	1,395	620
Malaysia	<19	0	<19	0	<19	400	40	360	231	130
Singapore	104	<10	94-104	43-53	51	316	<52	264-316	203	61-113
South Korea	<15	2	<13	<13	0	670	20	650	476	174
Taiwan	(D)	1	(D)	*	(D)	111	<54	57-111	55	2-56
Other	0	0	0	0	0	482	40	442	390	52
						(D)	(D)	>1	>1	(D)

Notes to Table A-6

(D) = Suppressed by source to avoid disclosure

* = Less than \$500,000

^aObtained by subtracting local sales from total sales where the two are comparable. Figures may not agree precisely with sums of exports to U.S. and to other countries.

^bOf which \$1.075 million is Belgium and \$81 million Luxembourg

^cExcluding Luxembourg

^dIncluding Ireland

^eIncluding Luxembourg

^fExcluding Luxembourg exports to the U.S.

^gIncluding Luxembourg exports to the U.S.

^hExcluding Ireland

ⁱExcluding Japan and Middle East

^jSouth America, Mexico, and Panama

^kExports by Denmark were \$67 million.

^lExcluding Luxembourg exports other than to U.S.

Source: U.S. Department of Commerce (1981).

Table A-7
 Transportation Equipment
 Sales and Exports by U.S. Majority-Owned Manufacturing Affiliates
 1966 and 1977
 (\$ million)

	Sales				Exports							
	Total		Local		Total ^a		To U.S.		To Other Countries			
	1966	1977	1966	1977	1966	1977	1966	1977	1966	1977		
All countries	11,156	48,686	8,457	29,815	2,699	18,871	(D)	9,206	(D)	9,665		
Developed	10,112	43,225	7,421	24,762	2,691	18,463	(D)	9,000	(D)	9,463		
Canada	3,861	17,273	2,852	8,536	1,010	8,737	948	8,443	62	295		
Europe	5,012	22,720	3,369	13,084	1,643	9,636	(D)	554	(D)	9,082		
EEC (9)	(D)	21,124	(D)	(D)	(D)	(D)	(D)	541	(D)	(D)		
UK	(D)	6,699	(D)	4,290	(D)	2,409	(D)	(D)	(D)	(D)		
EEC (6)	2,747	12,829 ^b	1,911	(D)	836	(D)	(D)	(D)	(D)	(D)		
Belg.-Lux.	(D)	(D)	(D)	(D)	(D)	(D)	(D)	4	(D)	(D)		
France	(D)	3,216	(D)	1,923	(D)	1,293	(D)	7	19	1,286		
Germany	(D)	9,641	(D)	5,226	(D)	4,415	(D)	(D)	(D)	(D)		
Italy	63	370	(D)	282	(D)	88	(D)	9	2	79		
Neth.	(D)	(D)	(D)	(D)	15	(D)	*	3	15	(D)		
Other Europe	(D)	1,596 ^c	(D)	(D)	(D)	(D)	(D)	13	(D)	(D)		
Denmark	(D)	0	(D)	0	(D)	0	*	0	(D)	0		
Ireland	0	(D)	0	(D)	0	20	0	*	0	20		
Norway	0	0	0	0	0	0	0	0	0	0		
Spain	4	1,339	4	(D)	0	(D)	0	(D)	0	(D)		
Sweden	0	35	0	27	0	8	0	(D)	0	(D)		
Switzerland	(D)	0	(D)	0	(D)	0	(D)	0	(D)	0		
Other	55	(D)	(D)	(D)	(D)	(D)	0	(D)	(D)	(D)		
Japan	} 1,239	3	} 1,200	3	0	0	0	0	0	59		
Other		3,229		3,139	38	90	(D)	3	(D)	87		
Australia		810		2,548	779	2,472	31	76	(D)	3	(D)	73
New Zeal.		(D)		(D)	(D)	(D)	0	(D)	0	0	*	(D)
S. Africa		319		(D)	(D)	(D)	7	(D)	0	*	(D)	(D)
Developing	1,044	5,461	1,036	5,053	8	408	(D)	206	(D)	202		
Latin America	1,019	5,249	1,010	4,867	8	382	(D)	(D)	(D)	(D)		
South & Cent.	1,019	5,249	1,010	4,867	8	382	(D)	(D)	(D)	(D)		
Argentina	396	762	394	721	2	41	(D)	(D)	(D)	(D)		
Brazil	185	2,145	184	1,947	1	198	(D)	57	(D)	142		
Colombia	(D)	(D)	(D)	(D)	0	0	0	0	0	*		
Mexico	(D)	1,002	(D)	864	(D)	138	(D)	126	(D)	12		
Venezuela	152	1,046	152	1,045	0	1	0	*	0	1		
Other Asia ^d	<25	212 ^e	<25	186 ^e	0	26 ^e	0	<23	*	<26		
India	(D)	0	(D)	0	0	0	0	0	*	0		
Indonesia	0	0	0	0	0	0	0	0	0	0		
Philippines	<25	<104	<26	<102	0	2	0	*	0	2		
Other	<25	>108	<26	>84	0	24	0	<23	*	<24		
Hong Kong		0		0	0	0	0	0	0	0		
Malaysia		(D)		(D)	0	1	0	0	0	1		
Singapore		(D)		(D)	0	(D)	0	(D)	0	0		
South Korea		0		0	0	0	0	0	0	0		
Taiwan		(D)		(D)	0	(D)	0	(D)	0	(D)		
Other		0		0		0		0		0		

Notes to Table A-7

(D) = Suppressed by source to avoid disclosure

* = Less than \$500,000

^aObtained by subtracting local sales from total sales. Figures may not agree precisely with sums of exports to U.S. and to other countries.

^bIncluding Ireland

^cExcluding Ireland

^dExcluding Japan and Middle East

^eAssuming no sales by affiliates in Sub-Saharan Africa other than South Africa, Liberia, and Nigeria

Source: U.S. Department of Commerce (1975) and (1981).

Table B-1
 All Manufactured Products
 Exports by U.S. Majority-Owned Manufacturing Affiliates and by All Firms
 1966 and 1977
 (\$ million)

	Exports by U.S. Affiliates		Total Exports		
			SITC 5-8 plus Manufactured foods and other Mfd. Products		Manufacturing Industries exc. Petroleum Products
	1966	1977	1966	1977	1977
All countries	8,817	59,773	110,605.	627,337. ^a 605,006.	NA
Developed	8,239	54,288	94,055.	528,475. ^a 529,231.	NA
Canada	2,399	14,051	5,271.3	24,400.7	29,795.8
Europe	5,610	39,347	75,410.	409,339. ^a 406,335.	NA
UK	2,093	8,338	12,775.4	50,221.2	52,127.9
EEC	3,054	27,014	45,426.1	266,727.5	276,078.3
Belg.-Lux.	562	5,473	5,953.3	32,085.6	33,165.7
France	552	5,200	9,020.5	55,153.6	58,358.0
Germany	1,214	10,317	18,438.4	109,397.1	113,013.1
Italy	279	1,846	6,776.1	39,542.2	40,251.7
Neth.	427	4,529	5,098.7	30,549.0	31,289.8
Other Europe	463	3,997	NA	89,386.	NA
Denmark	19	230	1,970.7	8,292.8	8,755.5
Ireland	51	913	408.8	3,608.7	3,922.9
Norway	33	155	1,166.0	5,966.4	6,351.8
Spain	11	795	738.0	8,024.0	9,072.6
Sweden	99	498	3,156.3	15,893.5	17,810.9
Switzerland	206	643	3,167.5	16,834.6	16,744.7
Other	43	763			
Japan	69	326	9,254.9	78,291.5	79,957.9
Other Developed	162	562	2,771.1	9,995.8	12,981.7
Australia	107	377	1,310.4	5,627.5	6,722.1
New Zeal.	2	39	584.9	2,034.7	2,613.7
S. Africa	53	146	875.8	2,333.6	3,645.9
Developing	578	5,486	16,550.	98,862. ^a 75,775.	
Latin America	362	2,341	6,424.	32,504. ^a 22,504.	
South & Cent.	307	2,196			
Argentina	121	190	891.0	2,731.7	2,257.2
Brazil	39	994	394.1	6,551.4	6,763.4
Colombia	18	39	75.9	509.3	467.6
Mexico	49	488	489.3	1,368.2	3,002.4
Venezuela	1	10	32.3	178.8	158.5
Other Asia ^b	207	2,921	5,295.	48,905. ^a 43,055.	
India	19	17	868.2	3,698.4	3,524.5
Indonesia	0	107	150.6	313.2	842.7
Philippines	67	260	241.5	1,101.5	2,059.6
Other	121	2,537			
Hong Kong		600	1,218.0	9,097.9	9,428.5
Malaysia		339	373.3	1,571.6	2,930.8
Singapore		822	417.3	4,012.8	4,289.2
South Korea		128	190.7	8,847.7	8,955.5
Taiwan		558	404.1		
Other		91			

Notes to Table B-1

(D) = Suppressed by source to avoid disclosure

* = Less than \$500,000

^aIncompletely adjusted but comparable to 1966.

^bExcluding Japan and Middle East

Source: Table A-1 and United Nations, Yearbook of International Trade Statistics, 1966, 1969, 1978, 1979, and Monthly Bulletin of Statistics, Tables on World Trade by Commodity Classes and Regions, April and July, 1972 and later issues.

Table B-2
Food Products
Exports by U.S. Majority-Owned Manufacturing Affiliates and by All Firms
1966 and 1977
(\$ million)

	Exports by U.S. Affiliates		Total Exports		Food, Beverage and Tobacco Products Industries 1977
			SITC 0+1 less non- manufactured foods plus oils and fats		
	1966	1977	1966	1977	
All countries	666	3,229	14,060.	96,239. ^a	
Developed	409	2,533	12,025.	58,789. 53,244. ^a	
Canada	131	340	468.0	40,297. 1,317.4	1,445.3
Europe	232	2,093	8,990.	44,323. ^a	
UK	67	334	809.5	33,626. 3,414.9	3,274.0
EEC (6)	142	1,469		23,453.5	
Belg.-Lux.	10	102	346.4	2,694.5	2,659.0
France	19	216	1,056.5	6,331.2	6,399.7
Germany	26	332	425.8	5,686.5	5,189.0
Italy	20	69	363.9	1,933.9	1,892.6
Neth.	75	750	1,099.7	6,807.4	6,933.2
Other Europe	24	290		6,757.	
Denmark	*	93	934.6	2,670.2	2,844.5
Ireland	(D)	138	220.2	1,416.3	1,456.4
Norway	0	0	106.0	536.2	557.8
Spain	2	20	157.9	1,231.0	1,185.2
Sweden	*	5	90.5	362.9	343.0
Switzerland	(D)	(D)	166.0	671.9	693.0
Other	(D)	(D)		1,315.	
Japan	0	0	231.4	830.9	724.2
Other Developed	46	100	1,449.0		4,915.2
Australia	38	61	699.3	2,443.1	2,758.2
New Zeal.	<2	20	529.3	1,333.9	1,563.1
S. Africa	(D)	20	220.4	731.1	1,035.1
Developing	257	695	9,620.	42,995. ^a	
Latin America	200	481	4,610.	18,492. 21,010. ^a	
South & Cent.	198	400		10,573.	
Argentina	108	9	528.8	1,795.3	1,805.3
Brazil	16	306	187.0	3,464.4	3,442.1
Colombia	*	3	13.9	94.4	95.3
Mexico	18	17	143.9	280.3	247.1
Venezuela	0	5			
Other Asia ^b	56	179	2,035.	11,684. ^a	
India	(D)	*	108.3	5,009. 413.1	449.2
Indonesia	0	0	14.2	302.6	293.0
Philippines	51	166	168.1	1,104.4	1,111.7
Other	22	15			
Hong Kong		0	45.2	108.1	96.2
Malaysia		1	39.3	932.3	930.1
Singapore		5	99.5	493.8	469.8
South Korea		(D)	13.7	277.0	280.5
Taiwan		(D)	98.8	NA	
Other		(D)			

Notes to Table B-2

(D) = Suppressed by source to avoid disclosure

* = Less than \$500,000

^aIncompletely adjusted but comparable to 1966.

^bExcluding Japan and Middle East

Source: Table A-2 and United Nations, Yearbook of International Trade Statistics, 1966, 1969, 1978, 1979, and Monthly Bulletin of Statistics, Tables on World Trade by Commodity Classes and Regions, April and July, 1972 and later issues.

Chemicals

Exports by U.S. Majority-Owned Manufacturing Affiliates and by All Firms
1966 and 1977
(\$ million)

	Exports by		Total Exports		
	U.S.-Owned Affiliates		SITC 5 plus synthetic rubber and yarns		Chemical Industry exc. mfd. rubber & petroleum products
	1966	1977	1966	1977	1977
All countries	1,025	8,447	9,825.	62,356. ^a 67,862.	
Developed	928	7,983	9,330.	57,745. ^a 62,987.	
Canada	203	427	410.1	1,835.9	1,953.7
Europe	693	7,454	8,120.	50,002. ^a 54,207.	
EEC (9)		7,106	7,948.3	47,005.2	50,135.7
UK	213	1,097	1,453.5	7,291.6	7,665.7
EEC (6)	424	5,627 ^b	6,349.	38,484.2	41,110.5
Belg.-Lux.	120	1,469 ^b	499.9	4,957.8	5,484.1
France	81	635	1,328.4	7,391.2	7,525.3
Germany	49	1,125	2,700.8	15,566.7	16,183.5
Italy	38	314	849.9	3,705.1	4,037.2
Neth.	136	2,084	970.	6,863.4	7,880.4
Other Europe	56	729 ^c	NA	8,431.	NA
Denmark	(D)	149 ^c	125.9	734.9	878.2
Ireland	<24	233	19.9	494.5	481.3
Norway	(D)	(D)	147.3	568.7	616.9
Spain	1	78	79.9	693.9	745.9
Sweden	18	82	171.6	962.1	1,163.9
Switzerland	11	71	729.1	3,668.6	3,736.1
Other	2	113 ^d	NA	1,308.	NA
Japan	16	12	927.3	5,532.	5,457.5
Other Developed	16	90	132.3	1,320.7	
Australia	12	73	74.3	938.1	1,007.3
New Zeal.	0	6	3.1	103.4	100.7
S. Africa	4	11	54.9	279.2	487.1
Developing	96	464	495.	4,611. ^a 4,875.	
Latin America	81	292	265.	2,109. ^a 2,150.	
South & Cent.	42	252			
Argentina	8	33	41.4	176.2	195.1
Brazil	2	34	26.8	184.1	210.7
Colombia	6	13	9.	52.7	56.4
Mexico	14	78	63.7	272.3	313.5
Venezuela	0	1		72.7	
Other Asia ^e	8-15	139	135.	1,452. ^a 1,664.	
India	3	3	19.8	146.5	163.8
Indonesia	0	0	1.9	60.3	169.8
Philippines	2	23	2.5	52.	55.
Other	3-10	113	NA	NA	
Hong Kong		40	53.8	403.4	322.
Malaysia		7	15.4	35.3	87.3
Singapore		2	38.6	315.6	333.7
South Korea		1	.7	305.	410.6
Taiwan		53	32.5		

Notes to Table B-3

(D) = Suppressed by source to avoid disclosure

^aIncompletely adjusted but comparable to 1966

^bExcluding Luxembourg

^cIncluding Luxembourg

^dIncluding Norway

^eExcluding Japan and Middle East

Source: Table A-3 and United Nations, Yearbook of International Trade Statistics, 1966, 1969, 1978, 1979, and Monthly Bulletin of Statistics, Tables on World Trade by Commodity Classes and Regions, April and July, 1972 and later issues.

Table B-4
 Primary and Fabricated Metals
 Exports by U.S. Majority-Owned Affiliates and by All Firms
 1966 and 1977
 (\$ million)

	Exports by U.S.-Owned Affiliates		Total Exports		
			Total Exports SITC 67, 68, 69, and 812		Primary Metal Industry plus SITC 69 and 812 1977
			1966	1977	
All countries	387	3,094	17,280.	79,512. ^a 81,870.	
Developed	315	2,641	14,510.	70,214. ^a 72,182.	
Canada	52	891	1,239.8	3,645.8	3,665.6
Europe	261	1,708	10,920.	50,083. ^a 51,675.	
EEC (9)	234-239	1,529		42,086.1	42,320.2
UK	144	368	1,548.6	5,160.5	5,198.4
EEC (6)	90	1,120 ^b	7,565.2	36,216.1	36,404.8
Belg.-Lux.	7	192 ^b	1,920.3	6,644.5	6,730.
France	9	129	1,459.9	7,669.9	7,707.8
Germany	31	474	2,891.2	13,565.7	13,629.1
Italy	12	90	774.3	5,121.6	5,121.9
Neth.	31	235	549.5	3,214.4	3,216.
Other Europe	26	220 ^c		10,299.	
Denmark	0	24 ^c	66.9	528.6	535.9
Ireland	<5	17	18.8	180.9	181.1
Norway	(D)	(D)	428.5	1,589.1	1,612.3
Spain	(D)	14	72.4	1,361.2	1,378.6
Sweden	<3	(D)	644.1	2,589.7	2,600.3
Switzerland	0	(D)	186.7	1,408.3	1,412.
Other	(D)	(D)		2,641.2	
Japan	0	4	1,778.4	14,150.1	14,229.6
Other Developed	(D)	40	586.7	2,554.8	3,061.1
Australia	(D)	28	316.2	1,284.3	1,286.9
New Zeal.	(D)	0	2.6	160.7	166.3
S. Africa	*	12	276.9	1,109.8	1,607.9
Developing	<72	453	2,770.	9,298. ^a 9,688.	
Latin America	(D)	278	1,049.	3,273. ^a 3,333.	
South & Cent.	(D)	263 ^d			
Argentina	*	12	12.1	124.7	128.1
Brazil	(D)	33	22.9	371.2	371.
Colombia	*	5	2.1	31.3	32.3
Mexico	(D)	32	121.5	421.4	548.1
Venezuela	0	1	5.3	32.2	27.8
Other Asia ^e		69	502.	3,609. ^a 3,931.	
India	0	0	41.9	659.5	659.3
Indonesia	0	0	-	210.7	217.1
Philippines	0	(D)	-	86.1	87.8
Other	(D)	22-69	72.9		
Hong Kong		(D)	72.9	375.9	366.
Malaysia		0	257.9	698.7	708.
Singapore		(D)	43.8	255.9	257.5
South Korea		0	14.8	977.8	1,016.3
Taiwan		0	29.7		

Notes to Table B-4

(D) = Suppressed by source to avoid disclosure

* = Less than \$500,000

^aIncompletely adjusted but comparable to 1966.

^bExcluding Luxembourg

^cIncluding Luxembourg

^dSouth America plus Mexico and Panama

^eExcluding Japan and Middle East

Source: Table A-4 and United Nations, Yearbook of International Trade Statistics, 1966, 1969, 1978, 1979, and Monthly Bulletin of Statistics, Tables on World Trade by Commodity Classes and Regions, April and July, 1972 and later issues.

Table B-5
Machinery
Exports by U.S. Majority-Owned Affiliates and by All Firms
1966 and 1977
(\$ million)

	Exports by U.S.-Owned Machinery - Mfg. Affiliates		Total Exports		Metal Mfg. Ind. less SITC 69 1977
			SITC 71 & 72, less 711.4, 711.5		
	1966	1977	1966	1977	
All countries	2,849	16,755		132,228.	
Developed	2,440	13,958	19,573.4 ^a	123,248.	126,646.7 ^a
Canada	259	1,060	715.6	3,007.2	3,245.1
Europe	2,101	12,502	16,883.8 ^a	99,070.	100,460.1 ^a
EEC (9)	1,986	11,599	14,802.3	82,356.7	88,111.6
UK	803	2,847	3,383.5	12,777.5	13,831.3
EEC (6)	1,180	8,415 ^b	11,000.7	67,071.4	71,425.8
Belg.-Lux.	(D)	1,576 ^b	668.4	4,348.4	4,711.6
France	(D)	2,029	1,672.9	12,280.7	12,888.
Germany	382	3,119	5,898.9	34,429.8	36,116.2
Italy	174	913	1,708.6	10,046.	10,995.3
Neth.	(D)	779	1,051.9	5,966.5	6,664.7
Other Europe	118	1,190 ^b	2,499.6 ^a	19,221.	15,203. a
Denmark	3	67	391.5	1,954.7	2,257.5
Ireland	(D)	(D)	26.6	553.1	597.
Norway	(D)	(D)	110.4	733.8	876.9
Spain	(D)	>290	76.6	1,197.3	1,138.8
Sweden	(D)	>257	970.4	4,751.	5,089.4
Switzerland	13	302	924.1	5,118.1	5,243.4
Other	(D)	>43	NA	NA	
Japan	40	242	1,820.9	22,068.2	22,094.9
Other Developed	41	154	153.1	712.5	846.6
Australia	(D)	68	86.	376.5	422.
New Zeal.	0	1	3.4	91.7	35.1
S. Africa	(D)	84	63.7	244.3	389.5
Developing	49	2,797	>300.3	8,980.	NA
Latin America	17	592	NA	1,453	NA
South & Cent.	17	529	NA	NA	NA
Argentina	1	77	18.3	257.	258.7
Brazil	7	320	33.6	716.	738.8
Colombia	(D)	2	3.5	45.2	55.9
Mexico	4	127	17.1	173.2	166.1
Venezuela	0	2	-	5.7	7.9
Other Asia ^d	31	2,150-2,197	>227.8	6,613.	NA
India	(D)	9	12.6	213.4	230.6
Indonesia	0	>4	-	45.4	78.8
Philippines	(D)	28	-	39.	69.5
Other	<31	1,877-2,194	NA	6,315.2	NA
Hong Kong		403-413	100.6	1,480.4	1,606.4
Malaysia		264-335	13.6	363.6	361.1
Singapore		744-754	51.8	1,572.9	1,647.8
South Korea		57-124	11.4	1,152.2	1,192.9
Taiwan		>442	37.8	1,746.1	NA
Other		(D)			

Notes to Table B-5

(D) = Suppressed by source to avoid disclosure

^aIncomplete total.

^bExcluding exports of electrical machinery by Luxembourg to countries other than the U.S.

^cIncluding exports of non-electrical machinery by Luxembourg to the U.S. and exports of electrical machinery by Luxembourg to countries other than the U.S.

^dExcluding Japan and Middle East

Source: Table A-5 and United Nations, Yearbook of International Trade Statistics, 1966, 1969, 1978, 1979, and Monthly Bulletin of Statistics, Tables on World Trade by Commodity Classes and Regions, April and July, 1972 and later issues.

Table B-6

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Nonelectrical and Electrical Machinery and Equipment
Exports by U.S. Majority-Owned Affiliates, 1977 and by All Firms, 1966 and 1977

	Non-Electrical Machinery			Electrical Machinery and Equipment		
	Exports by U.S.-owned Affiliates 1977	Total Exports		Exports by U.S.-owned Affiliates 1977	Total Exports, SITC 72	
		SITC 711 1966	less 711.4 & 711.5 1977		1966	1977
All countries	10,462	NA	77,748	6,293		64,380.
Developed	10,036	NA	75,661	3,922		57,487.
Canada	666	442.4	2,182.	394	273.2	825.2
Europe	9,097	11,693.88	61,737.98	3,405	5,190.8	32,419.8
			63,948.			35,122.
EEC (9)	8,674	10,160.	53,401.4	2,925	4,642.3	28,955.3
UK	2,254	2,414.6	8,397.3	593	968.9	4,380.2
EEC (6)	6,229 ^a	7,452.	43,187.3	2,186 ^b	3,548.7	23,884.1
Belg.-Lux.	999 ^a	412.1	2,547.5	577 ^b	256.3	1,800.9
France	1,735	1,117.1	7,723.4	294	555.8	4,557.3
Germany	2,217	4,279.7	23,378.7	902	1,619.2	11,051.1
Italy	580	1,214.4	6,918.4	333	494.2	3,127.6
Neth.	698	428.7	2,619.3	81	623.2	3,347.2
Other Europe	613 ^c	NA	12,364.	577		6,858.
Denmark	0	282.5	1,436.8	67	109.	517.9
Ireland	209 ^c	10.9	380.	(D)	15.7	173.1
Norway	2	71.1	491.4	(D)	39.3	242.4
Spain	27	61.9	794.1	(D)	14.7	403.2
Sweden	257	707.1	3,216.	(D)	263.3	1,535.
Switzerland	72	693.7	3,835.	230	230.4	1,283.1
Other	43	NA	2,211.	(D)		2,704.
Japan	212	765.8	10,262.9	30	1,055.1	11,805.3
Other Developed	61	114.9	493.1	93	38.2	219.4
Australia	52	62.1	250.8	16	23.9	125.7
New Zeal.	0	2.2	47.9	1	1.2	43.8
S. Africa	8	50.6	194.4	76	13.1	49.9
Developing	425	NA	2,087.	2,372		6,893.
Latin America	250	NA	879.	342		574.
South & Cent.	250	NA	NA	279 ^e		
Argentina	72	14.9	209.6	5	3.4	47.4
Brazil	151	28.2	411.7	169	5.4	304.3
Colombia	1	2.6	36.2	1	.9	9.
Mexico	26	8.1	102.7	101	9.	70.5
Venezuela	1	-	3.9	1	-	1.8
Other Asia ^f	172	NA	1,160.	1,978-2,025		5,453.
India	3	5.9	110.7	6	6.7	102.7
Indonesia	0	-	11.9	>4	-	33.5
Philippines	0	-	13.1	28	-	25.9
Other	169		1,024.	1,708-1,991		5,290.
Hong Kong	43-53	11.9	205.3	360	88.7	1,275.1
Malaysia	<19	10.1	30.4	264-316	3.5	333.2
Singapore	94-104	32.3	396.4	650	19.5	1,176.5
South Korea	<13	4.	125.7	57-111	7.4	1,026.5
Taiwan	(D)	12.6	NA	442	25.2	NA
Other	(D)	(D)	NA	>1	NA	NA

Notes to Table B-6

(D) = Suppressed by source to avoid disclosure

^aExcluding Luxembourg exports to the U.S.

^bExcluding Luxembourg exports to countries other than the U.S.

^cIncluding Luxembourg exports to the U.S.

^dIncluding Luxembourg exports to countries other than the U.S.

^eSouth America, Mexico, and Panama

^fExcluding Japan and Middle East

^gIncomplete total

Source: Table A-6 and United Nations, Yearbook of International Trade Statistics, 1966, 1969, 1978, 1979, and Monthly Bulletin of Statistics, Tables on World Trade by Commodity Classes and Regions, April and July, 1972 and later issues.

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Table B-7
Transportation Equipment
Exports by U.S. Majority-Owned Affiliates and by All Firms
1966 and 1977
(\$ million)

	Exports by U.S.-Owned Affiliates		Total Exports			
	1966	1977	SITC 73 plus 711.4 & 711.5		SITC 732 plus 711.5	
			1966	1977	1966	1977
All countries	2,699	18,871		102,985.		73,625.
Developed	2,691	18,463	13,172.8 ^a	97,772.3 ^a	9,234.3	71,302.1
Canada	1,010	8,737	1,212.	10,515.2	962.1	9,755.6
Europe	1,643	9,636	10,385.2 ^a	62,477.6 ^a	7,621.5 ^a	46,052.8 ^a
				64,669.		46,843.
EEC (9)	(D)	(D)	9,515.7	55,253.7	7,217.6	42,512.5
UK	(D)	2,409	2,716.4	8,779.2	1,913.3	5,722.8
EEC (6)	836	(D)	6,659.9	45,667.5	5,256.4	36,541.
Belg.-Lux.	(D)	(D)	665.	4,740.6	568.3	4,430.
France	(D)	1,293	1,329.6	11,427.4	949.	8,434.
Germany	(D)	4,415	3,397.	22,084.3	2,929.9	18,301.6
Italy	(D)	88	863.4	5,205.9	689.9	4,304.7
Neth.	15	(D)	404.9	2,209.3	119.3	1,070.7
Other Europe	(D)	(D)		10,222.3		4,579.2
Denmark	(D)	0	130.4	697.5	47.6	207.1
Ireland	0	20	9.	109.5	.3	41.6
Norway	0	0	149.4	1,785.8	15.8	118.8
Spain	0	(D)	128.8	1,418.8	32.3	1,010.5
Sweden	0	8	544.6	3,553.9	329.6	2,173.7
Switzerland	(D)	0	46.7	465.4	26.2	237.3
Other	(D)	(D)		2,191.4		790.2
Japan	0	0	1,486.9	24,411.3	582.6	15,301.
Other Developed	38	90	88.7	368.2	68.1	192.7
Australia	31	76	648.	195.7	50.8	120.1
New Zeal.	0	(D)	-	77.7	-	15.5
S. Africa	7	(D)	23.9	94.8	17.3	57.1
Developing	8	408		2,917.		1,515.
Latin America	8	382		1,012.		796.
South & Cent.	8	382				
Argentina	2	41	2.3	221.9	2.	155.3
Brazil	1	198	9.2	673.6	1.3	533.9
Colombia	0	0	-	18.	-	13.1
Mexico	(D)	138	4.3	75.1	0.7	63.6
Venezuela	0	1	-	3.3	-	12.9
Other Asia ^b	0	26 ^c		1,845.		696.
India	0	0	7.9	161.8	4.6	112.2
Indonesia	0	0	-	8.	-	4.7
Philippines	0	2	-	14.2	-	11.2
Other	0	24		1,661.		567.9
Hong Kong		0	8.6	77.4	2.8	54.5
Malaysia		1	11.4	43.4	8.8	2.
Singapore		(D)	52.1	444.1	49.4	151.7
South Korea		0	2.8	698.4	-	37.8
Taiwan		(D)	2.	397.1	-	321.9
Other		0				

Notes to Table B-7

(D) = Suppressed by source to avoid disclosure

^aIncomplete total

^bExcluding Japan and Middle East

^cAssuming no sales by affiliates in Sub-Saharan Africa other than South Africa, Liberia, and Nigeria

Source: Table B-7 and United Nations, Yearbook of International Trade Statistics, 1966, 1969, 1978, 1979, and Monthly Bulletin of Statistics, Tables on World Trade by Commodity Classes and Regions, April and July, 1972 and later issues.