

L. 5.2

BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM
Division of International Finance

REVIEW OF FOREIGN DEVELOPMENTS

June 12, 1967

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38 pages

The Problem of Steel Imports

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The Problem of Steel Imports

From the beginning of the century through the late 1950's the United States was a net exporter of steel. However, in 1959 this position was suddenly reversed, when, helped along by the 116-day steel strike, imports more than doubled in both value and volume, and exceeded exports for the first time. After a moderate cyclical decline in 1960-61, steel imports advanced sharply. In 1966 they reached nearly 11 million tons, exceeding by 4 per cent the level of the previous year, which had been swollen by threats of a strike in the United States. Imports last year accounted for 11 per cent of the U.S. market supply compared to less than 3 per cent of the domestic market in the early 1950's (see Table and Chart 1).

Steel exports, on the other hand, have shown no particular growth. Steel exports during the 1960's, averaged 2.4 million tons annually, one-fourth below the 3.3 million ton average of the 1950's, excepting the temporary increase during the 1956-57 boom years which were given an added boost by the Suez war scare (see Chart 1). In dollar terms, exports averaged about \$500 million for both periods, again excepting 1956-57 (see Chart 2).

As a result of these changes, the U.S. balance of trade in steel has shifted from an export surplus of \$350 million in the early

Table 1. U.S. Exports and Imports of Steel Mill Products, 1950-1966^{1/}

Year	Millions of Dollars			Thousands of Tons			Imports as Per cent of ^{2/} U.S. Market
	Exports	Imports	Trade Balance	Exports	Imports	Trade Balance	
1950-1955 Average	508	151	357	3,286	1,298	1,988	1.8
1956	759	174	585	4,348	1,341	3,007	1.7
1957	997	171	825	5,348	1,155	4,193	1.5
1958	564	192	372	2,823	1,707	1,116	2.9
1959	363	516	-154	1,677	4,396	-2,719	6.1
1960	601	449	152	2,977	3,359	-382	4.7
1961	423	382	41	1,990	3,163	-1,173	4.7
1962	424	484	-60	2,013	4,100	-2,087	5.6
1963	465	633	-168	2,224	5,446	-3,222	6.9
1964	603	749	-146	3,442	6,440	-2,998	7.3
1965	508	1,177	-669	2,496	10,383	-7,887	10.3
1966	420	1,208	-788	1,724	10,753	-9,029	10.9

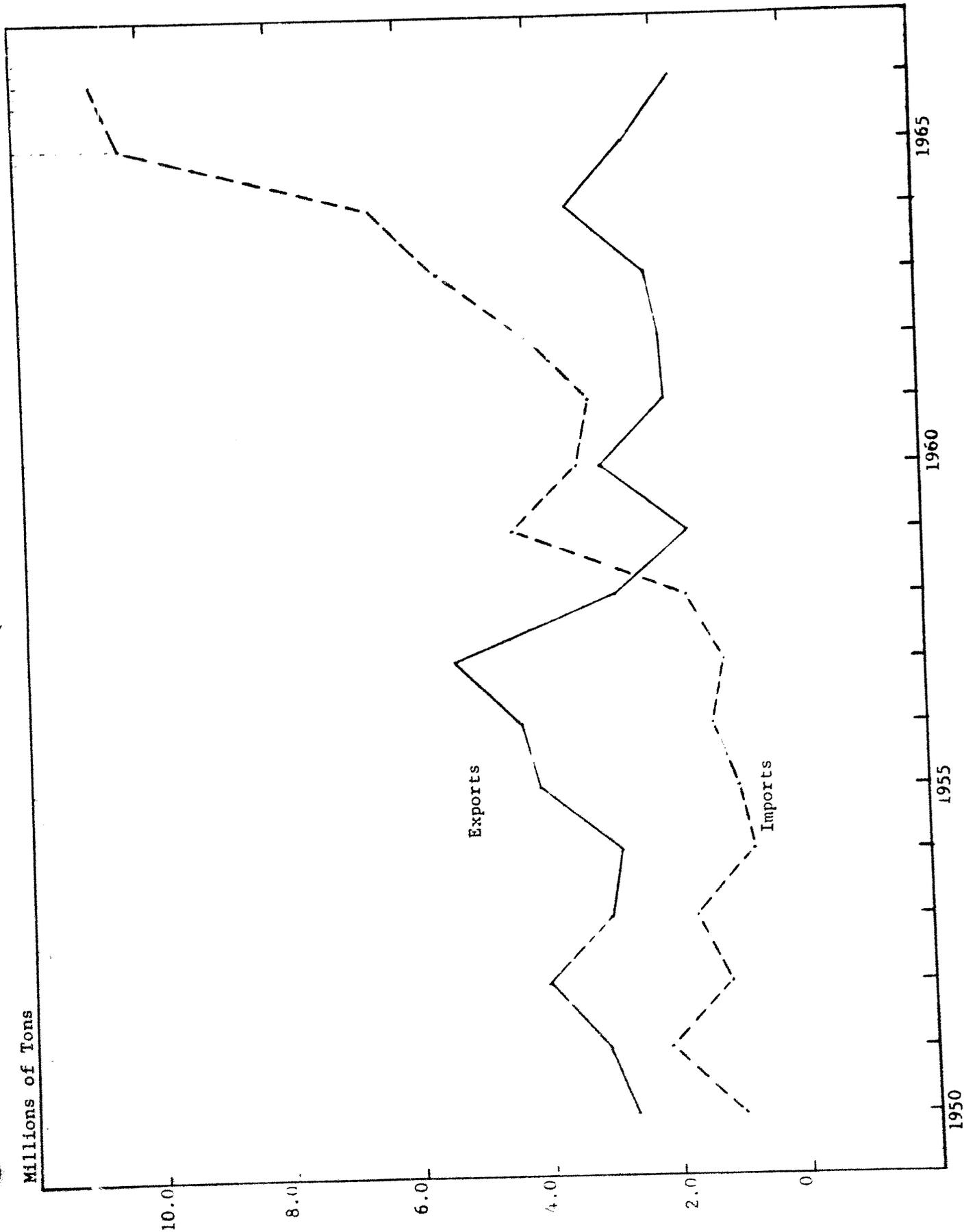
^{1/} Exports and Imports f.o.b.

^{2/} U.S. imports as a percentage of U.S. production plus imports less exports based on data in tons.

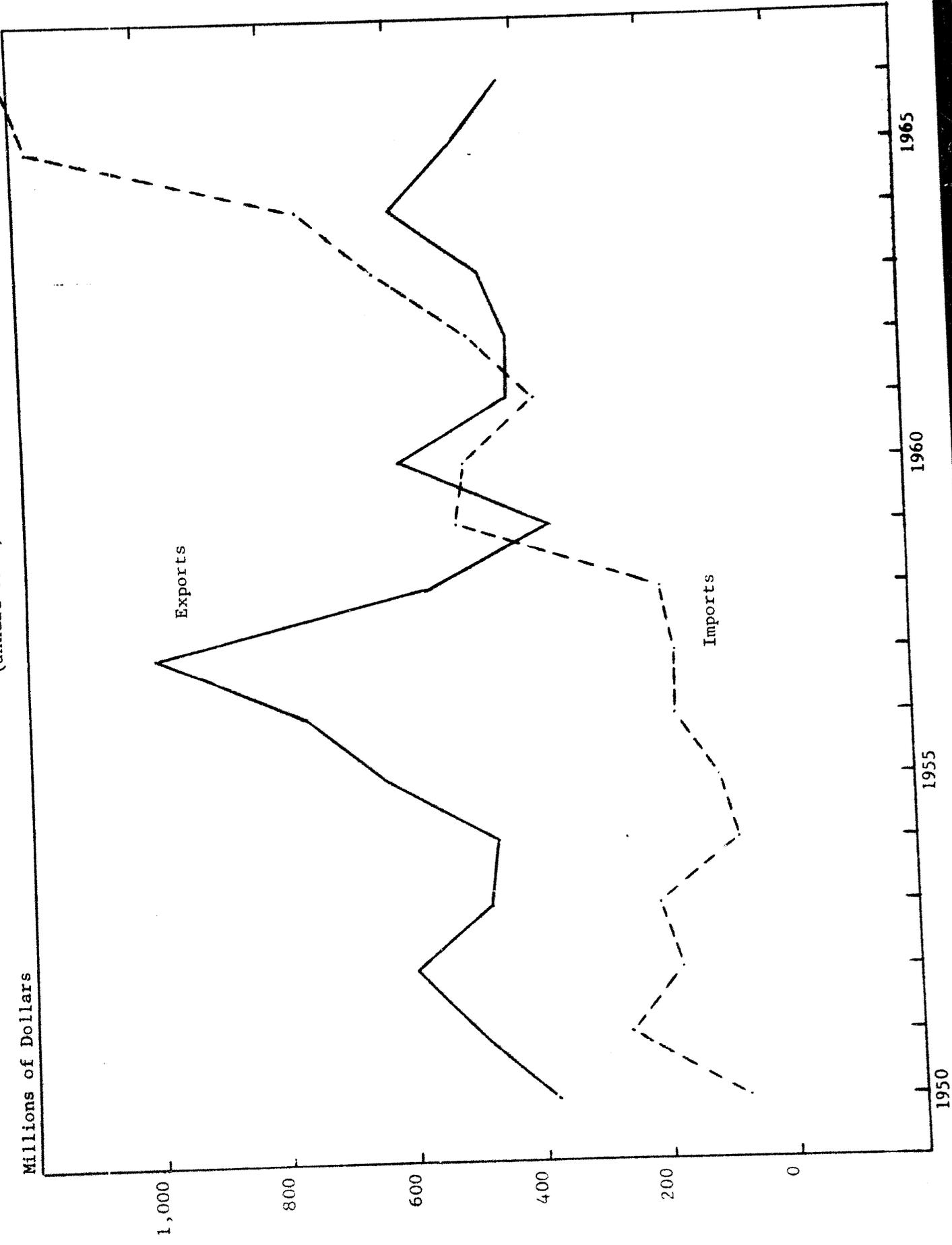
Source: 1955-1964--Council of Economic Advisers, Report to the President on Steel Prices, p.13.

Figures for years prior to 1955 and subsequent to 1964 were furnished by the U.S. Department of Commerce, Business and Defense Services Administration.

FR 703a
Chart 1. U. S. Trade in Steel Mill Products, 1950-1966
(annual data)



ER 703a
Chart 2. U.S. Balance of Trade in Steel Mill Products, 1950-1966
(annual data)



1950's to an import surplus of \$150 million in 1963-64 and to one of almost \$800 million last year (see Chart 2). This striking deterioration in our balance of trade in steel was clearly an important factor in the \$2.2 billion decline of our over-all trade surplus between 1963-64 and 1966.

This paper examines the recent sharp growth in steel imports and the changes in composition, and compares them with the pattern of growth during the late 1950's. Continued high (or rising) imports of steel would make more difficult the achievement of the large trade surplus that will be necessary if the United States is to achieve sustainable equilibrium in international payments. Thus, the competitive response of U.S. steel producers to the current high level of imports will have implications that extend far beyond the steel industry.

The competitive threat of imports to U.S. companies is greater now than in the late 1950's and the early 1960's, when the companies apparently felt that they could afford to give up a sizable share of the market for wire rods in order to avoid making competitive adjustments.^{1/} This paper reviews the response of the steel companies to the growth of imports in the earlier period, and considers some aspects of the current need for competitive adjustments in the light of information on relative prices and on the extent to which U.S. companies have kept pace with technological advances in production processes.

^{1/} Adams, Walter and Joel Dirlam, "Steel Imports and Vertical Oligopoly Power," American Economic Review, Vol. LIV, September 1964, pp. 640-643.

Recently U.S. companies have begun to request government protection against foreign competition. If steel is as important to the over-all competitive position of the U.S. economy as various studies have suggested (see page 33 below) it is clearly to our advantage to keep the steel industry as competitive as possible and keep governmental intervention at a minimum. In June 1966 hearings were held by the Senate Finance Committee on a resolution calling for the study of the impact of steel imports on the U.S. economy.^{1/} Although the resolution was never reported out to the Senate as a whole, the Committee is making a study and a preliminary report is expected to be completed by June 1967.

The change in composition of steel imports.

Significant changes have taken place in the composition of steel mill product imports during the past 10 years. In 1957 the most important type of imported steel in terms of volume was wire and wire products, closely followed by shapes, plates, bars and tool steel (see Table 2). By 1961 the most important category of steel imports was bars and tool steel. From then until 1965 the volume of steel imports was fairly evenly distributed among the largest six categories. But in 1965 imports of sheet and strip rose rapidly and accounted for one-third of all steel imports in that year.

The tremendous increase in steel imports in 1965 reflected strike threats, which encouraged U.S. customers to import 4 million

^{1/} Steel Imports, Hearings before the Committee on Finance, U.S. Senate, 89th Congress, 2nd Session, on S. Res. 149, June 2 and 3, 1966.

Table 2. U.S. Imports of Steel Mill Products by Category

	1957	1959	1961	1962	1963	1964	1965	1966
	thousands of net tons							
Total steel mill products	1,154	4,396	3,163	4,100	5,446	6,450	10,382	10,753
Sheet and strip	3.6	8.8	5.4	9.4	15.2	18.1	33.8	34.3
Shapes and plates	25.2	18.3	10.4	12.8	15.3	17.2	16.4	17.7
Bars and tool steel	22.7	30.6	28.7	24.3	19.8	18.2	15.8	16.0
Semi-finished products ^{1/}	5.4	12.4	19.9	20.0	19.6	20.2	15.1	12.8
Pipes and tubing	16.5	12.2	16.5	16.0	14.3	12.3	9.0	9.8
Wire and wire products	26.1	16.1	17.8	16.0	13.9	12.6	8.3	8.0
Tin mill products	--	1.5	.6	1.4	1.7	1.4	1.4	1.2
Rails and accessories	.5	.2	.7	.3	.2	.2	.2	.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

^{1/} Semifinished products include wire rods, ingots, blooms, billets, slabs, etc.

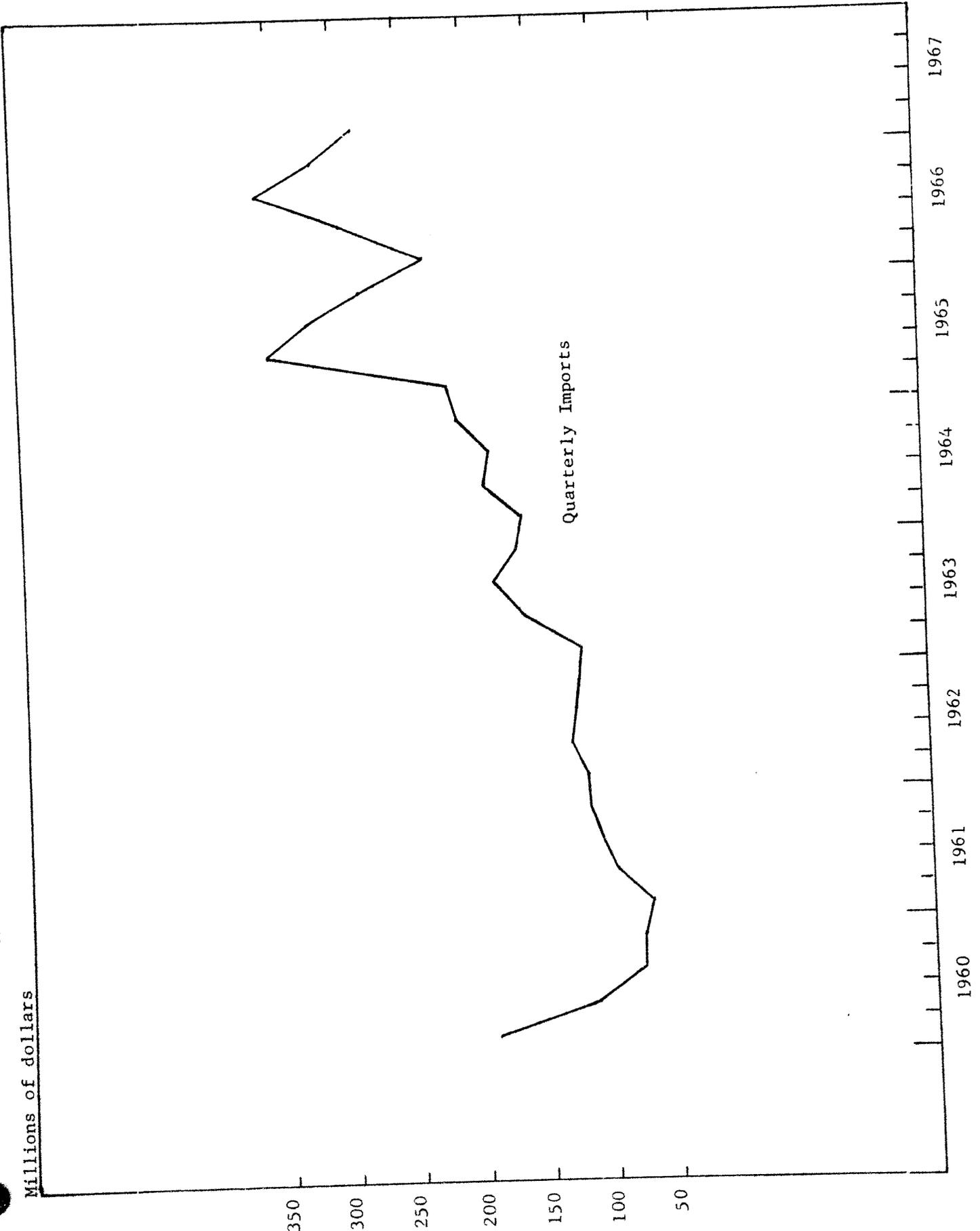
Source: American Iron and Steel Institute, Annual Statistical Reports, 1957-1965.
Data for 1966 were furnished through U.S. Department of Commerce, Business and Defense Services Administration.

tons of steel more than in 1964. The last sharp increase in steel imports had taken place in 1959 and was also strike-induced; but the increase this time was almost as large as total steel imports in 1959. Increased inventory accumulation as a precaution under such conditions was more or less expected; during the second quarter of 1965 steel imports advanced rapidly to an annual rate of \$1.4 billion compared with an annual rate of \$.9 billion during the preceding quarter and \$.8 billion during the second quarter of 1964 (see Chart 3). When the strike threat passed imports fell sharply during the winter of 1965-66, but during the spring and summer of 1966 they rose rapidly once more, reaching an annual rate of \$1.4 billion in the third quarter. During the winter and early spring of 1966-67 steel imports declined from the high 1966 summer levels but remained well above the import levels for the same period a year ago.^{1/}

More than half of the sharp increase in steel imports in 1965 was accounted for by steel sheets. And in both 1965 and 1966 sheets represented more than 30 per cent of the total value of steel imports. This sharp rise is significant not only because of the rapid increase in sheet import value (from \$130 million in 1965 to \$400 million in 1966), but also because the rising imports of steel sheets represented a shift to a more highly processed type of steel away from the cruder products, such as wire rods and bars, of the late 1950's and the early 1960's.

^{1/} Since much of the 1965-66 increase in steel mill product imports was steel sheets entering the U.S. through the Michigan customs district (see page 10, footnote 1 and Table 5), the sharp winter declines in steel imports probably reflect in part the seasonal closing of the St. Lawrence Seaway.

Chart 3. U. S. Imports of Steel Mill Products, 1960-1967



Millions of dollars

Quarterly Imports

1960 1961 1962 1963 1964 1965 1966 1967

This new pattern of imports is also reflected in the shares of the domestic market accounted for by the different types of steel imports (see Table 3). In 1957 wire and wire products not only were the most important type of imported steel but also had the relatively largest share of the domestic product market; 8.3 per cent of the wire and wire products sold in the U.S. domestic market were imported. In 1959, reflecting the influence of the strike, all broad categories of steel imports increased their U.S. market shares. But in 1965 only in the case of sheet and strip did imports increase their market share. While the market share of imported sheet and strip still ranks only sixth of the eight steel categories, the size of the market involved makes this increase particularly important. In addition, most of the 1965 increase in steel imports seemed to be in response to the increased demand of a single industry -- the automotive industry, which is the largest single consumer of sheet steel in the country.^{1/}

With the change in composition of steel imports, there came a new pattern of sources. In 1959, Belgium-Luxembourg was the major supplier of steel to the U.S., sending twice as much as any other country, but even so it supplied only one-fourth of the increase in U.S. imports; West Germany and France also provided substantial shares (see Table 4). In 1965, while all major foreign exporters increased

^{1/} More than 40 per cent of all U.S. steel sheet shipments went to the automotive industry, and the emergence of the Michigan customs district as the leading port of entry for steel imports reflected the large volume of imported steel sheets; in 1965 nearly 60 per cent of its steel imports were sheets. The largest ports did not necessarily experience the largest increases (see Table 5).

Table 3. Imports of Steel Mill Products as a Per cent of Total Domestic Purchases^{1/}

Steel Mill Product	1957	1959	1961	1962	1963	1964	1965	1966
Semi-finished products	1.9	16.0	21.1	24.8	27.4	28.2	29.0	28.5
Wire and wire products	8.3	17.4	15.7	17.6	19.9	21.0	20.1	20.0
Shapes and plates	1.8	7.4	3.1	4.7	6.4	7.2	9.5	10.8
Bars and tool steel	2.3	11.3	8.3	8.4	8.5	8.3	10.3	10.6
Pipes and tubing	1.9	6.4	7.1	8.7	10.3	9.1	9.1	10.6
Sheet and strip	.2	1.4	.7	1.4	2.6	3.4	8.9	9.5
Tin mill products	--	1.2	.3	1.0	1.7	1.5	2.2	2.4
Rails and accessories	.2	.9	3.1	1.3	1.2	1.0	1.6	1.5

^{1/} Based on data in tons. Domestic purchases equal U.S. production less exports plus imports.

Source: American Iron and Steel Institute, Annual Statistical Reports, 1957-1965.
Data for 1966 were furnished through U.S. Department of Commerce, Business and Defense Services Administration.

Table 4. Major Suppliers of Steel to the U.S.
(thousands of net tons)

Country	1957	1959	1961	1962	1963	1964	1964	1966
<u>All countries</u>	<u>1,155</u>	<u>4,396</u>	<u>3,163</u>	<u>4,100</u>	<u>5,446</u>	<u>6,440</u>	<u>10,383</u>	<u>10,753</u>
Japan	31	624	597	1,072	1,808	2,446	4,418	4,851
Bel.-Lux.	479	1,437	1,050	1,247	1,280	1,384	1,751	1,612
W. Germany	189	725	499	460	539	676	1,178	1,220
France	178	586	321	299	359	440	858	764
U.K.	57	214	166	250	350	285	720	748
Canada	52	376	304	367	583	692	644	692
All other ^{1/}	169	434	226	405	527	517	814	866

^{1/} Most of the 1964-65 increase accounted for by Italy.

Source: American Iron and Steel Institute, Annual Statistical Reports, 1957-1965.
Data for 1966 were furnished through U.S. Department of Commerce, Business and Defense Services Administration.

Table 5. U.S. Steel Mill Product Imports by Selected Ports of Entry, 1965

Imports through Selected U.S. Ports of Entry	1 9 6 5			Steel Sheet Imports: Amount of 1965 Increase ^{1/}
	Imports of All Steel Mill Products Total Amount ^{1/}	Change from 1964 ^{1/}		
		Per cent	Amount ^{1/}	
<u>Total Imports</u>	<u>10,383</u>	<u>61.2</u>	<u>3,943</u>	<u>2,124</u>
<u>More than 100% Increase</u>				
Michigan	1,638	125.9	913	651
Chicago	750	113.7	399	278
Philadelphia	645	186.7	420	258
Ohio	567	250.0	405	251
Maryland	431	104.3	220	185
<u>Less than 100% Increase</u>				
Galveston	1,094	42.8	324	78
Los Angeles	1,058	26.9	224	105
New York	764	38.4	212	78
New Orleans	660	81.3	364	88
Florida	693	45.0	353	3
San Francisco	291	28.2	64	10

^{1/} Data in thousands of net tons.

Source: American Iron and Steel Institute, Annual Statistical Report, 1964 and 1965.

their shipments of steel to the U.S., Japan supplied 4.4 million tons, more than 40 per cent of all U.S. steel imports^{1/} (see Chart 4).

Japan's emergence as the largest single supplier of steel to the U.S. resulted from increased shipments of steel sheet; in 1965 Japanese exports of sheet to the United States accounted for more than half of U.S. imports of sheet (see Table 6).

Price Competition From Abroad

The 1965 jump in steel imports is the latest manifestation of a more basic problem. As Professors Walter Adams and Joel Dirlam have pointed out, the growth in steel imports is

an amalgam of several causes -- the recovery from wartime destruction and dismantling of the European and Japanese steel industries; the installation of ultramodern capacity, reflecting latest technology, outside the United States; a substantial increase of world-wide capacity; a generally export-oriented price policy by European and Japanese producers; a generally insensitive utility-like, administered price policy by domestic producers. In other words, the steel-import problem is the product of the comparative showing of the U.S. steel industry in an increasingly competitive world economy.^{2/}

Foreign steel production has grown significantly during the past 10 years, expanding 85 per cent between 1956 and 1965. During the same period, U.S. production increased 14 per cent (see Table 7).

^{1/} West Germany, France and Japan nearly doubled their exports to the U.S. The U.K. increased their steel exports two-and-a-half fold. Since the early 1960's steel imports from Belgium-Luxembourg have increased more slowly; Belgium-Luxembourg's major type of steel exports continues to be bars and structural shapes, not steel sheets.

^{2/} Adams and Dirlam, op. cit., p. 626.

Chart 4. Major Suppliers of Steel to the U. S.

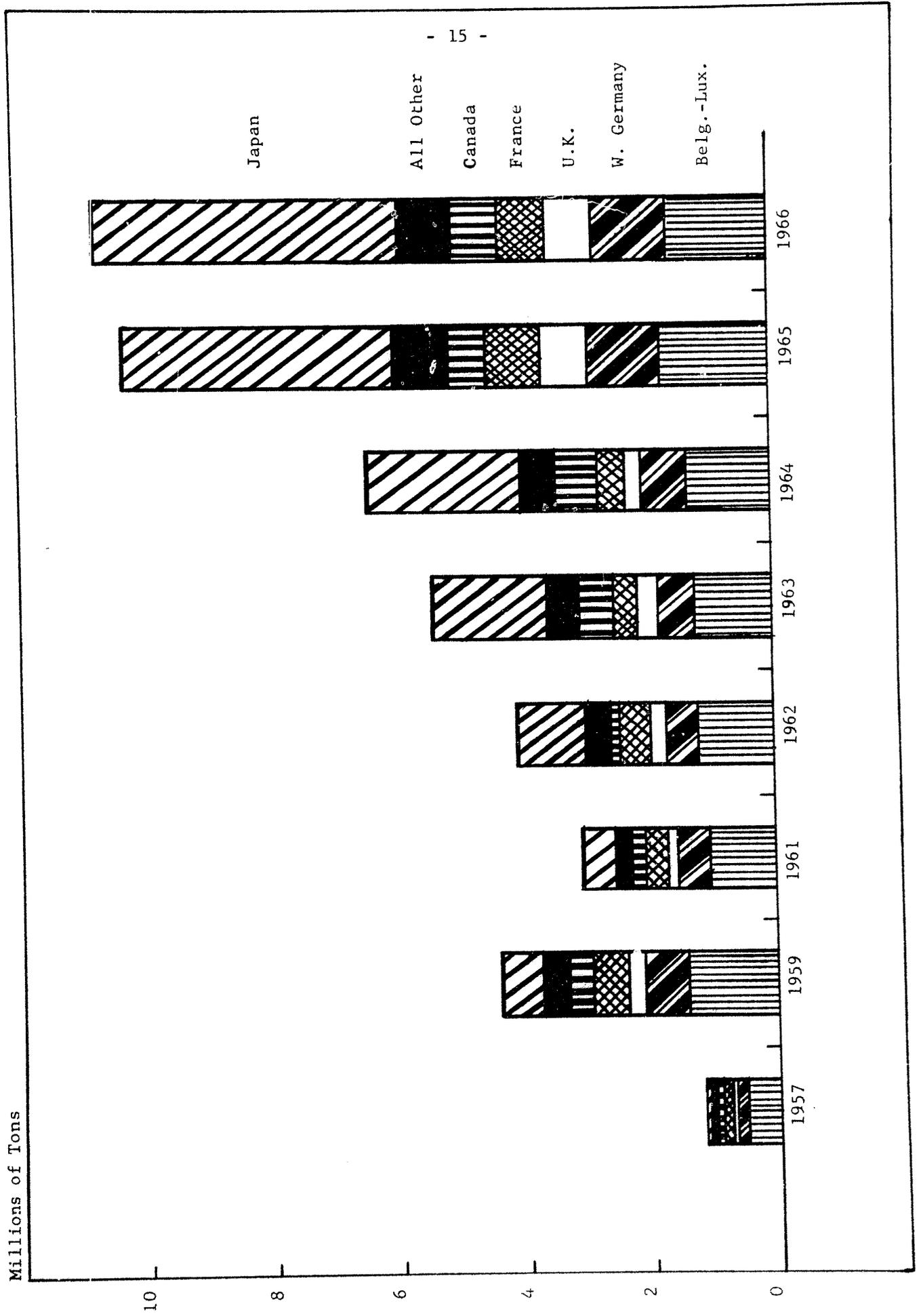


Table 6. Imports of Steel Sheets, 1961-1966
Hot and Cold Rolled
(thousands of net tons)

Source	1961	1962	1963	1964	1965	1966
<u>All countries</u>	<u>58</u>	<u>173</u>	<u>528</u>	<u>933</u>	<u>3,057</u>	<u>3,118</u>
Japan	10	89	254	493	1,472	1,755
W. Germany	2	5	30	146	420	429
U.K.	--	--	19	37	384	407
Canada	33	65	167	195	231	235
France	1	2	4	30	279	167
Bel.-Lux.	9	3	2	14	179	25
All other	3	9	52	18	92	100

Source: American Iron and Steel Institute, Annual Statistical Reports, 1957-1965. Data for 1966 were furnished through U.S. Department of Commerce, Business and Defense Services Administration.

Table 7. World Steel Production, 1956-1965^{1/}
(millions of net tons)

Year	U.S.	Rest of Free World	Japan	W.Ger.	U.K.	France	Bel.-Lux.	Other ^{2/}	Communist Bloc	World Production
1956	115	122	12	29	23	15	11	32	75	312
1957	113	129	14	31	24	16	11	33	80	322
1958	85	125	13	29	22	16	10	35	92	302
1959	93	141	18	32	23	17	11	40	103	337
1960	99	165	24	38	27	19	12	45	116	380
1961	98	175	31	37	25	19	12	51	117	390
1962	98	175	30	36	23	19	13	54	120	394
1963	109	187	35	35	25	19	13	60	126	422
1964	127	216	44	41	29	22	15	65	136	479
1965	131	225	45	41	30	22	15	72	146	501
% change 1956-65	13.9	84.5	375.0	41.4	30.4	46.7	36.4	25.0	94.7	60.6

^{1/} Primary steel

^{2/} Includes production data for Yugoslavia.

Source: American Iron and Steel Institute, Annual Statistical Reports, 1956-1965.

While ingot steel production in the U.S. fluctuated around 100 million tons annually, production in non-communist countries^{1/} rose from 122 million tons in 1956 to 197 million tons in 1963. Since then, steel production in both the U.S. and the rest of the free world has increased substantially; U.S. production reached 131 million tons in 1965 while production in the rest of the free world reached 225 million tons. The share of total foreign output going into export sales varies considerably among countries; in 1965, Japan and West Germany exported about 30 per cent of their steel production, France exported 40 per cent, while exports from the U.K. were 15 per cent of production. Belgium-Luxembourg, in a class by itself, exported more than 90 per cent of its production (see Table 8).

The recent surge in U.S. imports of steel mill products came at a time when during late 1965 and early 1966, the U.S. steel industry was operating near capacity, and the demand for steel from industries in other countries was not as intense as U.S. demand. As a result of this difference in business cycle timing between the U.S. and other industrial countries, there was a strong incentive for foreign producers to reduce prices, whereas U.S. mills were able to sell all they could produce at existing prices.

Accurate data on prices paid by customers is not available. Domestic wholesale and list prices may give a general indication of

^{1/} For these statistics Yugoslavia is included in the Western Europe category.

Table 8. Production and Exports of Steel Mill Products
in Selected Countries, 1965
(thousands of metric tons)

Country	Production ^{1/}	Exports	Exports as a % of Production
Bel.-Lux.	9,623	8,944	92.9
France	13,723	5,831	42.5
Japan	28,813	9,637	33.4
W. Germany	25,775	7,929	30.8
U. K.	19,207	2,963	15.4
U. S. ^{2/}	102,146	2,751	2.7

^{1/} The production of steel mill products is estimated as a 70 per cent yield of ingot production.

^{2/} U. S. data converted to metric tons.

Source: OECD, The Iron and Steel Industry in 1965. For the U. S.: American Iron and Steel Institute Annual Statistical Report, 1965.

levels, although at times steel may be sold at substantial discounts from listed prices. Reliable data on export prices are even harder to find. In this paper import unit values have been used as a rough approximation of export prices; conclusions based on unit values can, of course, only be approximate, since changes in unit values may often in part reflect changes in quality (see, for example, the footnote to Table 10.)

While the index of U.S. wholesale prices for steel mill products increased slightly between 1960 and 1965, as did similar indexes in ECSC countries and the U.K.^{1/}, Japanese domestic prices declined cyclically. In 1960 U.S. wholesale steel sheet prices were about equal to domestic Japanese prices (see Table 9).

Similarly ECSC listed domestic sheet prices were generally at about the level of U.S. prices, even though actual delivered prices in Europe were probably lower than in the United States.^{2/}

When U.S. wholesale prices of sheet rose 3 per cent between 1960 and 1965, domestic Japanese sheet prices declined by about one-fifth falling from \$161 per metric ton in 1960 to \$129 per metric

1/ European Coal and Steel Community, 11th and 12th General Reports.

2/ Under ECSC rules, while producers can fix their own selling prices and must publish price lists, the producer may align (i.e., reduce) his delivered price down to but not below a lower list price offered by a competitor within the community. As a result of this system of alignment, list prices do not reflect prices actually paid by customers, particularly during periods of weak demand. In addition, base on which prices are fixed differ between countries so that only broad comparisons are possible.

ton in 1965 (see Table 9). During 1966, Japanese steel prices responded to the rapid recovery of Japanese economic activity and by the end of the year had recovered two thirds of the 1960-65 price decline.

Export prices of Japanese steel, as well as ECSC and U.K. export prices, are generally below the domestic prices in those countries and are well below U.S. wholesale prices (see Table 10a). In 1965 as domestic demand lagged in home markets abroad, export markets became relatively more important. By January 1966 reported ECSC export prices for steel sheets (cold rolled) ranged from \$103 to \$106 per metric ton while listed home prices ranged from \$142 to \$166 per metric ton.^{1/} Similarly, Japanese export prices were approximately \$30 per metric ton below listed home prices (see Table 9 and Table 10a). Until the last months of 1966 Japanese sheet export prices continued to inch downward even though domestic prices had begun to move up. But as a result of the rapid recovery of domestic demand, Japanese manufacturers dropped production controls in September and sharply rising prices and demand for steel at home eventually cut into the volume of steel available for export.

As a result of pricing differentials U.S. steel products often have not been competitive with foreign products. For example,

^{1/} European Coal and Steel Community, op.cit. ECSC reported export prices generally support U.S. import unit values for those countries. Actual domestic prices are probably less than the listed home price (see above).

Table 9. Domestic Wholesale Steel Prices

	U.S. Steel Prices		Japanese Steel Prices			
	Total 1960 = 100	Sheet		Total 1960 = 100	Sheet	
		Total 1960 = 100	Price in dollars per metric ton		Total 1960 = 100	Price in dollars per metric ton
1960	100.0	100.0	154	100.0	100.0	161
1963	99.9	102.2	157	90.5	80.8	135
1964	100.7	103.4	159	91.3	78.6	131
1965	101.2	103.4	159	89.9	77.5	129
1966 - I	102.1	103.4	159	89.3	82.6	138
- II	102.3	103.4	159	90.2	86.5	144
- III	102.7	104.9	161	92.7	94.7	158
- IV	103.0	105.6	162	93.3	90.6	151

Source: U.S. -- U.S. Department of Labor, BLS, Wholesale Prices and Price Indexes, 1960-1966.

Japan -- Bureau of Statistics, Office of the Prime Minister, Monthly Statistics of Japan, January 1967, Wholesale Price Index, and Selected Wholesale Prices.

Table 10. Index of U.S. Steel Sheet Prices Compared to Index of Selected Import Prices, 1964-1966 (cold rolled sheet, 1964 = 100)

Years	U.S.	Import Index			
		Japan	Germany	France	U.K.
		(Index of unit values of imports into the U.S.)			
1964	100.0	100.0	100.0	100.0	100.0
1965	100.0	98.2	94.1	104.1	106.6
1966 - I	100.0	92.7	97.9	100.4	99.0
- II	100.0	91.8	99.6	107.2	102.7 ^{1/}
- III	101.4	91.6	103.0	109.1	101.6
- IV	102.1	92.0	105.3	101.5	100.0

^{1/} Average for April-May. In June the index was distorted by a disproportionately large volume of more expensive sheet imports.

Source: U.S., BLS Wholesale Price Index.
Other countries data calculated from U.S. Bureau of the Census, U.S. Imports of Merchandise for Consumption, Report FT 125, December 1964, 1965, 1966.

Table 10a. Selected U.S. Import Prices of Steel Sheet (cold rolled sheet, dollars per metric ton)

Years	U.S. Domestic Prices	Import Prices			
		Japan	Germany	France	U.K.
		(unit values of imports into the U.S.)			
1964	159	120	105	107	109
1965	159	117	120	111	117
1966 - I	159	112	103	107	108
- II	159	110	104	115	112 ^{1/}
- III	161	110	108	117	111
- IV	162	111	110	108	109

^{1/} Average for April-May. In June the unit value was distorted by a disproportionately large volume of more expensive sheet imports.

Source: U.S. -- U.S. Department of Labor, BLS, Wholesales Prices and Price Indexes, January 1967.
Other countries data calculated from U.S. Bureau of the Census, U.S. Imports of Merchandise for Consumption, Report FT 125, December 1964, 1965, 1966.

during the late 1950's imports of wire rods, the largest component of the semifinished steel group, (see Table 11), increased faster than any other steel product. But U.S. producers made no attempt to price wire rods competitively in order to prevent foreign products from increasing their market share. Professors Adams and Dirlam have noted that while the steel industry is an oligopoly in the horizontal sense it also has a high degree of vertical intergration: not only did twelve producers account for more than 90 per cent of wire rod capacity in the late 1950's, but moreover 80 per cent of their output went to their own fabricating plants. In 1955, as demand increased, domestic prices of wire rods rose and the integrated producers of rods tended to cut back on deliveries to independent fabricators. These fabricators began to turn to imports as a more dependable and less expensive source. Domestic prices of wire rods increased every year between 1955 and 1959, and then held steady, and by 1959 imports accounted for 40 per cent of the consumption of wire rods by nonintegrated fabricators.

While prices of wire rods were not reduced by the integrated producers, some adjustments were made in the prices of wire products, which declined after having reached a peak in 1958. For some individual wire products, where there was a strong competitive market structure, price reductions were made by the integrated firms to meet foreign domestic competition. For example, in the case of chain link fence and welded wire fabric -- where the volume of imports was not significant, but where independent fabricators were competing --

Table 11. Imports of Selected Steel Mill Products

	Wire Rods		All Semifinished Products ^{1/} (thousands of tons)
	Millions of dollars	Thousands of tons	
1957	7	54	62
1958	19	182	199
1959	45	449	540
1960	47	408	477
1961	48	451	631

	Steel Sheets		All Sheet and Strip (thousands of tons)
	Millions of dollars	Thousands of tons	
1963	98	737	827
1964	134	1,123	1,167
1965	371	3,454	3,507
1966	380	3,621	3,688

Source: American Iron and Steel Institute.

the large integrated companies met the price reductions of the independents. Similarly, in products such as woven wire fence, automatic baling wire and bale ties, when the independents reduced prices to meet the threat of a growing volume of imports, the integrated firms matched these reductions "to retain customers and to prevent the independents from cutting prices even further."^{1/}

The willingness of the integrated producers to meet competition in some wire products, but not in rods, involved a narrowing of the margin between rod and product prices and thus a change in the vertical price structure. Professors Adams and Dirlam provide several possible explanations for this behavior.

First, and this is the hypothesis advanced by some fabricators, the vertically integrated firms were simply inept. They pursued a public-utility, cost-plus pricing policy in the conviction that price has nothing to do with sales. Thus, they tried to saddle the nonintegrated fabricators with the sunk costs of excess and antiquated wire-rod capacity. Moreover, they never squarely faced the supply problems of the nonintegrated fabricators and never fully understood the abject dependence of these fabricators on a survival margin between rod and product prices. There is an element of truth in this view.

A second hypothesis is that the squeeze -- particularly the delicate but excruciating additional twist of the maintenance of rod prices between 1959 and 1962 -- was deliberate, and designed to rid the fabricating end of the industry of price competition by independents. This explanation cannot be wholly discarded.

A third, and probably the most valid, hypothesis is based on the structural implications of vertical integration Before reducing rod prices . . . the major firms had to consider not only the implications for rod revenues, but also the impact of the "cost" reduction on the independent fabricators and the indirect impact on the level of product

^{1/} Adams and Dirlam, op. cit., p. 644.

prices we must presume that they concluded during the 1957-1962 period that their losses from cuts in wire-rod prices, including the effect on products, would exceed the losses they suffered from relinquishing part of the noncaptive wire-rod market to imports.^{1/}

Since 1965, marked inroads have been made by the imports of another product -- steel sheets. If U.S. steel producers should react in the same way as in the case of wire rods, there would be a substantial cost for the U.S. balance on merchandise trade, not only because current levels of imports might well be maintained, but also because imports of sheet might grow. But there would also be a substantial cost to the companies themselves. The prospect of a permanent loss of 9-10 per cent of the steel sheet market is a considerably greater threat in dollar terms than was the threatened loss in 1961 of 20 per cent of the semifinished product market. In the late 1950's and early 1960's wire rod imports, which accounted for the bulk of total imports of semi-finished products (see Table 11), amounted to about \$50 million annually. By comparison, in 1966 imported steel sheets were valued at 8 times that amount, nearly \$400 million.

Until the latter part of 1966, U.S. producers may have found it difficult to do much about foreign competition, since they were operating at high levels of output. With the recent easing of domestic demand, however, there is increased scope for them to meet foreign competition. Quoted prices of foreign goods are affected not only by economic conditions in home markets, but also, since the dollar value shown in U.S. import statistics is defined generally as the market

^{1/} Adams and Dirlam, op. cit., pp. 645-646,

value in the foreign country, by the fact that the quoted prices of goods imported into the U.S. exclude U.S. import duties, ocean freight, and marine insurance. When such cost factors are included the differentials between U.S. domestic prices and import values are more likely to be in the range of \$10-20 per metric ton than in the \$40-50 per metric ton range indicated by Table 10a (see Appendix B). In the coming months, increased competition could imply adoption of more flexible pricing policies and improved delivery terms. The fact that U.S. producers did compete by lowering prices of wire product (although not of semifinished products, such as wire rods) might be taken as a harbinger of more flexible pricing of processed products such as sheet.

Over the longer run, the ability of U.S. producers to compete in steel products is importantly dependent on the relative state of technology in steel production. It is through technological advances that U.S. producers can hope to compete in the face of such factors as lower foreign wage costs. But, in general, the technological response of the U.S. steel industry to invention has been very slow in comparison to that of foreign steel industries. For years the U.S. steel industry, by the volume of its output and its position as an indispensable supplier to world markets, was able to postpone radical technological changes. However, increased foreign production of steel and steel mill products,^{1/} the resulting increase in foreign exports

^{1/} Among other factors, the increased foreign production of steel and steel mill products was assisted by rapid adoption of major innovations in production, lower labor costs, and various forms of foreign government subsidies.

to the U.S., and pressures from increasingly competitive materials such as aluminum, plastics, glass, and cement, eventually forced U.S. industry to make the contemplated changeovers in production techniques. But this delay has had substantial costs: the nearly 40 million tons of new open hearth capacity installed in the years prior to this changeover were made obsolete almost immediately.^{1/}

Only recently did the major U.S. steel producers introduce what has been called the major technological breakthrough at the ingot level in the steel industry since before the turn of the century -- the basic oxygen process. This process produces top grade steel more quickly and more efficiently than older methods and involves notably lower investment and operating costs.^{2/} As early as the mid-1950's the advantages of this process were discussed in the trade journals, but it took about a decade for the major U.S. steel producers, with the exception of Jones and Laughlin, to adopt this innovation.^{3/} Since 1963, the sizable increases in total steel production in the U.S. have been accomplished, for the most part, by use of oxygen furnaces (see Table 12). It is interesting to note that Japan was an early user of

^{1/} Business Week, November 16, 1963, pp. 144-146.

^{2/} Producers have estimated operating savings of the oxygen process over the open hearth method to be in the range of about \$5 per ingot ton and the capital savings to be about \$15-20 per ingot ton. While such estimates are necessarily crude, the differential between U.S. domestic prices and import prices apparently can be reduced substantially by the incorporation of these technological changes into U.S. production techniques. See Walter Adams and Joel Dirlam, "Bit Steel, Investments and Innovation," Quarterly Journal of Economics, May 1966, Vol. LXXX, pp. 167-189, and The New York Times, "U.S. Business: Chicago Mills Modernizing," May 28, 1967.

^{3/} U.S. Steel and Bethlehem introduced oxygen capacity in 1964, and Republic did so in 1965. For a further discussion of this problem see Adams and Dirlam, Ibid.

Table 12. U.S. Steel Production, 1961-1966
(millions of net tons)

Years	Total Production	Production by	
		Basic Oxygen Process	Open Hearth Method
1961	98.0	4.0	84.5
1962	98.3	5.6	83.0
1963	109.3	8.5	88.8
1964	127.1	15.4	98.1
1965	131.5	22.9	94.2
1966	134.1	33.9	85.0

Source: American Iron and Steel Institute, Annual Statistical Report, 1965. 1966 data provided by Department of Commerce, BDSA.

the basic oxygen process, integrating it into production as early as the mid-1950's, and by 1966, nearly 60 per cent of its ingot production was processed by the oxygen method.

The second major innovation only recently adopted is continuous casting which by-passes several steps in primary phases of steel making. Again this process involves a considerable cost saving, both investment and operational, but was adopted by major U.S. steel mills at least five years after European mills had begun to use it.

Several other recent improvements have allowed U.S. producers to enhance their productive capacity. The process called "beneficiation" of iron ores, which substantially enhances the iron content of low grade iron ores, "pelletizing", which reduces considerably the time it takes a furnace to produce pig iron, increased sizes of blast furnaces, and increased use of oxygen and natural gas, have all worked to double the capacity of many blast furnaces. In addition, the electronic age has left its mark as computer controlled rolling mills have insured a more uniform high-quality product. But again, all these improvements were introduced by U.S. producers no more rapidly than by foreign competitors particularly the Japanese. Thus far in the U.S., the lead in the major technological innovations has been taken by various smaller firms, and not, as Schumpeterian theory would assume, by the industry giants.

The real question for the U.S. steel companies as they face increased steel imports is whether the more efficient methods of production can be translated into more competitively priced products, or whether it would cost them more in profits to reduce prices at

home than they would lose via loss of sales to foreign producers. (While U.S. production of hot and cold rolled sheets totaled 60 million tons in 1965, only 3 million tons were imported.)

The non-price response to competition.

As an alternative to price competition, companies facing unwanted competition sometimes resort to political action. In the past when faced with increasing competition in the world market, which they were unwilling or unable to meet on market terms, domestic industries have sought relief by asking Congress to erect protective barriers to exclude the "unfair foreign competition."

Until recently, action taken by the U.S. steel industry against imports tended to take the form of complaints filed with the Treasury and Tariff Commission against alleged dumping of steel in the U.S. by foreign producers at prices below those charged in their home markets (see Appendix A).

But it is difficult to prove that dumping (as defined by anti-dumping legislation) exists; import prices must be proved to the Treasury to be "less than fair value," and then proved before the Tariff Commission to result in injury to the domestic industry. In the case of wire rod imports during the 1950's no such judgment could be made because export prices of Japan, the price leader, were the same as Japanese domestic prices; in addition, no actual or probable injury to the domestic industry was established.

In the current situation, industry tactics have changed; a move to increase tariffs is being substituted for the anti-dumping

route -- apparently a record year for steel profits and production provide a poor basis for an injury claim. At a February 1967 Capitol Hill meeting of Congressmen and steel industry executives, industry leaders called for an additional tariff on steel and pig iron imports to "create a climate of more equitable competition between domestic and foreign producers who seek a share of the U.S. market."^{1/}

Expecting substantial increases in productive capacity in Western Europe and Japan in the next few years, U.S. producers anticipate nothing but increased pressures from foreign steel production, and claim that a limit has been reached as to what U.S. mills can do and still maintain financial soundness."

A resurgence of protectionist attitudes in the steel industry is particularly significant because the steel industry plays a uniquely important role in the price and wage structure of the U.S. economy. Studies prepared for the Joint Economic Committee have shown that above average increases in steel prices during the 1950's played a critical part in the inflation of industrial goods prices, and contributed more than half of the rise in the Wholesale Price Index for all goods except farm products and food.^{2/}

^{1/} Wall Street Journal, February 9, 1967, p. 5.

^{2/} Otto Eckstein and Gary Fromm, "Steel and the Postwar Inflation," Study Paper No. 2, "Study of Employment, Growth, and Price Levels," Washington, Joint Economic Committee, 1959, p. 12. Also see Charles L. Schultze, "Recent Inflation in the United States," Study Paper No. 1, op. cit., Bela Balassa, "Recent Developments in the Competitiveness of American Industry and Prospects for the Future", in "Factors Affecting the United States Balance of Payments," Joint Economic Committee, 1962.

At the present time, when steel prices are again under pressure, any measure to insulate the industry from foreign competition would effectively remove one of the strong competitive forces from the U.S. domestic steel market. It has been regularly demonstrated (most recently by the Common Market) that vigorous competition is a vital ingredient for sound economic growth. It is questionable whether a lessening of competition in the steel industry is in the interest of the economy as a whole, no matter how attractive it is to that industry.

Moreover, because the U.S. plays a leading role in setting the direction of the free world's trade policy, any sign of raising U.S. barriers to trade cannot help but inspire retaliatory measures from the rest of the world -- and this would be particularly costly at a time when the U.S. is trying to expand its own export trade.

Appendix A. Dumping Complaints of Steel Mill Products, 1958-1966.^{1/}

<u>Year</u>	<u>Product</u>	<u>Country</u>	<u>Disposition</u> ^{2/}
1958	No complaints		
1959	Steel wire mesh	Belgium	No findings
	Pipe and tubing	Canada	No findings
	Bars	Mexico	No findings
1960	Pipe fittings - malleable iron	Japan	No findings
	Steel bars, angles, sheets, plates, reinforcing rods,	Japan	No findings
1961	No complaints		
1962	No complaints		
1963	Steel wire mesh	Belgium	No findings
	Steel wire rods	France	No findings
		Belgium	No findings
		France (another mfr.)	Dumping margins found; but no injury (Tariff Commission)

^{1/} Dumping complaints are first handled by the Treasury and if dumping margins are found the complaint then goes to the Tariff Commission to determine if the imports are injurious to domestic industry.

^{2/} A disposition of "no findings" means that the foreign exporter adjusted his prices or ceased shipments, or that imports were found to be not less than fair value.

<u>Year</u>	<u>Product</u>	<u>Country</u>	<u>Disposition</u>	
1963		West Germany	Dumping margins found; but no injury (Tariff Commission)	
		Luxembourg	Dumping margins found; but no injury (Tariff Commission)	
1964	Pipe, welded	Belgium	No findings	
		Luxembourg	No finding	
		United Kingdom	No findings	
		West Germany	No findings	
		Japan	No findings	
		France	No findings	
		Cast iron soil pipe, hot rolled sheet & plate	Australia	Dumping margins; but no injury (Tarriff Commission)
		Steel skelp and strip	Japan	Dumping margins; but no injury (Tariff Commission)
		Cold rolled steel sheet, and plate	Japan	No findings
			England	No findings
	Wire strand	Japan	No findings	
	Wire rope	United Kingdom	No findings	
	Reinforcing bars	Canada	<u>Dumping</u>	
	Bars - structural shapes	Canada	<u>Dumping</u>	

<u>Year</u>	<u>Product</u>	<u>Country</u>	<u>Disposition</u>
1965	Welded wire mesh	Belgium	No findings
1966	Welded wire mesh	Italy	No findings

Source: Treasury Department, Bureau of Customs.

Appendix B. Delivered Prices for Imported Steel Sheets, Japan to
Detroit, January 1967

<u>Items</u>	<u>Dollars per metric ton</u>	<u>Source of information</u>
1. Cold rolled sheets price f.o.b. Japan	111	FT 150 January 1967.
2. Ocean freight	22	Rates on file with the Federal Maritime Commission. See Item 950, Japan/Great Lakes Memorandum #1, #2, #3, Agreement No. 8670, FMC Tariff No. 1, 2, 3.
3. Insurance	2	Estimated at 2 per cent of the value.
4. Customs duty	9	1/10 of a cent per pound plus 8 per cent of the value. See U.S. Customs regulations.
5. Estimate of local harbor and delivery costs	3	Estimate based on railroad information.
6. Delivered price Detroit	<u>147</u>	Sum of items 1-5.
7. Domestic base price	147	<u>Iron Age</u> , January 1967, steel prices.
8. Estimate for extras	15-20	Buyers pay extra for quality and other products specifi- cations.
9. Published domestic wholesale prices	<u>161</u>	BLS Wholesale Prices and Price Indexes, January 1967.