REPORT BY THE

Comptroller General

OF THE UNITED STATES

United States - Japan Trade: Issues And Problems

The U.S.-Japan trade imbalance has created serious concern. The imbalance reflects underlying economic factors as well as differences in trade policy and attitudes toward exporting.

GAO analyzes these factors, contrasts U.S. and Japanese trade policies, and points out specific problems in the Japanese market through case studies from seven U.S. industries--computers, automobiles, telecommunications, color television, machine tools, logs and lumber, and soybeans.

These trade issues involve not only a trillion dollar market, but also U.S. political and national security considerations beyond the scope of this report.

The report provides a factual base for trade policy decisions by the Congress. It was prepared in response to a request from Senator Bentsen.

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SEPTEMBER 21, 1979

COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-162222

The Honorable Lloyd Bentsen, Chairman
Joint Economic Committee
Congress of the United States

Dear Mr. Chairman:

This report is in response to your request that we undertake a study of U.S. firms that have either been successful in penetrating Japanese markets or have encountered only frustration and that we provide an analysis of U.S. and Japanese trade policy.

This report highlights specific and practical export issues in the Japanese market through case studies drawn from seven U.S. industries, analyzes the broad underlying factors affecting both countries' trade posture with the world, and compares U.S. and Japanese trade policy.

The report was reviewed informally by the Department of State and the Office of the Special Trade Representative as well as by several economists outside the government specializing on the Japanese economy. In addition, each case study was reviewed by the respective case participant.

We anticipate wide public interest in the matters discussed in the report. Therefore, we are distributing the report to other committees and Members of Congress; the Departments of State, Commerce, and the Treasury; and the Office of the Special Trade Representative. Public distribution will occur at the time of your October 2, 1979, hearing.

Sincerely yours,

Comptroller General
of the United States

Contents

ABBREVIATIONS

AA	automatic approval system (Japanese)
AIQ	automatic import quota (Japanese)
ASA	American Soybean Association
BLS	Bureau of Labor Statistics (U.S. Deparment of Labor)
cif	"cost, insurance and freight".
COCOM	Coordinating committee (NATO members minus Iceland plus Japan)
CPI	consumer price index
CNC	computer numerical control machines
CTR	color television receiver
CY	calendar year
ECC	export contributing companies (Japan)
EEC	European Economic Community
fas	"free alongside".
FAS	Foreign Agriculture Service of U.S. Department of Agriculture
FCC	Federal Communications Commission
fob	"free on board".
FRB	Federal Reserve Board
FY	fiscal year
GAO	General Accounting Office
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GNP	gross national product
IMF	International Monetary Fund
IQ	import quota system (Japanese)
ITC	International Trade Commission
JAL	Japan Air Lines
JDB	Japan Development Bank
JETRO	Japan External Trade Organization
JNR	Japanese National Railway
LDC	less developed country
MITI	Ministry of International Trade and Industry (Japan)
MT	metric tons

MTN	Multilateral Trade Negotiations
NAM	National Association of Manufacturers
NATO	North Atlantic Treaty Organization
NC	numerical control
NMTBA	National Machine Tool Builders' Association
NTB	nontariff barrier
NTT	Nippon Telephone and Telegraph
OECD	Organization for Economic Cooperation and Development
OEM	Original equipment manufacturer
OMA	Orderly Marketing Agreement
OPEC	Organization of Petroleum Exporting Countries
PABX	private automatic branch exchange
PBX	private branch exchange key set telephone system
PRC	People's Republic of China
PTT	post, telephone and telegraph authorities
R&D	research and development
SIC	Standard Industrial Classification System (U.S.)
SITC	Standard International Trade Classification (U.N.)
STR	Office of Special Trade Representative
TSG	Japan Trade Study Group (U.S.)
TSUS 807	a tariff item in the tariff schedule of the U.S.
USDA	U.S. Department of Agriculture
VAT	value-added tax
VTR	video tape recorder
WPI	wholesale price index

COMPTROLLER GENERAL'S
REPORT TO THE CONGRESS

U.S.-JAPAN TRADE: ISSUES AND PROBLEMS

D I G E S T

The steadily increasing deficit in U.S. trade with Japan between 1976 and 1978 resulted in widespread concerns in the United States. By 1978 the deficit was $11.6 billion, two and a half times that of 1976.

In world trade, Japan, between 1975 and 1978, had mounting surpluses; the United States ever larger deficits. The bilateral trade is of such magnitude that it reflected global problems and accentuated them. In this report GAO examines the broad underlying factors affecting both countries' world trade posture and uses case studies from seven industries to illustrate the corporate experiences of U.S. firms attempting to market in Japan.

For a long time, Japan provided layers of protection to its industries while continuing to expand its export trade. Now the Government of Japan is adopting a new trade policy reflected in the substantial reduction of tariffs and the lowering of many nontariff barriers. The telecommunications industry remains a conspicuous exception to this policy. However, attitudes on both sides of the Pacific have been slow to adjust to the new circumstances. American businessmen still remember the frustration of earlier attempts to penetrate the Japanese market. Similarly, mid-level Japanese Government officials, responsible for administering the new approach, frequently operate as if there were no new commercial policy.

In 1979 Japan's global trade surplus has decreased sharply. It is less clear what the overall U.S. trade record will be, but the trade deficit appears to be falling.

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During the first 6 months of 1979, the deficit with Japan was substantially reduced over the first 6 months of 1978. (See ch. 1.)

Factors affecting trade performance

GAO believes the United States must pay greater attention to new plant and equipment. For most of the years, 1970-78, Japan's ratio of gross fixed investment (exclusive of residential construction) to gross domestic product has been double that of the United States. Not only has Japan's ratio of personal savings to disposable personal income in this period been roughly three times that of the United States, but the United States has proportionately been investing far higher amounts outside its borders.

Although the United States spends more on research and development as a proportion of gross national product than Japan, Japan's rising capability is apparent in its share of U.S. patents awarded to foreign nationals. Between 1970 and 1977, the proportion of such patents awarded to Japanese nationals nearly doubled.

An important element in Japan's international competitiveness is its employment system which grants job security to the elite of the labor movement, with the result that relatively, Japan experiences far less time lost to strikes than the United States. (See ch. 9.)

Trade policies contrasted

GAO found striking differences in "export consciousness" between the two countries as illustrated in our case studies of automobiles, color television, machine tools, and lumber. Japanese "think" foreign trade; as early as the fifth grade, school children are introduced to its importance for their country. Americans come from a quite different background--a richly endowed economy, continental in breadth, for which in the past, foreign trade has been a minor element.

This study confirmed that the United States must heighten its "export consciousness" which, among other things, means studying other nations' preferences and designing products accordingly.

In comparing U.S. and Japanese trade policies, GAO finds the sharpest contrast in the different approach toward export industries. Japan's commercial policy rests on identifying industries with strong export potential and providing them with support. In the United States, there is no analysis of export potential among industries. Shoes and computers are regarded equally. Before targeting an "export industry," Japan asks "Do the products of this industry have a high valued-added content? Will the demand for this product rise with rising income?" These questions are not asked in the United States. Japan encourages its strong industries; the United States protects its weak ones.

Japan's foreign trade administration is more focused than that of the United States because, lacking raw materials and land sufficient to feed itself, virtually the only goods Japan has to sell to the world are manufactured goods. The United States, by contrast, sells manufactured goods, agricultural products, and crude materials, each with its own trade administration.

Japan's primary technique for encouraging industries with strong trade potential has been accelerated depreciation, with great emphasis on modern plant and equipment. The United States has no comparative statistics on the average age of plant and equipment. The United States extends investment credit to all manufacturers alike; Japan favors certain industries over others, with a view to supporting industries important to the performance of the economy. At the present time, for example, the computer industry is receiving the greatest government benefits.

There is an important time-frame difference between Japan and the United States in trade policy. Japan anticipates. Its conception of "early warning" rests on economic projections 5 to 10 years or more in the future. Because Japan perceives increasing pressure from newly industrializing countries in textiles, consumer electronic products and the like, the government feels compelled to encourage industry to move into more sophisticated types of manufacture. The United States reacts. Its conception of "early warning" is based on import statistics of the goods which arrive. 1/ (See ch. 10.)

CONCLUSIONS FROM THE CASE STUDIES

The primary criterion for selection of case studies was the importance of an industry to the flow of trade between the two countries. A second consideration was to illustrate the wide range of problems in different industries.

The computer industry represents a basic, high technology industry in which the United States is strong and in which Japan is determined to develop its own strength. Automobiles represent the single largest product-line deficit in the bilateral trade. Telecommunications equipment is particularly interesting because of the scale of the argument over the status and actions of Japan's Nippon Telephone and Telegraph (NTT), color television because of its prominence in public debate. GAO chose machine tools, not because of the scale of the trade or the size of industry, but because of their important ramifications for other industries. Japan is the United States' most important export market

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1/Notwithstanding the Trade Act of 1974, which provided for comparability of export, import and production statistics the U.S. does not yet have import and production statistics on a common basis.

A troubling item for the U.S. economy and for U.S. competitiveness abroad is that a recent survey found that U.S. machine tool equipment

is older on the average than equipment generally in U.S. manufacturing. This may be the principal factor in the U.S. industry's loss of productivity at the rate of .9 percent a year from 1967-76. Japan, on the other hand, recognizing the importance of the machine tool industry to the health of the industrial sector of the economy, has given it special depreciation provisions to encourage the adoption of the latest technology. Factors greatly aiding Japan's penetration of the U.S. market, in addition to the price competitiveness of its tools, are servicing and promptness of delivery. Currently, Japan's delivery time-lag is half that of the United States. (See ch. 6.)

Logs and Lumber

The U.S. policy on exports of crude materials is ambivalent. The fact that exports drive up domestic prices creates a conflict with domestic users. Japan is eager to buy logs; the United States is not sure about selling.

It is frequently observed that it would be preferable if the United States sold Japan lumber rather than logs (higher value-added). However, Japan uses lumber of different dimensions than U.S. standards, and U.S. mills have been reluctant to cut to Japanese standards. (Canadian mills have been more ready.) In addition, increased lumber imports would threaten the Japanese sawmill industry, which is characterized by thousands of small lumber mills. Instead, the U.S. has been urging Japan to convert its housing construction methods to U.S. standards, but this, of course, is not a quick route to increased sales. (See ch. 7.)

Soybeans

Japan imports about 90 percent of the soybeans it consumes. Between 1973 and 1977 the U.S. share of total imports increased from 88 percent to 95 percent.

U.S. agriculture enjoys the same type of government export support that Japan extends to its manufacturing sector. The Department of Agriculture's Foreign Agricultural Service provides joint funding with the American Soybean Association for a Tokyo Office, which exists to facilitate marketing in Japan and to promote the uses of soybeans. In fiscal year 1979 the Foreign Agricultural Service allocated $522,000 to the American Soybean Association to help develop and maintain the U.S. soybean market in Japan.

While each case participant had an individual story to tell, a theme going through almost all of the cases was the difficulty experienced in distribution. The high cost of land in Japan, and hence of showroom space, aggravates this problem. If market opportunities in Japan are to compare to those which Japan enjoys in the United States, American businessmen must be able successfully to distribute their products. (See ch. 8.)

The report was reviewed informally by the Department of State and the Office of the Special Trade Representative as well as by several economists outside the government specializing on the Japanese economy. In addition, each case study was reviewed by the respective case participant. These comments were considered in preparing this report.

for agricultural products. Soybeans were chosen to represent this large trade, and logs (and lumber) to illustrate crude materials. Each of these chapters was reviewed by the case participants.

Computers

An array of government aids is helping this Japanese industry rapidly catch up to levels of world competitiveness, preparing it to be a strong competitor in the field. The problem is how to develop two-way trade in this industry, admitting a vigorous new competitor while, at the same time, avoiding the fate of such American industries as radio and television. Two-way trade in the same product line is the emerging pattern of international trade in manufactured goods. (See ch. 2.)

Automobiles

Earlier, Japan surrounded this industry with many protective devices. Today, most of these have been dismantled even though some barriers remain. Currently, a major factor causing the enormous deficit in automotive trade is not government policy but size of car. Specializing in small cars, Japan's industry came upon an immense opportunity in the American market whereas the U.S. industry, specializing in large, gas consuming cars, found only a thin, top slice of Japan's. U.S. industry is now moving in new directions. (See ch. 3.)

Telecommunications

The telecommunications market in Japan has remained a conspicuous exception to the recent liberalization of trade barriers. An array of nontariff barriers (NTBs) prevents U.S. access to the Japanese market. The lack of definition distinguishing central office and interconnect markets limits U.S. ability to enter the market. Furthermore, NTT's policies regarding equipment and installation approval circumscribe the range of equipment sold to the Japanese market. Negotiations both multilaterally and bilaterally, have not produced to date a formula for opening this market.

The "mutual reciprocity" agreement negotiated in June 1979, framed in terms of "government procurement" will, in GAO's view, have only a limited impact. The formula essentially deals with procurement by both governments and, since telecommunications services in the U.S. market are largely provided by private enterprises whereas in Japan they are provided by a government agency, the number of sales for which Japan would have to allow "mutual" access is obviously very limited. (See ch. 4.)

Color Television

The Japanese color television industry has made heavy inroads into the U.S. market, while American producers have little to show for their efforts to enter Japan's. GAO's case participant documented efforts to enter the Japanese market and was consistently blocked, although currently it has negotiations once again underway. Independent observers and the Japanese industry claim that the U.S. industry did not take the Japanese market seriously when it had a price advantage; however, GAO's review indicates that U.S. industry was seriously impaired by tariff and NTBs from entering the market. It is clear that thousands of jobs have been lost in the U.S. color television industry, though ironically, it may be Japan which will revitalize U.S. domestic production of color televisions. Japanese companies in the United States are currently turning out over a million sets a year. (See ch. 5.)

Machine Tools

In machine tools, the United States has had an export surplus in global trade. The case participant, a leader in the American industry, had a success story to report on its operations in the Japanese market. However, in trade with Japan, the United States moved into deficit in 1975 and into deficit globally in 1978.

CHAPTER 1

INTRODUCTION

In requesting GAO to undertake a review of the U.S.-Japan trade imbalance, Senator Bentsen asked that we focus "in the first instance on U.S. firms that have been successful in penetrating Japanese markets and other firms that have encountered only frustration." In addition, he asked for a "comprehensive, comparative analysis of U.S. and Japanese policy on imports and exports."

The advantage of opening a trade discussion with case studies is that they highlight practical and specific questions. On the other hand, case studies alone are not sufficient for an understanding of trade issues, because these "windows" are necessarily limited to the perspective of the individual firm. Basic factors which exercise a very real influence on trade, such as the strength of domestic demand, monetary alignment, savings and investment, research and development expenditures, productivity gains in manufacturing as a whole, are often seen only rather imperfectly, if at all, through case studies. Following the case studies, we explore the underlying economic factors affecting trade between the two countries.

We conclude the report with a comparison of trade policy in the two countries. Japan has a clearly stated trade policy which has had priority over other national considerations. U.S. trade policy, much less clearly defined, is but one of several national objectives, the most important of which is national security.

To prepare this report we conducted interviews with the case participants, with other U.S. industry representatives and with U.S. officials in a number of departments and agencies in Washington. In Japan we met with American Embassy officials, with Japanese Government officials, and with Japanese industry representatives from the case study industries. We also met with American businessmen some of whom are the representatives in Japan of our case participants and others of whom are officials of the American Chamber of Commerce in Japan. In addition, we had discussions with leading American economists specializing in Japan.

In this report, we present seven case studies drawn from the entire gamut of Japan's imports and chosen for their present or potential significance in the bilateral trade. The firms selected for study are from the following industries:

computers	machine tools
automotive trade	logs and lumber
telecommunications	soybeans
color television	

A word about each.

Computers represent a key high technology industry in which the United States has exceptional national and international strength and, incidentally, for which the U.S. statistical measures--SIC, and TSUS--lack explicit articulation. While the United States now enjoys a sizeable surplus, in its bilateral trade with Japan, Japan has only recently begun to enter the export market and is expected to become a strong competitor.

Automotive trade represents the single largest product-line deficit with Japan. Prior to 1971, the Japanese market was effectively closed to importation and manufacture in Japan of foreign automobiles was effectively prohibited. Although some barriers remain, both trade and investment have been greatly liberalized. Currently, American producers are planning to export cars they believe will be more competitive in the Japanese market.

Telecommunications was chosen because of the scale of the dispute surrounding it, rather than for its trade volume. In fact, until the last few years, telecommunications equipment was not a significant item of international trade. As a result of recent court and FCC decisions, the U.S. market is now opening up to more than one domestic manufacturer as well as to foreign producers, including Japanese. The United States is seeking comparable opportunity in Japan.

Color television was selected because of the volume of trade, the scale of the imbalance, the public debate, and the number of U.S. Government actions in this matter.

Machine tools is an industry whose relatively small size belies its economic significance. As the industry which turns out the tools that other industries use for the production of goods, its technical breakthroughs and its cost effectiveness have important ramifications. Long a U.S. industry with an excess of exports over imports, in 1975, it first showed a deficit with Japan and in 1978 a global deficit.

Logs and lumber represent a segment of that large part of Japan's trade in raw materials arising from its paucity of natural resources. Export of logs to Japan is restricted from

national forests in the West and from state forests in California, Oregon, Idaho, and Alaska, and by a recent informal government-to-government agreement.

Soybeans were selected to represent Japan's large agricultural imports. Lacking agricultural land sufficient to feed itself, Japan is a major agricultural importer. U.S. shipments of agricultural products to Japan are two and a half times larger than to our next most important national customer. Needless to say, the trade is virtually one-way.

THE PROBLEM OF TRADE IMBALANCE

Japan's economy--a trillion dollar market

The issue of trade imbalance with Japan concerns U.S. trade with the world's third largest economy. In terms of GNP, Japan ranks after the Soviet Union which ranks after the United States. Japan's GNP is significantly greater than that of all of the East Asian countries combined--both Koreas, the People's Republic of China and Taiwan, the countries of Southeast Asia including Burma but not India, Indonesia--plus Australia and New Zealand. 1/ In trade, U.S. exports to Japan are over 90 percent of U.S. exports to Germany and the United Kingdom combined. 2/ Thus, the stakes in resolving current trade issues are exceptionally high--not only in the economic area but in the political and military areas as well, subjects beyond the scope of this report.

U.S. global and bilateral trade balances

During the 3 years, 1976-78, the bilateral trade balance between the United States and Japan steadily worsened. The deficit when exports and imports are valued fas for the United States was: 3/

$5.3 billion	1976
8.1 billion	1977
11.6 billion	1978

1/CIA, National Basic Intelligence Fact Book, July 1978.

2/Department of Commerce, Highlights of U.S. Export-Import Trade.

3/See Table 1, fas.

In these same 3 years, the U.S. trade deficit with the world also deteriorated. The statistics are: 1/

$ 6 billion	1976
27 billion	1977
29 billion	1978

The causal connection between the bilateral deficit and the global deficit has been argued both ways. Some point to the bilateral deficit as a major factor in our global problems; others point to the global deficit as a significant factor in the bilateral deficit. Chart 1 graphs the bilateral trade during the 1970's. For comparative purposes, the chart also shows U.S. bilateral trade with Germany, the other strong surplus country. 2/

Recently there has been improvement in the trade figures though the second quarter of 1979 reverses the trend. According to U.S. statistics, the deficits in the trade balance by quarters for 1978 and the first two quarters of 1979 are: 3/

	1978	1979
1	$3.1 billion	$1.8 billion
2	3.2	2.6
3	3.0	
4	2.2	

If one compares the first 6 months of 1979 with 1978 there is, however, improvement. The U.S. bilateral deficit

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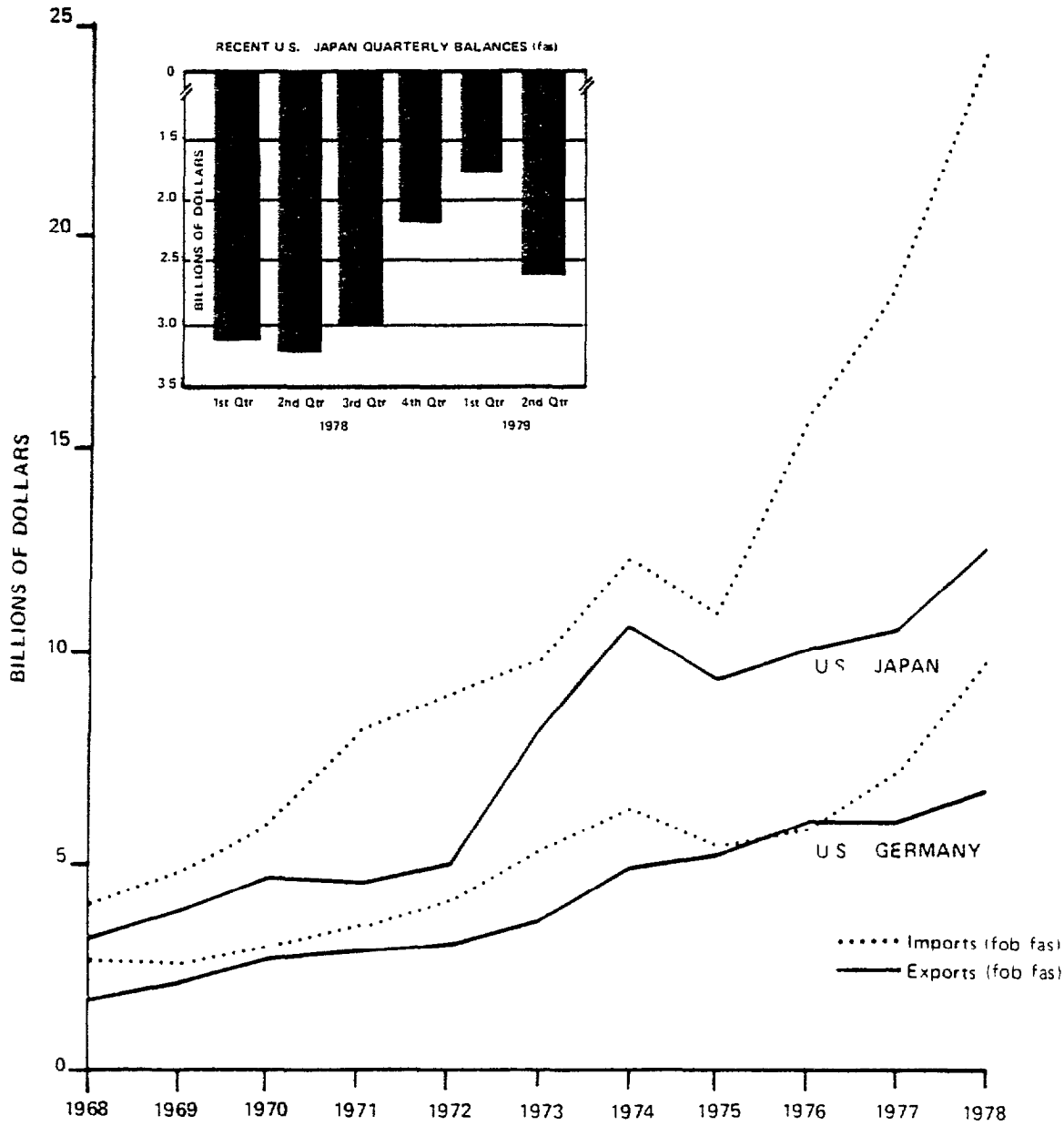
1/See Table 2, fas.

2/In this report the Federal Republic of Germany is cited as "Germany."

3/The 1978 balances are computed from the Department of Commerce, Highlights of U.S. Export and Import Trade, December 1978. The 1979 balances are unpublished figures from the Department of Commerce, International Research Unit. Seasonally unadjusted figures have been used. U.S. adjustment for seasonality in the bilateral trade occurs only on the import side.

CHART 1

UNITED STATES BILATERAL TRADE WITH JAPAN AND GERMANY 1968-78



Source: For 1968-77 trade, U.S. Department of Commerce, United States Trade With Major Trading Partners, 1970-1976 (OBR 77-49), and United States Foreign Trade Annual (OBR 78-21). For 1978 trade, U.S. Department of Commerce, Highlights of U.S. Export and Import Trade, 12/78. For trade balances, Ibid., 3/79

with Japan for the first half of 1978 was $6.3 billion; for the first half of 1979, $4.5 billion. 1/

Measuring trade balances

Various accounts of the same trade flows often appear to conflict because different measures have been used for valuing the goods. Exports create little difficulty for they are traditionally valued at port of exportation, but imports may be valued either at port of exportation or at port of importation. When imports are valued at the port of exportation, there are two possible methods, depending upon whether the goods are "alongside" the ship or are "on board" the ship. The terms used for these two ways, which vary only slightly, are "free alongside" (fas) and "free on board" (fob). When goods are valued at the port of importation, insurance and freight are included, which results in a higher figure. The expression used for this system is cost, insurance and freight (cif). Since in the United States, the foregoing figures are compiled by the Bureau of the Census, we refer to them as "Census" measures.

Still another way of reporting trade is the balance-of-payments (BOP) method. In the case of the United States, the BOP measure of trade flows which uses fas valuation is substantially different from the Census figures using the fas method. In the case of Japan, the BOP trade calculation is based on fob valuation and is virtually identical to the other trade figures. In the case of Germany, which uses fob, there is only a small difference.

For the United States, the discrepancy arises primarily out of two factors: (1) the geographical definition of the United States and (2) the care with which inland freight is computed. The BOP geographic definition of the United States includes Puerto Rico and outlying territories, while the Census definition does not. Because of the long U.S. land border with Canada, much trade moves directly from factory to destination without changing mode of transportation at the border.

1/While the Japanese cif statistics on a customs-clearance basis would be expected to be sizeably different than the U.S. fas statistics, nevertheless the scale of the disparity is surprising. The Japanese report a surplus of $2.7 billion for the second quarter of 1978 contrasted with $1.4 billion for the second quarter of 1979. Comparing the first 6 months months of 1978 with the first 6 months of 1979, the Japanese report a $5.2 billion surplus for 1978, a $2.7 billion surplus for 1979.

As is implicit from the foregoing discussion, trade valuation, however calculated, takes place at borders. Accordingly, Census figures oftentimes do not reflect the value of the goods at the national boundary. BOP figures attempt to adjust for this.

Because of the confusion arising from these different ways of measuring trade, we report by more than one measure. In Table 1, we show bilateral trade using the two basic Census measures; in Table 2, showing global trade balances, we present trade by the three measures.

Table 1

U.S. Bilateral Balance of Trade with Japan and Germany Under Different Methods of Import Valuation, 1974-78

Year	Japan		Germany	
	fas	cif	fas	cif
	(millions)			
1974	$- 1,659.0	$- 2,796.7	$- 1,338.3	$-1,930.9
1975	- 1,705.3	- 2,773.3	- 187.4	- 555.8
1976	- 5,359.5	- 6,777.3	+ 138.8	- 235.1
1977	- 8,027.6	- 9,673.4	- 1,256.3	-1,709.4
1978	-11,577.7	-13,576.3	- 3,003.9	-3,605.2

Source: Department of Commerce, Highlights of U.S. Export and Import Trade FT-990.

In Table 2, by whatever method, the United States globally is shown to have experienced trade deficits in 6 of the last 9 years. The Japanese figures globally show no deficit when imports are valued fob but when imports are valued cif, deficit appear in 3 of the years. The German balance of trade statistics, on the other hand, regardless of method, indicate no deficits. In fact, in the difficult immediate post-OPEC (1973) period, Germany had enormous trade surpluses.

Table 2

Global Balance of Trade--United States, Japan, and Germany Under Different Methods of Import Valuation, 1970-78

Year	United States			Japan			Germany		
	fas	BOP	cif	fob	BOP	cif	fob	BOP	cif
	(billions)								
1970	$ 2.6	$2.6	$ 0.1	$ 4.0	$4.0	$ 0.4	$ 6.1	$5.4	$ 4.3
1971	-2.2	-2.3	-5.0	7.8	7.8	4.3	6.8	6.8	4.6
1972	-6.7	-6.4	-10.0	8.9	9.0	5.1	8.0	8.4	6.3
1973	1.0	.9	-3.1	3.7	3.7	-1.4	16.0	15.5	12.7
1974	-2.6	-5.3	-10.4	1.5	1.4	-6.6	23.1	22.2	19.7
1975	11.0	9.1	3.7	5.0	5.0	-2.1	18.2	17.7	15.3
1976	-5.9	-9.4	-14.7	9.9	9.9	2.4	17.0	16.7	13.8
1977	-26.6	-31.1	-36.4	17.3	17.3	9.7	19.5	19.7	16.5
1978	-28.5	-34.1	-39.6	24.7	25.7	18.3	23.9	25.1	20.3

Note: For the United States, exports are valued fas and imports are valued as shown. For Japan and Germany, exports are valued fob and imports are valued as shown.

Source: For Census Statistics, Department of Commerce, International Economic Indicators, June 1979, p. 46. For BOP Statistics, IMF, International Financial Statistics, 1970-77 statistics from Jan. 1978; 1978 statistics from Jan. 1979.

What measures should be the basis for policy--the balance on merchandise trade, the balance on goods and services the balance on current account?

In the foregoing discussion we have pointed out the various ways in which trade figures are published. For policy decisions, which measure is most appropriate, the balance on merchandise trade, the balance on goods and services, or the balance on current account? Furthermore, each of these measures can be considered globally or bilaterally with quite different results.

Conceptually, the balance on merchandise trade is self-explanatory. "Goods and services," in addition to those integral accompaniments to the movements of goods --stevedoring, shipping and insurance--includes passenger transportation (airlines and other), tourism, dividend payments and payment for patent royalties and licensing fees. The distinction between the "goods and services" account and the "current account" is that the latter includes unilateral official and personal transfers such as government-to-government grants, social security payments sent abroad and private remittances. 1/

The measure chosen may depend upon the policymaker's primary concern in examining the issue--balance of payments, employment, national security--or some other factor. If the concern is employment, one might think that the merchandise trade balance should be used, but this assumes that "services" are less employment-creating than the production of goods. While a portion of "services" is less employment-creating, other types of services such as tourism, for example, may be quite as employment-creating as manufacturing, if not more so. The problem with "services" is that it embraces such a miscellany of items. However, the category, "goods and services" is commonly used in trade statistics.

Generally, in assessing a nation's "world economic citizenship," economists use the current account as their measure, and they use it on a global basis. On a global current account basis, the United States and Japan look quite different than they do on the trade account though not so different as to change the large deficit and large

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1/For amplification of these terms, see IMF, Balance of Payments Manual, Fourth Edition, 1977.

surplus positions. The current account position of the two countries, with Germany added for comparison, is shown in Table 3.

An explanation is required for the extraordinary discrep- discrepancy in the U.S. "old series" and "new series" figures. The IMF has for some time been pressing to have reinvested earnings of incorporated foreign affiliates included in the current account calculation. The United States adopted the IMF methodology June 1978, and the "new series" figures reflect this change.

Table 3

Global Balance on Current Account, United States, Japan, and Germany, 1973-78

	United States		Japan	Germany
	New series	Old series		
	(billions)			
1973	$ 6.9	$ -0.4	$ -0.1	$ 4.3
1974	1.7	-5.0	-4.7	9.8
1975	18.4	11.6	-0.7	3.5
1976	4.3	-1.4	3.7	3.4
1977	-15.3	-20.2	10.9	4.2
1978	-16.0	-24.6	16.6	8.5

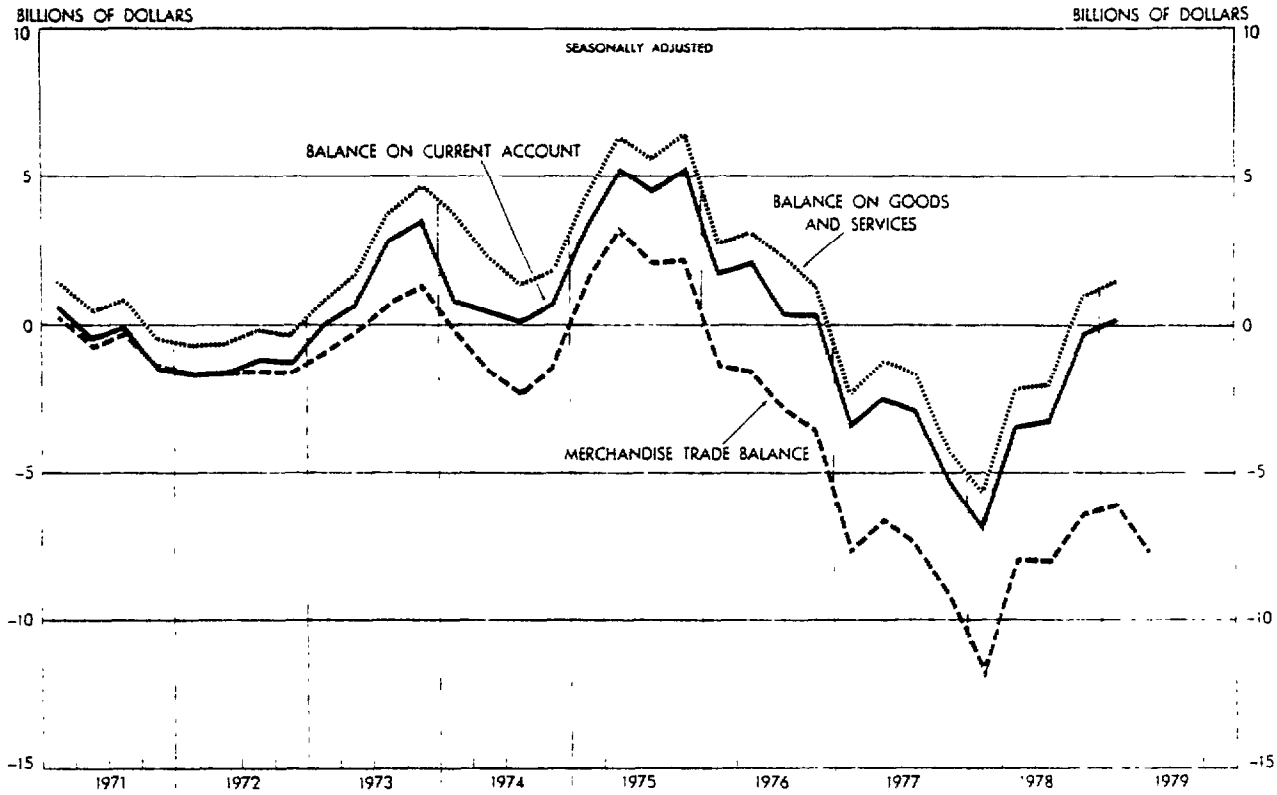
Source: Department of Commerce, International Economic Indicators, June 1979, p. 75. The "old series" statistics from Dec. 1977 issue. Figures for 1978 were computed from BOP statistics.

When the statistics of Table 3, the current account, are compared to those of Table 2, the trade balance, it will be seen that there are major differences. A policymaker would be much less disturbed by the state of the American economy if noting Table 3 rather than Table 2. For 1978, the trade deficit was $28.5 billion (fas valuation) whereas the current account deficit by the "new series" was $16.0 billion. Similarly, Japan's situation changes substantially. Instead of a 1978 trade surplus of $24 billion (fob valuation), the current account surplus is $16.6 billion. The American economy is in a strong surplus position on services; the Japanese economy is in significant deficit.

Chart 2 contrasts the global position of the United States by the three measures, merchandise trade balance (BOP), goods and services, and current account, 1971-79.

CHART 2

U.S. GLOBAL TRANSACTIONS BY THREE MEASURES, 1971-79



SOURCE: COUNCIL OF ECONOMIC ADVISORS, ECONOMIC INDICATORS, AUGUST 1979

RELATIVE IMPORT DEPENDENCY

Relative import dependency for major agricultural and raw material commodities for the United States, Japan and Germany is shown in Table 4.

Table 4

Import Dependence of Japan, United States, and Germany on Selected Natural Resources, 1976
(percent)

	Japan	United States	Germany
Beef	23.4	4.8	14.7
Pork	12.4	.2	8.8
Wheat	96.3	.1	24.1
Corn	99.9	0	97.0
Soybeans	97.0	0	100.0
Cotton	100.0	1.3	100.0
Wool	100.0	28.6	100.0
Logs	66.5	.2	10.0
Iron Ore	99.4	36.5	95.4
Copper	93.3	24.6	99.1
Lead	66.0	12.0	85.4
Zinc	67.8	24.4	84.2
Bauxite	100.0	87.2	100.0
Tin	99.8	100.0	88.5
Nickel	99.3	100.0	99.1
Coal	77.6	.2	3.5
Crude oil	99.7	39.4	95.0
Natural Gas	72.3	4.6	59.6

Source: For agriculture, FAO Production Yearbook, 1977; FAO Trade Yearbook, 1977. For minerals, for Japan and Germany, U.S. Bureau of Mines, Minerals Yearbook, 1976; for the United States, Mineral Commodity Summaries, 1979.

While Germany is often considered as "resource poor" as Japan, Table 4 shows that, in the critical energy area, Germany is in a much stronger position. Although both countries are almost totally dependent on the world for oil, Germany was virtually able to meet its own coal needs while Japan in 1976 was able to meet only about one-quarter of its requirements. Similarly, in natural gas, Germany is seen to be more self-sufficient than Japan. In logs, Japan has a far higher import dependence than Germany though in iron ore there is little difference between the two.

Many times, Japanese defend their low proportion of manufactured imports by noting their paucity of raw materials and hence their need to import them in large quantities. While Table 4 makes clear that Japan has exceptional import dependency, the difference in import dependency between Japan and Germany is not sufficient to explain the difference in the proportion of manufactured imports shown in Table 5.

A MITI spokesman in a recent speech in Washington claimed that a new pattern is emerging. He stated on June 6, 1979, that "from last summer until now, the level of manufactured imports is 40-60 percent higher than that achieved a year ago." Table 5 makes it clear that there is much room for improvement.

Table 5

Selected Industrialized Countries' Global Imports a/ of Manufactures b/ 1977

	Total imports	Imports of manufactures	Share
	(billions)		(percentage)
United States	$147.8	$76.6	51.8
Japan	70.6	14.7	20.8
Germany	100.7	57.4	57.0
Canada	39.5	30.4	77.0
France	70.3	40.7	57.9
United Kingdom	63.7	37.8	59.3
Italy	46.7	21.0	45.0

a/Imports are valued cif except in the case of the United States where they are valued fas and Canada where they are valued fob.

b/Manufactures refer to chemicals, machinery, transport equipment, and other manufactures except mineral fuel products, processed food, fats, oils, firearms of war and ammunition.

Source: For total imports, United Nations, Yearbook of International Trade Statistics 1977; for imports of manufactures, Department of Commerce, International Economic Indicators, March 1979, table 44. Percentage computed.

Table 6 provides a detailed breakdown of the U.S.-Japan bilateral trade for 1978 and compares it to U.S. global trade and to U.S.-Germany bilateral trade. As will be seen, U.S. trade with Japan has certain unusual qualities. First, Japan is a disproportionately important market for U.S. agricultural products; 35 percent of our exports to Japan are agricultural products in contrast to 21 percent to the world. Conversely, on imports from Japan, it will be noted that 99.6 percent are "nonagricultural," while the percentage figure from the world is 91.3 percent.

Table 6

Composition of U.S.-Japanese Bilateral Trade Compared to U.S.-World Trade and U.S.-Germany Bilateral Trade, 1978

	Breakdown of U.S. exports to Japan compared to U.S. exports to the world and to Germany			Breakdown of U.S. imports from Japan compared with U.S. imports from the world and from Germany		
	Japan	World	Germany	Japan	World	Germany
	(percent)					
Agricultural commodities	35.0	20.8	22.1	0.4	8.7	3.1
Nonagricultural commodities	65.0	79.2	77.9	99.6	91.3	96.9
Totals	100.0	100.0	100.0	100.0	100.0	100.0
Food and live animals	23.6	13.0	12.3	1.1	7.9	1.4
Beverages and tobacco	2.1	1.6	1.7	0.0	1.3	1.4
Crude materials except fuels, inedible	28.9	11.0	13.8	0.2	5.4	0.6
Mineral Fuels	6.4	2.7	1.3	0.1	24.5	3.3
Oils and fats—animal and vegetable	0.5	1.1	0.6	0.0	0.3	0.0
Chemicals	8.7	8.9	8.4	2.3	3.7	8.0
Manufactured goods classified chiefly by materials	4.8	8.8	7.6	19.6	15.8	15.9
Machinery and transport equipment	17.5	42.0	38.8	65.6	27.7	60.1
Miscellaneous manufacturers	6.6	7.2	10.2	10.4	11.1	7.5
Commodities and transactions not classified elsewhere	0.6	3.6	4.1	0.7	2.3	1.9
Totals (rounded)	100.0	100.0	100.0	100.0	100.0	100.0

Source: Computed from Department of Commerce, Highlights of U.S. Export and Import Trade, Dec. 1978, tables E-6 and I-10.

On the export side, the table makes clear that U.S. chemical exports to Japan are comparable to U.S. chemical exports to the world and to Germany. Where the major export difference occurs is in the low proportion of U.S. exports to Japan in machinery and transport equipment. Correlatively, on the import side, the huge difference in the U.S. pattern of trade with Japan and the world--though not with Germany--is the immense proportion that occurs in machinery and transport equipment.

TRENDS IN THE COMPOSITION OF U.S. AND JAPANESE TRADE

Table 7 provides a time dimension on the composition of global and bilateral imports and exports for the two countries. Because in the case of global imports, the OPEC price hike distorts the trends in primary goods, it is helpful to focus attention on the 1956-72 period. In this time period, both countries relatively reduced their global imports of primary goods. Between 1956 and 1972, the U.S. proportion of imports in agricultural and crude materials declined from 60 percent of total imports to 30 percent. For Japan such imports declined from 84 percent to 70 percent. Correlatively, both countries increased their proportion of imports of manufactured goods. For the United States, manufactures increased as a proportion of global imports from 40 percent of the total to 70 percent. For Japan, manufactures as a percentage of global imports increased from 16 percent to 30 percent. It will be noted, however, in the bilateral trade that the U.S. share of manufactured imports from Japan rose from 9 percent in 1956 to 23 percent in 1972 to 29 percent in 1978, whereas for Japan the share of manufactured imports from the United States declined from 54 percent in 1956 to 39 percent in 1972 to 29 percent in 1978.

As can be seen in Table 7, the broad breakdown of U.S global exports changed little between 1956 and 1978. The bilateral proportions are the more interesting part of the export story. Japan rose as a market for U.S. primary goods from 10 percent of such exports in 1956 to 19 percent in 1978. As a market for U.S. manufactured goods, Japan increased its share from 2 percent to 6 percent though given the size of the Japanese economy the 1978 share was still extremely small. On the other hand, for Japan, the position of the United States as an export market for Japanese manufactured goods increased from 20 percent of its total exports of manufactures in 1956 to 32 percent in 1970 and then decreased to 26 percent in 1978.

Table 7

Trends in U.S. and Japanese Trade in Primary Goods and Manufactures, 1956-78: Share of These Categories in Total Imports and Exports and the Proportion of This Share Arising out of the Bilateral Trade a/

Year	United States				Japan			
	Primary goods		Manufactured goods		Primary goods		Manufactured goods	
	Total	Japan	Total	Japan	Total	United States	Total	United States
				Imports (percent)				
1956	60	2	40	9	84	29	16	54
1960	54	2	46	15	78	30	22	52
1964	48	2	52	17	74	26	28	39
1968	34	1	66	18	73	23	27	38
1970	32	2	68	21	70	24	30	41
1972	30	2	70	23	70	19	30	39
1974	45	1	55	21	76	16	24	33
1976	46	.6	54	23	78	14	22	32
1978	45	.5	55	29	73	15	27	29
				Exports (percent)				
1956	35	10	65	2	12	36	88	20
1960	35	13	65	3	11	29	89	27
1964	34	14	66	4	8	26	92	28
1968	28	18	72	5	5	22	95	32
1970	28	22	72	6	5	17	95	32
1972	31	17	69	6	3	28	97	31
1974	35	18	65	3	3	18	97	23
1976	33	17	67	5	2	18	97	23
1978	33	19	67	6	2	15	98	26

a/Primary goods are SITC commodity categories 0-4; manufactured goods, SITC commodity categories 5-9.

Source: For 1956-70, computed from pertinent year volumes of U.N. Commodity Trade Statistics. For 1972-78: for the United States, computed from pertinent December issues of Department of Commerce Highlights of U.S. Export and Import Trade; for Japan, computed from pertinent December issues of Ministry of Finance, The Summary Report, Trade of Japan.

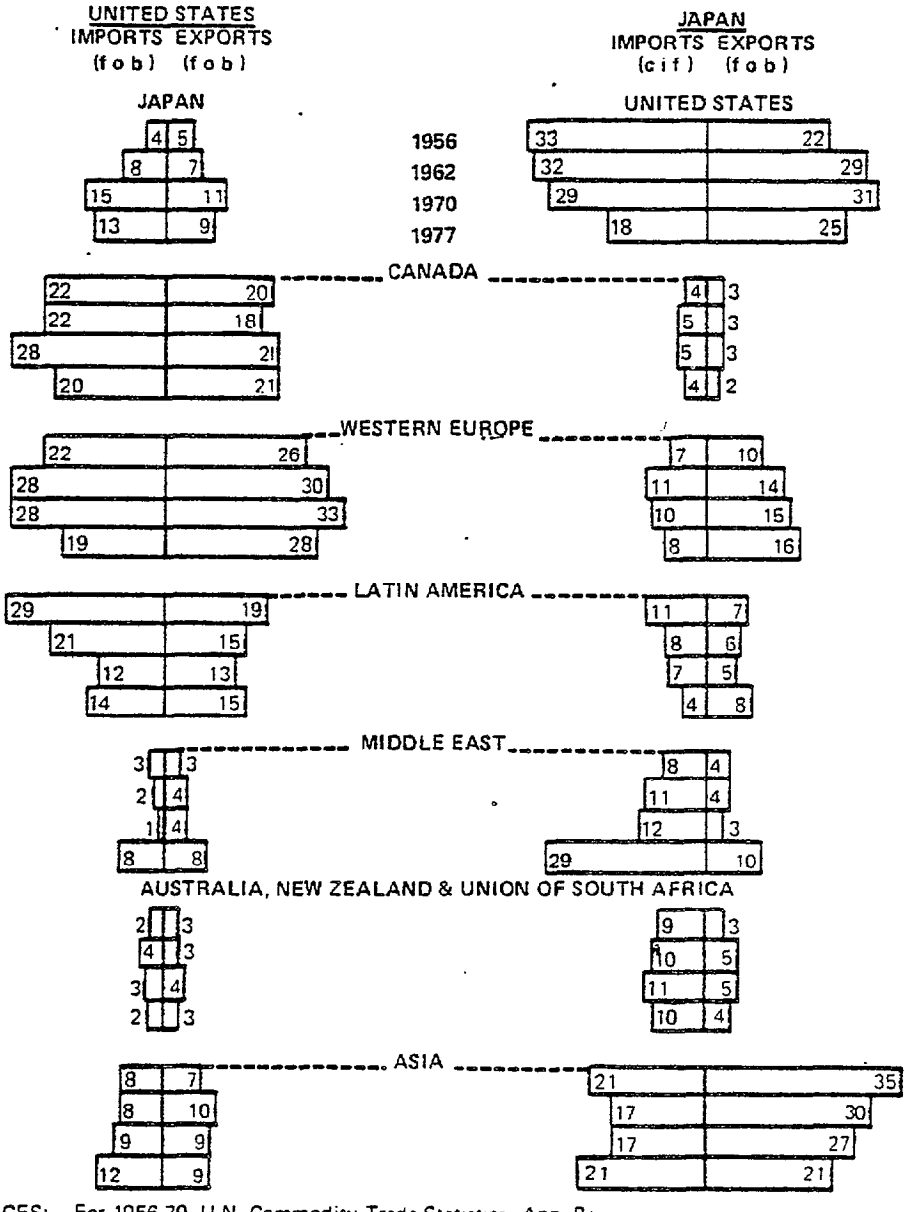
GEOGRAPHIC DISTRIBUTION OF TRADE

Although Japan is an economic superpower, proportionately it is a much less important market for the United States than is the United States for Japan. In 1977, the United States exported 9 percent of its total exports to Japan, while it imported 13 percent of its total imports from that country. For Japan, on the other hand, the United States in that year provided a market for 25 percent of its exports and 18 percent of its imports. This imbalance together with the world pattern of trade for each country will be seen in Chart 3 as will the changes that have occurred between 1956 and 1977. It will be noted that from 1970 to 1977 the relative importance of the bilateral trade has decreased for both partners. Absolutely, of course, it has greatly increased.

CHART 3

GEOGRAPHIC DISTRIBUTION OF U.S. AND JAPANESE IMPORTS AND EXPORTS 1956, 1962, 1970 and 1977

(In percent)



SOURCES: For 1956-70, U N Commodity Trade Statistics, App. B;
for 1977, U.N Yearbook of International Trade Statistics 1977, Vol. 1
For geographical definitions, see sources.

CHAPTER 2

COMPUTERS

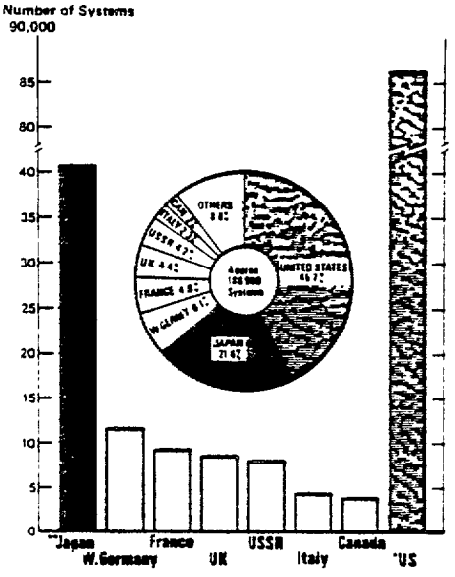
Although Japan was a latecomer to computer manufacture, its industry, with strong government support, has developed with extraordinary speed and strength. Today, second only to the United States, its production far exceeds the output of European countries. While the United States still exports more computers to Japan than it imports from it and while American companies, IBM in particular, hold a critical role in computer production in Japan, the speed and scale of Japan's computer growth have led a good many observers to wonder whether the U.S. dominance will continue. The Japanese computer industry is not only producing computer hardware considered comparable to that of the U.S. industry, but it is challenging U.S. industry for production of the next higher level of computer sophistication, or fourth generation. In software, Japan is not regarded as equal to the United States. Not surprisingly, that is where Japanese Government assistance is now focused.

SIZE OF WORLD MARKET AND PRINCIPAL COMPANIES

In terms of absolute worldwide production and usage, Japan now ranks after the United States, though, as will be seen in Chart 1 showing comparative usage, there is a large gap between the first and second position. However, use of computers in Japan is increasing dramatically. Also, as can be seen when comparing computer usage and gross domestic product (GDP), although there is a large gap between the number of systems in the United States and Japan, on a relative GDP basis Japan's usage is greater. Whereas Japan's GDP in 1976 was roughly one-third that of the United States, Japan had almost half the number of computer installations.

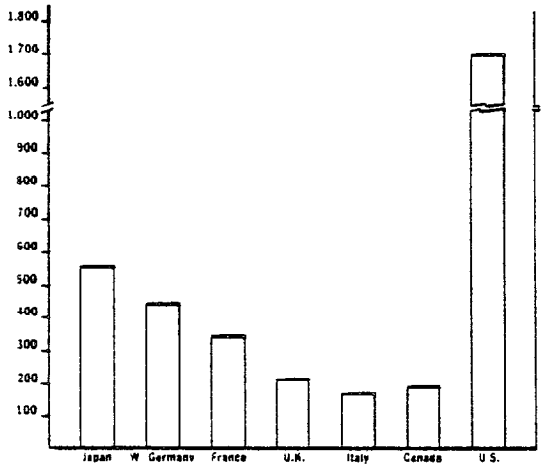
CHART 1

GENERAL PURPOSE COMPUTER INSTALLATIONS BY COUNTRY



Source World Business Weekly, Financial Times of London Vol 2, No. 10, March 12-18, 1979 p. 30 where it is shown to be taken from *International Data Com (Dec 76) **MITI (March 77) and others from International Data Com (Dec 74)

COMPARISON OF SELECTED COUNTRIES' GROSS DOMESTIC PRODUCT, 1976 (billions of dollars)



Source: OECD Economic Surveys, Japan, July 1978.

We present two different ways of noting the dominance of American companies in the world market--a listing of world majors by their 1977 processing revenue in Table 1, and in Chart 2 the structure of the industry in the major countries.

Table 1

Worldwide Data Processing Revenue of Computer Companies, 1977

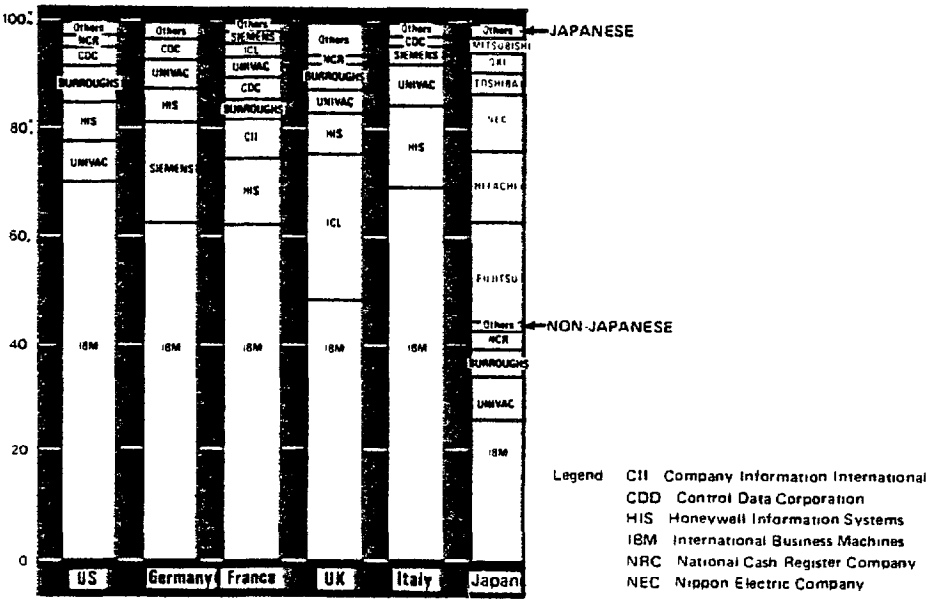
Country and company	(millions)
United States	
IBM	$14,765
Burroughs	1,844
NCR	1,574
Control Data	1,513
Sperry Univac	1,472
Digital Equipment	1,059
Honeywell	1,037
Japan	
Fujitsu	856
Hitachi	720
Nippon Electric Company	400
France	
Computer Industry International	765
West Germany	
Nixdorf	384
Siemans	550
Great Britain	
International Computers Ltd.	233

Source: Datamation, June, 1978, pp. 86-87.

In Chart 2 we show industrial structure in selected countries.

CHART 2

COMPUTER MARKET SHARES
BASED ON VALUE OF SYSTEMS IN USE, 1976



Source: World Business Weekly, Financial Times of London, Vol..2, No. 10, March 12-18, 1979, p.30.
The bar representing Japan was taken from another chart in the same article.

In the 1972 Computer White paper, the Japanese Government described the situation this way: 1/

> "The structure of the computer industry is, on a worldwide basis, overwhelmingly dominated by American firms as is seen from the fact that they control 94% of the world's market. IBM alone controls 70% of the U.S. market and 66% of the world market and thus has unrivaled hegemony. No other firm has attained a size one-tenth that of IBM [by 1977, it will be noted that three American companies had] and there results a Gulliver-type economic structure consisting of one giant and a number of Lilliputians. As the Japanese computer industry controls a mere 2% of the world's markets, the influence of IBM and other large foreign manufacturers is very great."

1/Cited by Merton J. Peck and Shuji Tamura in "Technology" in Asia's New Giant, Hugh Patrick and Henry Rosovsky, eds., The Brookings Institution, 1976, pp. 571-572.

JAPAN'S COMPUTER TRADE

As shown in Table 2, domestic production accounts for most of Japan's computer consumption. (Consumption equals production plus imports minus exports.) Table 2 is distinguished from other tables in the chapter by not including parts, for which we were unable to obtain production data. The scale of the difference in trade, whether parts are included or not, is to be seen in the 1978 data. When parts are excluded, Japan's exports were $331 million; when as in Table 4 parts are included, Japan's exports were $497.4 million, an increase of approximately 50 percent. Because the yen/dollar alignment changed so significantly in 1977 and 1978, we provide the data of Tables 2, 3 and 4 in yen as tables 5, 6 and 7 at the end of the chapter.

Table 2

Japan's Market for
Computers and Related Equipment
(excluding parts)

	1974	1975	1976	1977	1978
			(millions)		
Production in Japan	$2,020.6	$1,823.6	$2,087.0	$2,678.5	$4,324.6
Exports	83.2	107.7	132.5	152.7	331.1
Imports	398.6	323.9	319.5	408.1	391.3
Consumption	2,336.0	2,039.8	2,274.0	2,933.9	4,384.8
Production as % of consumption	86.5%	89.4%	91.8%	91.3%	98.6%

Note: Yen/dollar conversions made from International Financial Statistics, International Monetary Fund, Japan table, line af.

Source: The computer production figures, 1974-76, are from the Computer White Paper, 1977 Edition, published by the Japan Information Processing Center, p. 14. The production figure for 1977 is from the Current State and Progress of The Computer Industry in Japan, 1978, Japan Electronics Industry Association, p.3. The 1978 production figure was taken from an article appearing in Electronic News, April 24, 1978. The import and export fiqures are from year-end volumes of Japan Exports and Imports-Commodity by Country, published by the Japan Tariff Association.

Table 2 shows the dramatic changes taking place in Japan's computer trade. In 1974 exports were roughly one-fifth imports. While imports remained relatively constant, however, exports grew fourfold almost equaling imports by 1978. It should be borne in mind, however, that a significant amount of the domestic production is supplied by foreign firms manufacturing locally. Foreign firms' total share of the Japanese market is about 43 percent. 1/ Table 2 makes it clear that Japan is no longer dependent on imports of computers and related equipment. However, the desirable goal is two-way trade between the United States and Japan in their computer product specializations. 2/

In the bilateral trade, as seen in the following statistics the United States enjoys a strong surplus position but one which is declining.

Table 3

Bilateral Trade in Computers and Related Equipment
(including parts)

	1974	1975	1976	1977	1978
		(millions)			
U.S. Exports to Japan	$281.7	$214.1	$271.7	$346.2	$367.9
Japanese Exports to U.S.	16.7	33.5	99.7	96.9	218.1
Balance	265.0	180.6	172.0	249.3	149.8

Note: Yen/dollar conversion handled as in Table 2.
Source: Source cited in Table 2.

With a large share of Japanese production, a large world market share, and a surplus in the bilateral trade, the U.S. computer industry's position is easily a case of successful market penetration by U.S. firms. The Japanese Government, however, is taking substantial measures to

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1/World Business Weekly, Financial Times of London, Vol. 2, No. 10, March 12-18, 1979, p. 32.

2/For discussion of two-way trade within the same industry, see for example Raymond Vernon, Sovereignty at Bay, Basic Books 1971 and Louis T. Wells, Jr., ed., Product Life Cycle and International Trade, Harvard Business School, 1972.

accomplish its goal of liberating its market from what it calls foreign domination. The central question becomes whether Japan's attempt to challenge American firms presents a different situation. Private industry is not alone in its concern. President Ford in his International Economic Report of the President, January 1977 stated that Japan "is expected to become the chief and possibly only foreign competitor of the United States in all varieties of computers and related products by the mid-1980s."

Before taking up the development of Japan's computer industry, it will be helpful to clarify the usage of key terms. These definitions are from the "Vocabulary for Information Processing," published by the American National Standards Institute.

--Computer. A data processor that can perform substantial computation, including numerous arithmetic operations or logic operations, without intervention by a human operator during a run.

--Hardware. Physical equipment used in data processing as opposed to computer programs, procedures, rules, and associated documentation. Contrast with software.

--Peripheral equipment. In a data processing system, any equipment, distinct from the central processing unit, that may provide the system with outside communication or additional facilities.

--Software. Computer programs, procedures, rules, and possibly associated documentation concerned with the operation of a data processing system. Contrast with hardware.

BACKGROUND

In order to understand the present day structure of Japan's computer industry, it may be useful to have some knowledge of its earlier development. 1/ Japan, began computer manufacture in the latter half of the 1950s, about 10 years after the United States had produced its first computer.

1/Much of the information in this section was taken from the appendix chapter on computers in U.S. Department of Commerce, Japan, the Government-Business Relationship, February 1972, pp. 78-101.

Therefore, Japan suffered from a large technology gap. The need for protection from foreign industry and the need to foster domestic technology has led to a strong role by the MITI. The Japanese Government's role in the computer industry has been described as the "most extensive" in a particular industry. 1/

In 1955, MITI organized a Research Committee on the computer composed of representatives from government, private industry, and university research scientists. The structure of the industry today reflects in large part the recommendations of this group, i.e.

--R&D activities should be encouraged,
--foreign technology should be introduced through technical assistance and patent licenses, and
--imports of computers should be limited.

In 1957, the Electronics Industry Development Provisional Act was passed which, in large measure, addressed itself to accomplishing the above objectives. The Act provided for the government to formulate industry policy objectives; for a Council to insure government and industry communication; and for establishment of channels for financial assistance to hardware producers. Finally, it empowered MITI to exempt selectively any portion of the industry from the Anti-Monopoly Law. The Act was susperseded in 1978 by the Special Measures Law Concerning Promotion of Specialized Machine and Information Industry, which continues the provisions of the earlier Act with revisions to recognize technological advances in the industry.

Japanese manufacturers - The Japanese industry consists of six major producers: Fujitsu, Hitachi, NEC, Toshiba, Oki, and Mitsubishi. All of these firms were among the originators of Japan's computer industry and, as of March 1976, accounted for 97 percent of the 56.6 percent share of the Japanese market held by Japanese firms. Fujitsu is the largest of the Japanese manufacturers with a 19 percent market share, second only to IBM. It is also the only Japanese producer whose major source of revenue is derived from computer production. 2/

1/Peck and Tamura, op. cit. p. 571.

2/For share of market, Chart 2; for ratio of computer production to company's total production, "Japan Market Information Report, Electronic Computers, Industry/Market Outlook," prepared by the American Embassy, Tokyo, July 1977, p. 8.

Company	Share of Japanese computer market	Ratio of computer production to company's total production
	(percentage)	
Fujitsu	19.0	73
Oki	4.0	39
NEC	11.0	23
Hitachi	14.0	11
Toshiba	4.5	6
Mitsubishi	2.5	5
Others	1.5	-
	56.5	

Establishment of manufacturing facilities by foreign companies - All of Japan's major producers-Hitachi, NEC, Toshiba, Oki and Mitsubishi--have had (or currently have) licensing agreements with American firms. Foreign companies wishing to establish manufacturing in Japan first had to obtain approval of the government under the Foreign Investment Law of 1950. The price tag for entry into Japan in the computer field was Japanese companies' access to American technology. In 1960, IBM was permitted to engage in computer production in Japan with a 100 percent held subsidiary with foreign exchange remittance guarantees in exchange for entering into licensing agreements with 13 Japanese companies. In 1963, Sperry Rand formed a joint venture with Oki Electric Industry Company with Oki holding a 51 percent share. Within 3 years of IBM's licensing agreements, Japan's major manufacturers (except Fujitsu) had entered into licensing agreements with other major U.S. producers. Fujitsu now has a joint venture with Amdahl in which technology is exchanged.

JAPANESE AID TO ITS COMPUTER INDUSTRY

Early in the 1970s, Japan began liberalizing its restrictions on the import of computer investment and equipment. Import duties were lowered beginning in 1972 with the latest reduction being made in March 1978. At the MTN, further reductions were agreed upon which will be phased-in in equal steps over the next 8 years starting January 1, 1980.

Date	Reduction of import duties	
	Main units	Peripheral equipment
	(percentage)	
Prior to 1972	15.0	25.0
1972	13.5	22.5
1978	10.5	17.5
1987	4.9	3.7 - 6.0

From December 1975, because of the strength which the domestic manufacturers had been able to attain, MITI announced that computer main units would no longer be under quantitative restriction. It noted, however, that the government was resolved to keep a close watch on market trends to insure that the domestic market secured an appropriate share and, further, that the government would take measures to encourage the next generation of computers and secure sufficient rental funds for domestic machines. It is noteworthy that when quotas were dropped, MITI sent letters to the public sector, utilities and banks urging them to use domestic computers, noting that they were comparable to foreign models in performance.

In addition to quota and tariff protection, and control over foreign investment, the Japanese Government is providing direct assistance to the industry. Through these efforts Japanese computer manufacturers have been able to build computers that are considered competitive with the IBM 370 series computer, bringing Japan "up to speed" on what is considered to be the current state or third generation of computer hardware technology.

For research purposes, the industry was divided into three groups: Fujitsu-Hitachi, Nippon Electric (NEC)-Toshiba, and Mitsubishi-Oki with the government providing 50 percent of the expenses for developing computers competitive with IBM's machine. Aid was also extended to cover 50 percent of the expenses incurred by these companies and peripheral equipment manufacturers in developing peripheral equipment and terminal devices. Between April 1972 and March 1977, when the program was terminated, the Japanese Government had given $195.9 million to the above companies. 1/ Through administrative guidance, MITI is directing and shaping its computer industry by means of various subsidies and other aid and through the promotion of cooperative Japanese industry relationships.

In the following sections we describe some of the major forms of the Japanese Government's aid to its computer industry to help it become more competitive. We have not included aid given for specific applications such as the promotion of a medical information system and the development of automobile traffic control technology.

1/Yen/dollar conversion handled as in Table 2.

Hardware-Development and Marketing

Very Large Scale Integration Program (VLSI) - In an effort to compete with IBM's development of its Future System or fourth generation of computers, the Japanese Government has organized the VLSI program. In terms of hardware, this represents Japan's attempt to compete with IBM in terms of future technology rather than trying to catch up. This next generation will have a vast increase in memory storage and will compute at a speed approaching that of light. This is one of the major areas illustrating MITI's aid and guidance. Through this program, the Japanese Government subsidizes 50 percent of selected private companies' research and development on a 4-year program which began in 1976.

As a funnel for its funds, MITI has set up a VLSI organization composed of five selected producers. These producers are divided into two research organizations--Fujitsu, Hitachi, and Mitsubishi compose one group while Toshiba and NEC compose the other. These five companies account for approximately 90 percent of the sales of Japanese computer manufacturers. The total amount budgeted for the 4-year subsidy period (1976-79) totals $117.6 million. 1/

Pattern recognition system - In a program which began in 1971, MITI's Electrotechnical Laboratory is working with Toshiba, Fujitsu, NEC, Hitachi and Mitsubishi to develop a fifth generation of computers. The program which is 100 percent government-financed with a budget of $94.3 million 1/ is slated for completion in 1981. The objective of the program is to develop a new generation system capable of imputing, recognizing and processing "pattern information" such as Japanese characters, drawings, shapes of objects, color, and even human voices.

Japan Electronic Computer Co., Ltd (JECC) - To facilitate the marketing of selected Japanese companies' hardware, MITI established the JECC in 1961 as a computer-leasing company composed of Fujitsu, Hitachi, NEC, Toshiba, Oki and Mitsubishi. It exists for the purpose of buying and leasing these companies' computers. This constitutes a major outlet available only to the above firms purchasing over half of their production. About half of the funds for

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1/Yen/dollar conversions after 1978 are computed using the 1978 exchange rate, U.S. $1 = 210.47 yen. See note, Table 2.

the operation of JECC are obtained through the government-owned Japan Development Bank (JDB) at rates which undercut those in the market. Between fiscal years 1974 and 1977, the Japan Development Bank made available over $643 million to the JECC to finance its leasing operations. 1/ The JDB has been lending JECC the rental funds required since JECC's establishment in 1961.

A significant feature of JECC is the trade-in loss reserve. Under this system, the manufacturer must repurchase computers returned to JECC by the end-user at a value determined by JECC. As a relief against losses incurred upon repurchase, the manufacturer is permitted to reserve against taxable income 20 percent of its sales to JECC. After 5 years, the reserve must be placed back into income.

Hardware tax incentives - In addition to the tax benefits described under JECC's leasing program, the Japanese government provides various other tax incentives for producers and for purchasers of computers. These fall primarily under the provisions of the Basic Electronics Industry Development Law established in 1957 and reenacted every 7 years. Under this legislation, facilities which are used in the production of newly developed technologies may be depreciated in the first year by an amount equal to one-third of the initial book value of the facilities, in addition to normal depreciation. In order to qualify for such benefits, a company must first apply to MITI which, in determining approval, takes into consideration the product's international competitive position.

In addition to the Japanese Government's promotion of leasing arrangements through the JECC, the government also provides tax incentives to end-users to promote the purchase of computers. There are various advantages and disadvantages in both the leasing or purchasing of equipment. However, decisions regarding the lease or purchase of computers are managerial decisions based on a number of factors including:

--the rate at which the equipment will become obsolete;

--the changing needs and responsibilities of the purchasing organization;

1/Yen/dollar conversion handled as in Table 2.

--the ultimate pay-out of the equipment; and

--the amount of capital investment required for the purchase.

A user may decide to purchase rather than lease the equipment because the government's tax incentive program provides that an end-user who purchases a computer of a more sophisticated nature gets a special 20 percent depreciation allowance the first year, in addition to normal depreciation allowances. According to the 1976 Computer White Paper, such incentives, in addition to other depreciation allowances, permit the purchaser to effectively write-off just over 50 percent of the acquisition cost in the first year.

Software - development and marketing - In conjunction with the government's and industry's effort to develop fourth generation hardware under the VLSI program, MITI also has extended subsidies to develop software and new peripherals and terminals to be incorporated with this hardware. Whereas the R&D subsidies for the VLSI program are supposed to conclude in FY 1979 (ending March 31, 1980), the subsidies for the development of operating systems began in FY 1979 and are projected to last for 5 years. Again, under MITI auspices, the subsidy budget for this program is $332.6 million. 1/

Information - Technology Promotion Agency (IPA) - Established by the "Law Concerning the Information-Technology Agency," on October 1, 1970, the IPA was created to

--interest private industry in developing a software industry in areas which have a high degree of public interest;

--purchase any software package having a high degree of public interest (with accompanying copyright); and

--guarantee loans for businesses engaged in the development of software packages.

1/Conversions from yen to dollars after 1978, are computed using the 1978 exchange rate, U.S. $1 = 210.47 yen. See note, Table 2.

The government invested $2.92 million, a 50 percent share, along with six computer manufacturers, in the creation of IPA and contributed the following R&D grants: 1/

(millions)

1970	$ 0.8
1971	1.1
1972	1.2
1973	2.9
1974	3.4
1975	4.5
1976	5.8
1977	7.6

As an incentive to register software packages with the IPA, private industry is offered a tax incentive under which 50 percent of a company's software profits are deferred for taxation purposes for 4 years.

Upon ownership of software packages, IPA markets them to private industry for projects having a high degree of "public interest." When asked what constituted "public interest," the MITI and IPA officials with whom we talked were not responsive.

Software tax incentives - Another incentive for software development is the government's program warranty system. Under this program, 2 percent of a firm's total program sales may be set aside (for tax purposes) to provide a reserve for these modifications.

The government also extends tax credits for expenses incurred in training information processing software engineers. This credit, established in 1973, applies to the increase in training expenses in 1 year over the preceding year. An amount equal to 20 percent of increased training expenses can be used as a credit against taxes due (to a maximum amount of 10 percent of taxes due).

Special depreciation for users

Prior to April 1978, under the Machinery and Electronics Industry Law, there was a special 20 percent first-year depreciation available to users who purchased computers that were employed in a manner to promote sophistication in data processing. This depreciation applied to hardware. In July 1978, the Machinery and Electronics Industry Law

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1/Yen/dollar conversion handled as in Table 2.

was consolidated into the Specialized Machine and Information Industry Promotion Law and the software industry was added as one to be encouraged. As of April 1979, special first-year depreciation has been provided for users of on-line complex equipment where computers are connected with intelligent terminals. In this case, the depreciation is applicable to the whole system, hardware and software. Both under the earlier provisions and under the new legislation, users are eligible for the depreciation regardless of whether the equipment is manufactured in Japan by Japanese companies, by foreign companies, or imported.

Japan-U.S. R&D aid contrasted

The amounts of aid which the Japanese Government gives to its industry for research and development are published in a number of sources. However, we were unable to obtain similar information for the United States mainly because R&D funds given to American computer companies are often only one element in a government project which may cover many industries. In our discussions with Japanese Government officials, they were quick to point out that the United States has contributed vast amounts of aid to its computer manufacturers through its military and space programs. In response, one U.S. computer manufacturing representative noted that whereas Japanese manufacturers receive aid, often in the form of direct subsidies, for commercial purposes, U.S. manufacturers receive aid as a by-product of government projects designed primarily for governmental end-uses.

JAPAN'S MOVE TOWARD WORLD EXPORTS

When compared to total production, Japanese computer exports are relatively small, 8 percent in 1978. (See Table 2.) Below we show Japan's exports to the world and to the United States.

Table 4
Japan's Exports of Computers and Related Equipment
(including parts)

	1974	1975	1976	1977	1978
		(millions)			
To World	$102.9	$144.4	$203.3	$248.0	$497.4
To U.S.	16.7	33.5	99.7	96.9	218.1
U.S. share	16%	23%	49%	39%	44%

Source: Source cited in Table 2.

A significant amount of Japan's exports are attributable to IBM Japan. For example, in 1977, IBM Japan computer exports were approximately $153 million, 62 percent of total exports. The following year, however, IBM's share of the export market fell considerably. IBM Japan's 1978 sales were $215.7 million, accounting for 43 percent of the $497.4 of Japan's computer export sales. While we do not have the export sales data for the other computer firms in Japan, it appears that a good portion of those exports were from Japanese firms exporting through U.S. marketing channels.

Although exports are minor, Japanese manufacturers are moving toward establishing overseas marketing channels for computers, mostly in the United States. While Japan's computer manufacturers have formed some business relationships with foreign firms other than American, most of Japan's marketing channels, even in Europe, are through U.S. companies.

Japanese marketing channels in the United States - In the United States (and Canada), Fujitsu sells large and medium scale computers through a joint venture (29 percent equity) with Amdahl, an American producer. Hitachi and NEC sell through American firms as well as through their own sales subsidiaries in the United States. Also, Fujitsu separately and in a joint venture with Hitachi, has obtained contracts with an American firm, Memorex, to produce magnetic tape drive equipment. In 1977, Hitachi and Itel, an American firm, concluded an agreement whereby Itel will market Hitachi's large computers on an original equipment manufacturer's (OEM) basis, i.e., under Itel's brand name. One year earlier, Hitachi established its own sales subsidiary in California. In addition, Hitachi contracted with National Cash Register, in the fall of 1976, to supply NCR with disc storage systems. According to an article in the Japan Economic Journal, May 22, 1979, sales of computers in foreign markets through American firms contributed significantly to the high level of sales by firms such as Fujitsu and Hitachi during the 1978 Japanese fiscal year.

NEC supplies machines and components to Honeywell Information Systems (HIS) outside the United States and, in 1977, established a separate wholly-owned sales subsidiary in Massachusetts. In 1976, Honeywell also concluded an OEM contract with Toshiba for the supply of consoles for large computers. In 1978, Mitsubishi Electric Corporation established its own marketing facility in the United States and will sell under the name MELCOM.

Japanese international marketing channels (excluding U.S.) - The ties that Japanese and American companies have established are not confined to the American market. For example, in 1976, Fujitsu and Amdahl formed a joint venture, Amdahl International. The European market will be covered by this company's subsidiary, Amdahl Deutschland, located in Munich, and through a manufacturing facility in Spain. In addition, Fujitsu has purchased a 20 percent equity share in a Canadian firm and, in the spring of 1978, signed a marketing agreement with Siemens, a German manufacturer who will sell Fujitsu's large-scale computers under the Siemens name.

In addition to their U.S. efforts, NEC and Honeywell Information Systems have established marketing arrangements in Australia and Italy. HIS is marketing NEC's office computers under a 5-year contract in Australia and HIS Italy sells NEC magnetic disc devices in Europe. In 1977, NEC also established its own subsidiary in Singapore to sell office computers throughout Southeast Asia.

Hitachi's link with Itel extends beyond the United States to include all of North and South America, Western Europe, and Australia for the sale of large computers. There are also indications that Hitachi has separately been promoting computers to Russia but, because of COCOM restrictions, has not yet concluded any sales.

Various news reports indicate that some of Japan's major computer companies have concluded sales or are awaiting COCOM approval for sales to the People's Republic of China. Reports indicate that Hitachi has already delivered three medium-scale to large-scale computers to China and has an additional order for eleven medium-scale computers. It is believed that Hitachi's main competitor for the latter order was IBM. In addition, it is reported that Fujitsu has shipped two large-scale systems and NEC has recently received COCOM approval to ship one medium-scale and one large-scale system to China.

CONCLUSION

The speed and strength with which Japan's computer industry has grown has led both the U.S. Government and private industry to express concern as to the likelihood that Japan will eventually become a formidable competitor. At the present time the United States continues to dominate the computer field worldwide. IBM alone accounts for some 60 percent of the world market and there are a number of other American companies producing abroad. With the aid of their government, Japan's major computer producers are manufacturing computer hardware which, according to some sources, is competitive with IBM's current computer generation; they are now devoting

themselves to the race to develop the "fourth generation". In terms of software, it is generally believed that the United States continues to enjoy a considerable lead. This area also, however, is now receiving resources and attention from the Japanese government and private industry.

In terms of bilateral trade, the United States continues to enjoy a surplus. Most of Japan's consumption of American computers and related equipment, however, is from U.S. firms producing in Japan. As indicated in Chart 2, although U.S. firms have a large share of the Japanese computer market, they do not have the dominance enjoyed in other industrialized country markets. Japan's exports to the United States and the rest of the world are relatively minor but are projected by MITI to grow at an annual rate of 30.4 percent. Japanese manufacturers are moving toward establishment of overseas marketing channels for computers, mostly in the United States. Japan's computer manufacturers have formed some business relationships with foreign firms other than American but most of Japan's marketing channels, even in Europe, are through U.S. companies.

Table 5

Japan's Market for
Computers and Related Equipment
(excluding parts)

	1974	1975	1976	1977	1978
	(billions of yen)				
Production in Japan	589.0	541.2	618.9	719.2	910.2
Exports	24.3	32.0	39.3	41.0	69.7
Imports	116.2	96.1	94.7	109.6	82.3
Apparent consumption	680.9	605.3	674.3	787.8	922.8
Production as % of consumption (minus exports)	86.5%	89.4%	91.8%	91.3%	98.6%

Table 6

Bilateral Trade in Computers and Related Equipment
(including parts)

	1974	1975	1976	1977	1978
	(billions of yen)				
U.S. exports to Japan	82.1	63.5	80.6	93.0	77.4
Japanese exports to U.S.	4.9	10.0	29.6	26.0	45.9
Balance	77.2	53.5	51.0	67.0	31.5

Table 7

Japan's Exports of Computers and Related Equipment
(including parts)

	1974	1975	1976	1977	1978
	(billions of yen)				
To World	30.0	42.9	60.3	66.6	104.7
To U.S.	4.9	10.0	29.6	26.0	45.9

Source: Source cited in Table 2.

CHAPTER 3

AUTOMOTIVE TRADE

INTRODUCTION

Although in the early postwar years, Japanese policy-makers argued vigorously as to whether a Japanese auto industry could compete in the international market, automotive products have become Japan's single largest export, accounting for $15.5 billion or 16 percent of its total exports in 1978. Currently, about one-half of Japan's vehicle production is intended for export with 40 percent of this export share going to the American market.

While Japan is a major exporter of automobiles, its imports of vehicles are minimal. In 1977, imports were only one percent of exports.

Table 1

Japanese Global Exports and Imports of Autos, Trucks & Buses, 1977

	Units	Total
Japanese exports:		
Cars	2,958,879	
Trucks	1,369,917	
Buses	24,021	
		4,352,817
Japanese imports:		
Cars	41,395	
Trucks	94	
Buses	1	
		41,490

Source: Japan Automotive Manufacturers Association, Inc., Motor Vehicle Statistics of Japan, 1978, pp. 14-17.

Until 1971, Japan's market was effectively closed to outsiders, both through imports and investment. The barriers have now largely come down, but an important market factor--size of car--continues greatly to affect U.S.-Japan bilateral trade. The strength of the Japanese automobile industry is in small cars, while the strength of the American industry is in large cars, with both countries exporting their strengths. For obvious reasons, Japan has enjoyed an immense opportunity in the American market--one which our producers have only recently seriously addressed--while we have only a thin, top slice of their market. In land-scarce Japan, where residential streets are narrow and

where overnight street parking is banned in urban areas, there is no way that large cars could be mass marketed even if oil prices were not escalating.

The American industry, now working hard to produce smaller cars, sees the trade challenge more in terms of reducing Japan's share of the U.S. market than in U.S. gains in the Japanese market. A spokesman for our case participant points out that in the American market, U.S. producers have an advantage over the Japanese who must pay transportation and insurance costs; in the Japanese market, we must pay the additional costs. Although American producers are now paying attention to the Japanese market, the case participant believes that, because of relative production costs, scale penetration is not possible and that any big swing will come from outcompeting the Japanese in the American market.

While the U.S. automotive market is five times as large as the Japanese market, Japanese car and truck exports to the United States are 45 times U.S. exports to Japan. In 1978, Japan exported $8.2 billion in automotive products to the United States while U.S. automotive exports to Japan amounted to $.2 billion, resulting in an automotive trade deficit of $8.0 billion. This U.S. deficit represented an increase of $2.7 billion over 1977.

Table 2

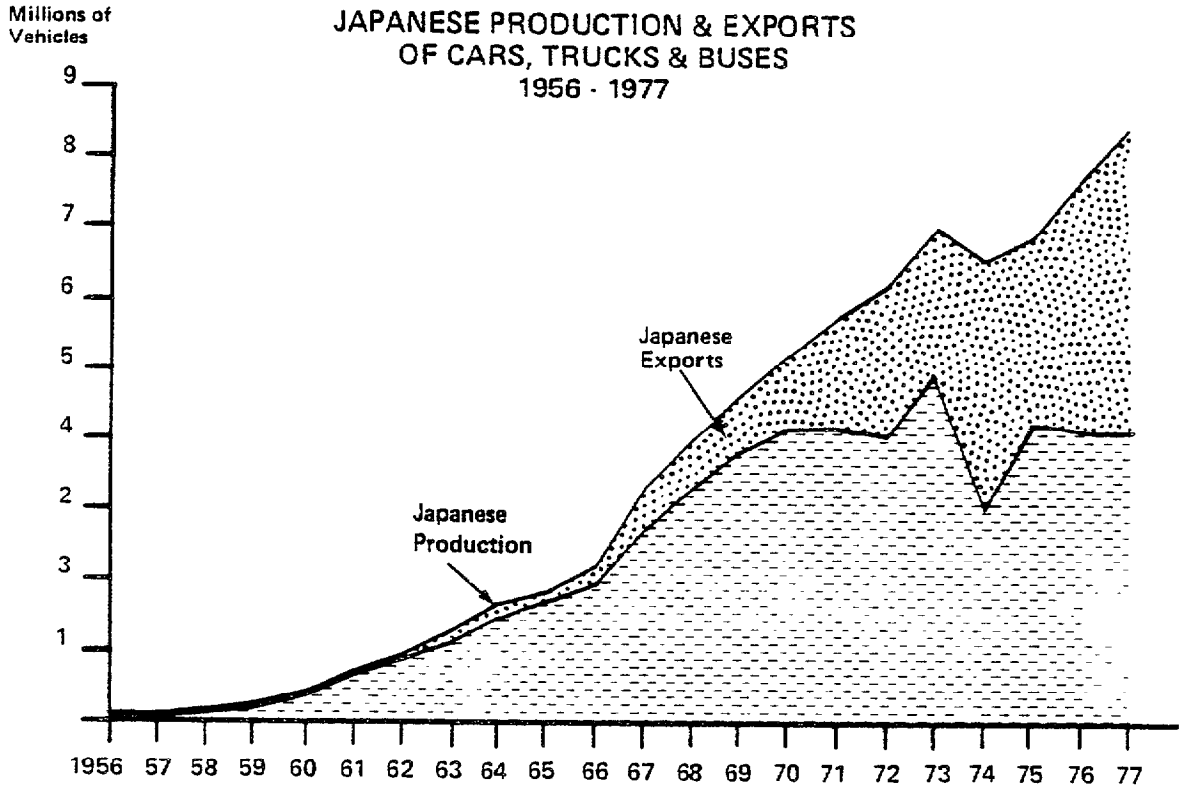
U.S.-Japan Automotive Trade, 1978
(millions)

Japanese Exports to the U.S.	
Passenger cars	$5,735
Trucks	1,344
Total vehicles	$7,079
Parts & components	1,107
Total Japanese exports	$8,186
U.S. Exports to Japan	
Passenger cars	$ 102
Trucks (special purpose)	8
Total Vehicles	$ 110
Parts & components	72
Total U.S. exports	$ 182
U.S. Automotive Trade (Deficit) (excl. tires & tubes)	$(8,004)

Source: Case participant.

In Chart 1 we graph the relationship between domestic production of automotive equipment in Japan and exports. (For the figures, see Table 7 at end of chapter.) It will be seen that Japan's domestic production rose dramatically, in fact, close to an eighteenfold expansion within the decade, 1959-69. Further, it will be noted that exports rapidly came to play an increasingly important role for the industry; in fact, by 1977, exports accounted for just over half of Japan's production. It is clear that Japan's sustained auto industry growth during the 1970's has been due to exports rather than to domestic demand.

CHART 1



Source: Graph derived from figures in Motor Vehicle Statistics of Japan. Japan Automobile Manufacturers Association, Inc. 1978, pp. 8 and 14

JAPAN'S AID TO ITS AUTO INDUSTRY

Prior to the end of World War II, Japan's automotive industry was almost entirely engaged in the production of trucks. Up to the mid-thirties, Ford and GM largely held the passenger car market through assembly operations in Japan. In the early 1950's Japan decided to develop its own passenger car industry. This goal was achieved by excluding imports; by preventing foreign investment, with the exception of licensing of foreign technology which falls under Japan's Foreign Investment Law; and by granting preferred status to the domestic automobile industry.

Japan excluded imports by prohibitive tariffs and by highly discriminatory commodity taxes, as will be seen in Table 3, where we provide the historical record through 1970. Even as late as 1972, the commodity tax on the typical size foreign car was double the rate on the typical size Japanese car.

Table 3

Tariff and Commodity Rates on Automotive Equipment 1955-72 a/

Tariff Rates

	Passenger cars b/		Trucks	Parts
	Less than 270mm wheelbase	More than 270mm wheelbase		
	(percentage)			
1955	40.0	35.0	30.0	30.0
1962	40.0	35.0	27-30.0	30.0
July 1968	36.0	28.0	22-24.0	24-30.0
Apr. 1969	36.0	17.5	22-24.0	24-30.0
Jan. 1970	34.0	17.5	19-21.0	24-30.0
May 1970	20.0	17.5	19-21.0	24-30.0
Apr. 1971	10.0	10.0	10.0	10.0
Apr. 1972	8.8	8.8	8.8	8.8
Nov. 1972	6.4	6.4	6.4	6.4

Commodity Tax Rates (Prior to 1971)

	Wheelbase/engine size		
	304.8 mm/ greater than 3000cc	270-304.8mm/ 2000-3000cc	less than 270mm/ less than 2000cc
	(percentage)		
1954	50	40	20
1962	40	30	20
1966-70	40	30	15

Source: Ministry of Finance data.

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a/Virtually all American automobiles, because of engine size and/or wheelbase length, were taxed at rates applicable to larger cars.

b/Before 1961 different size-classification applicable. Pre-1961 rates for sizes comparable to present.

A variety of government measures gave the industry (1) greater access to capital, (2) a preferred claim on scarce foreign exchange, and (3) a share in the tax stimulus program designed for high growth. The funds the industry received from the Japan Development Bank were estimated by the Boston Consulting Group to be about 9 percent of total cost of passenger car production facilities, 1951-55. Even more significant than the amount, however, was the "signal" such loans gave to the commercial banks, the primary source of outside funding, that automobile companies were to be given priority on loan applications. The industry was also given priority status on foreign exchange although not, of course, for the purchase of finished automobiles. Thirdly, the industry participated in the tax schemes designed for high growth both through rapid depreciation and overseas market development. In fact, at the beginning of this decade, the automobile and steel industries were the two chief claimants on the overseas market development fund. First-year depreciation could reach as high as 50 percent when the 25 percent first-year rationalization allowance was added to first-year depreciation computed by the double-declining method on an assumed 11-year life, and adjustments were made rewarding strong export performance. 1/

In calling attention to these government programs, in no sense do we minimize the entrepreneurial talent which enabled Japan's auto producers to take full advantage of governmental assistance. However, it is government programs which account for the striking difference in the speed of development of Japan's auto industry compared to those in other countries. According to our case study participant, the "almost absolute" restrictions which were in force prior to the early 1970's enabled Japanese car producers to develop ". . . world-scale capability with costs low enough to compete in the United States and Europe with prices substantially below [U.S. and European] domestic models."

RECENT JAPANESE EFFORTS TO LOWER BARRIERS

American manufacturers readily pointed out to us that the formal limitations which restricted imports into Japan have been greatly relaxed in recent years. Japan dramatically cut its tariff rates in 1971. As can be seen in Table 4, Japan's rate, which was far higher than those of the United States and the European Community in 1967 to 1970, is now at zero, the lowest of the three.

1/For a detailed discussion of this tax scheme, see Chapter 10.

Table 4

Japan, U.S. and EC Tariff Rates on Passenger Cars, 1967-78

	Japan			
	Small cars	Other cars	United States	European community
	(percentage)			
1967	40.0	28.0	6.5	22.0
1968	36.0	28.0	5.5	11.0
1969	36.0	17.5	5.0	11.0
1970	20.0	17.5	4.5	11.0
1971	10.0	10.0	4.0	11.0
1972	6.4	6.4	3.0	11.0
1978	0	0	3.0	11.0

Source: Case participant.

In 1971, also, administration of the Foreign Investment Law was eased to allow foreign investment. As a result, Chrysler and Mitsubishi entered into a joint venture, in which Chrysler eventually obtained a 15 percent holding. This was the first postwar foreign investment in Japan's auto industry. Although, in theory, 100 percent ownership became possible in 1971, in fact it is not, because of the way in which Japanese business is conducted. The sale of a Japanese company requires the unanimous consent of its directors, but, since this is virtually impossible to obtain, Japanese corporations are, in effect, not for sale.

Chrysler's joint venture with Mitsubishi was followed within 2 years by a similar arrangement between General Motors and Isuzu under which GM acquired 34.2 percent stock ownership. Ford negotiations with Toyo Kogyo, begun at this time, are now likely to be successfully completed in September 1979; it is reported that Ford will obtain a 25 percent share of the company. In these arrangements, it is noteworthy that it was the smaller companies rather than the big two which were "opened" to foreign capital. Mitsubishi Automobiles, spun off from Mitsubishi Heavy Industries, the largest company in the giant Mitsubishi complex, has yet to approximate the size of Toyoto and Nissan.

These U.S. equity-participation arrangements are seen by management to give American producers--if not American labor--several advantages. According to our case study participant, the benefits of these joint ventures are:

--they enable U.S. manufacturers to supplement their own lines with Japanese makes under American names, thereby taking advantage of Japan's efficiency and lower labor costs;

--they give American producers access to cheaper capital for the production of these cars and parts;

--they give a greater return on investment than that enjoyed by U.S. producers in the United States;

--they give U.S. producers greater access to the Japanese distribution system;

--they help to establish a U.S. presence in other Far East markets with Japanese cars bearing U.S. names, with U.S. models through Japanese outlets, and by participation through a minority equity position in Japanese vehicle exports;

--they allow U.S. manufacturers to take advantage of Japanese overseas marketing, including language skills and knowledge of Asian cultures.

FACTORS AFFECTING THE PRICE OF AMERICAN CARS IN JAPAN

American automobiles in Japan are sold at prices greatly above American retail prices. At our request, our case study participant provided a breakdown of the factors which result in retail prices essentially double the American price as shown in Table 5. In both the U.S. prices and Japanese prices, dealer discounts have been taken into consideration.

Table 5

Prices in Japan Compared with the United States for Selected Models
(on the basis of 200 yen to the dollar)

1979 models

	Sub-compact	Small sporty car	Compact size
U.S. effective retail a/	$4,810	$4,915	$6,635
Additional Japanese costs:			
Ocean freight and insurance	225 b/	175	210
Port handling & make-ready	105	125	125
Japanese commodity tax	700	850	1,200
Net homologation costs	110	435	535
Dealer incentives	0	500	500
Higher dealer margin	950	1,425	2,100
Other costs & profit (net)	205	180	760
Effective retail in Japan	$7,105	$8,605	$12,065

a/Including options standard in Japan.
b/Produced in Europe, hence the higher freight.

Source: Case participant.

It will be noted that higher dealer margins are the single most important factor causing the disparity; the commodity tax is the next most important factor and net homologation costs the third. The added "selling costs," dealer incentives and higher dealer margins, are lowest for the subcompact--19.8 percent above those in the United States--while on the small sporty car and on the compact, they are each 39 percent above those in the United States. Thus the market for subcompacts appears to be considerably more competitive than for the other two models. According to our case firm, suggested dealer margins for American and Japanese models have a similar pattern.

In this section, we discuss the effect of higher dealer margins, the distribution system, commodity taxes, current passenger car taxes and labor costs on car prices. Homologation is described in a later section.

Higher dealer margins, distribution costs

The most significant element in the increased cost of an American car in Japan is added distribution costs. Several factors govern these costs:

--the inability of American producers to develop volume with large expensive cars;

--the inability of importers, under Japan's exclusive dealerships, to "piggyback" on the dealer networks of the "majors";

--the inability of importers with existing small sales volumes to have their own extensive dealer networks because of the extremely high cost of land and other operating costs;

--the higher costs of distribution in Japan even for Japan's "majors"; and

--the higher trade-in value of a used car when the purchaser stays with the same maker.

Volume, which depends on how responsive the product is to the needs of the market, also affects sales costs and hence price. For the simple reason of space, larger cars do not have a mass market in Japan. Our case participant noted, however, that American producers are now attempting to respond to customer preferences for small cars with four and six cylinder automobiles such as Ford's Fiesta, Mustang, and Zephyr, and Dodge's Omni, all of which are being well received in Japan. Another point made by Japanese Government and industry officials, is that American producers have not adequately considered Japanese customer preferences, such as quality of paint and fitting of parts. Further, as Japanese observers point out, our producers still offer only left-hand drive vehicles in Japan, although Japanese manufacturers do not attempt to sell right-hand drive vehicles in the United States.

Our producers explain that their reluctance to produce right-hand cars stems from the expense of retooling and the low volume. Japanese manufacturers also faced these problems when they started exporting to the United States. However, American producers point out that, since left-hand drive is used overwhelmingly worldwide, Japan was converting to compete in the world market whereas the United States

would be converting essentially for the Japanese and U.K. markets only. We have companies in the U.K.; other left-hand drive countries--Australia and others formerly in the Commonwealth--have requirements for local manufacture. The result is that the potential market for right-hand drive outside of Japan and the U.K. and the "local-requirements" markets is estimated by our case participant to be only about 135,000 vehicles.

The Japanese auto industry's exclusive dealerships are now under study by Japan's Fair Trade Commission. As the Japanese economy becomes increasingly service-oriented, the Commission believes it important to pay increasing attention to anticompetitive practices in this sector.

The contrast in present selling costs is dramatically seen in the following figures showing salesmen's costs per car sold. Salesmen in Japan and the United States receive comparable compensation, but in Japan, salesmen average five sales per month as compared to eight in the United States; salesmen selling foreign cars in Japan average only two cars per month. According to our case participant, salesmen's cost per vehicle sold are:

	2 Cars/Month (U.S. average in Japan)	5 Cars/Month (domestic producers' average in Japan)	8 Cars/Month (U.S. average in the U.S.)
Salesman cost per vehicle sold	$1,040	$420	$200

Source: Case participant.

Commodity tax

The second most important factor raising the retail price of a car in Japan is the commodity tax. It is not clear why Japan imposes a commodity tax on cars especially since, in many years, it has had a large surplus in tax revenues. As Table 3 shows, this has been an extraordinary tax, used on a highly discriminatory basis against foreign cars. It will also be noted in Table 3 that the commodity tax on large cars was 50 percent during 1954-61 and remained at 40 percent through 1970. In asserting that the tax was highly discriminatory, we point to the scale of the difference between the tax on larger cars in contrast to the tax on typical size Japanese cars. Even when Japan was moving aggressively into the export market in the late sixties, as seen in Chart 1, the commodity tax was double or more on foreign-sized vehicles. Japan applies the tax on foreign cars on the basis of import value cif, while the United

States and Canada are virtually distinctive in basing duty rate on fas or fob value. Using the cif value for foreign cars while imposing the tax on their own cars "exfactory" makes a difference in the base to which the discriminatory rates apply. While it may not be discriminatory for a government to tax cars by size when it is attempting for various social reasons to promote small cars, the earlier scale of the disparity is difficult to explain in view of a commitment to accord foreigners "national" treatment. Currently, as will be shown in the next section, there is but a 5 percentage point difference in the rate for large and small cars in Japan.

Current passenger car taxes

American manufacturers frequently point to various taxes levied on automobiles which not only result in higher prices but tend to discriminate against the types of U.S. automobiles traditionally sold in Japan. Our case participant provided us with the following comparison of Japanese and U.S. automotive tax categories:

Table 6

A Comparison of Japanese and U.S. Automotive Taxes a/

Japanese Taxes					Similar
Type	When	Govt.	Tax	Basis	U.S. tax
Commodity	Once	National	15% (of landed cost)	under: 2000cc engine 1700mm width 2700mm wheelbase	None
			20%	over: "	
Acquisition	Once	Local	5%	of sales price	State sales tax
Weight	Bi-annual	Local	$63	per 0.5 ton	State registration fee
Road	Annual	Local	$ 94	Under 1000cc engine	None
			110	1001 - 1500cc engine	
			125	1501 - 2000cc engine	
			337	2001 - 3000cc engine	
			366	3001 - 6000cc engine	
			613	6001 & over	

a/Rates for these conversions from International Monetary Fund, International Financial Statistics, February 1979, Japan table 2, line ae. The 1978 annual rate is used

Source: Case participant.

The taxes most often criticized by American manufacturers are the commodity tax and the road tax. Most American cars are not equipped with engines smaller than two liters 1/ and/or they exceed either the width or wheelbase maximum requirements for the lower 15 percent tax. Vehicles charged the higher 20 percent commodity tax require "3" number license plates while all other cars have "5" number license plates which make "luxury" car status immediately apparent.

While the commodity tax is paid once, in the first instance, by the manufacturer, the road tax is applied annually on the owner of the vehicle. As the preceding table indicates, there is a sharp break in the tax for automobiles with engines in the 1501-2000cc range compared to the 2001-3000cc range--a 270 percent increase. Our case firm argues that more graduations are needed in the fees charged for engines over two liters. The progressive tax is intended as a fuel economy incentive. However, the case participant added that the tax is substantially more progressive than fuel consumption rates. In addition, Japan taxes gasoline at a rate of about $1 per gallon which in itself, is a substantial incentive to drive fuel efficient cars. Moreover, according to the case participant, the fact that the road tax clearly separates the under and over two liter engines reinforces the luxury status in the purchaser's mind, a disadvantage in selling to the mass market.

Labor factor

Although average compensation in manufacturing in Japan is approximately two-thirds of that in the United States, 2/ hourly compensation of production workers in the motor vehicles and equipment industry in Japan in 1978 was only 52 percent of that paid in the United States. 2/ The effect of wage rate differentials on final costs depends, of course, on the relationship of labor and capital in the production mix. Although we contacted various automobile manufacturers and government officials, we did not find a consensus as to whether the auto industry is more fully automated in the United States or in Japan. Nor did we find any studies or

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1/1000cc (cubic centimeters) = 1 liter.

2/Estimated Hourly Compensation of Production Workers in the Motor Vehicles And Equipment Industries, Twelve Countries, 1975-1978, unpublished data prepared by Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, May 1979.

consensus on the number of manhours needed to produce a vehicle. According to the 1978 annual reports of General Motors and Ford, 32.7 percent and 27.1 percent of their revenues, respectively, was spent on salaries, wages, and benefits, but these figures, of course, relate to direct labor outlays only.

According to our case participant, it normally takes about 125 manhours, including management and engineering, to produce a subcompact car from the time the rolled sheet metal is received until the car leaves the factory. Assuming equivalent manhours necessary to produce an automobile in the United States and Japan, and using the Department of Labor statistics, the following table shows a substantial difference in cost arising out of wage rate differences.

	Hourly wage Rate (1978) 1/	Total labor cost
United States	$12.65	$1581.25
Japan	6.54	817.50
Difference	$ 6.11	$ 763.75

HOMOLOGATION AND THE APPROVAL PROCESS FOR FOREIGN CARS

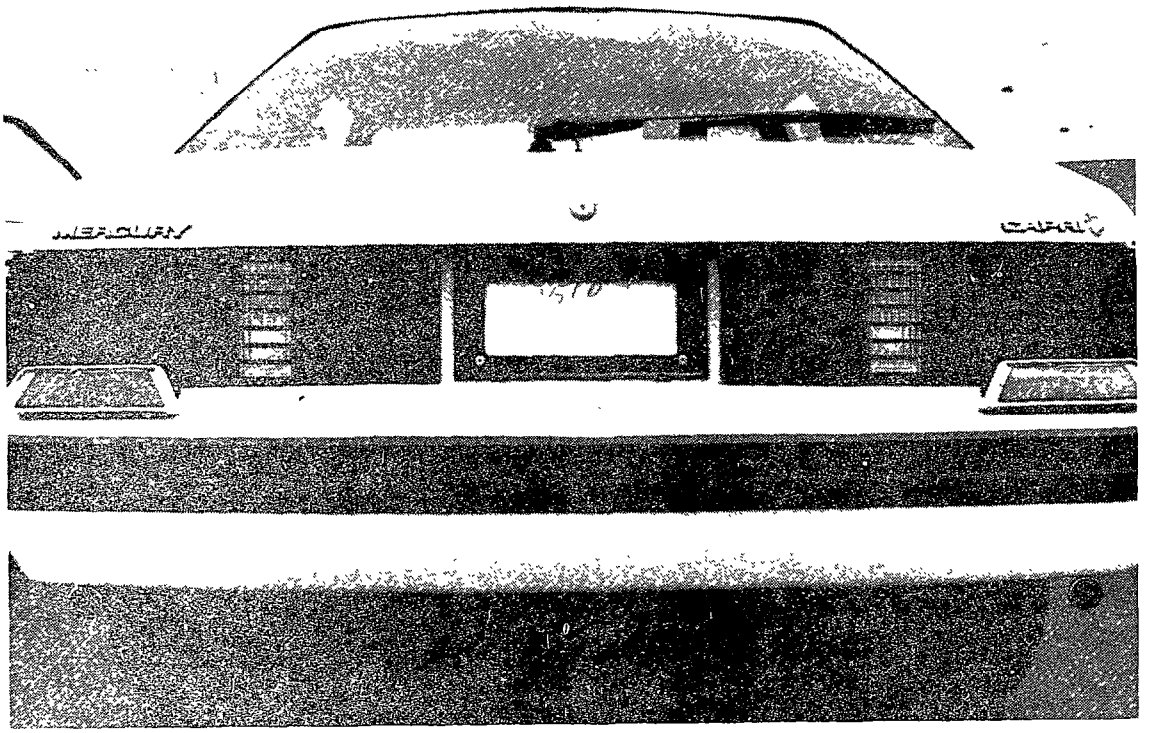
American manufacturers do not find it economical to produce to Japanese safety and environmental standards in the United States. For this reason, cars have to be modified to meet the Ministry of Transport's requirements after they reach Japan. This process is known as "homologation."

1/ In an explanatory attachment, the Department of Labor noted that: "Total hourly compensation includes all direct payments made to the worker (pay for time worked pay for vacations, holidays, and other leave, all bonuses and pay in kind) before payroll deductions of any kind, plus employer expenditures for legally-required insurance programs and contractual and private plans for the benefit of employees. In addition, compensation includes other significant taxes on payrolls or employment that are regarded as labor costs. Total compensation is computed per hour worked."

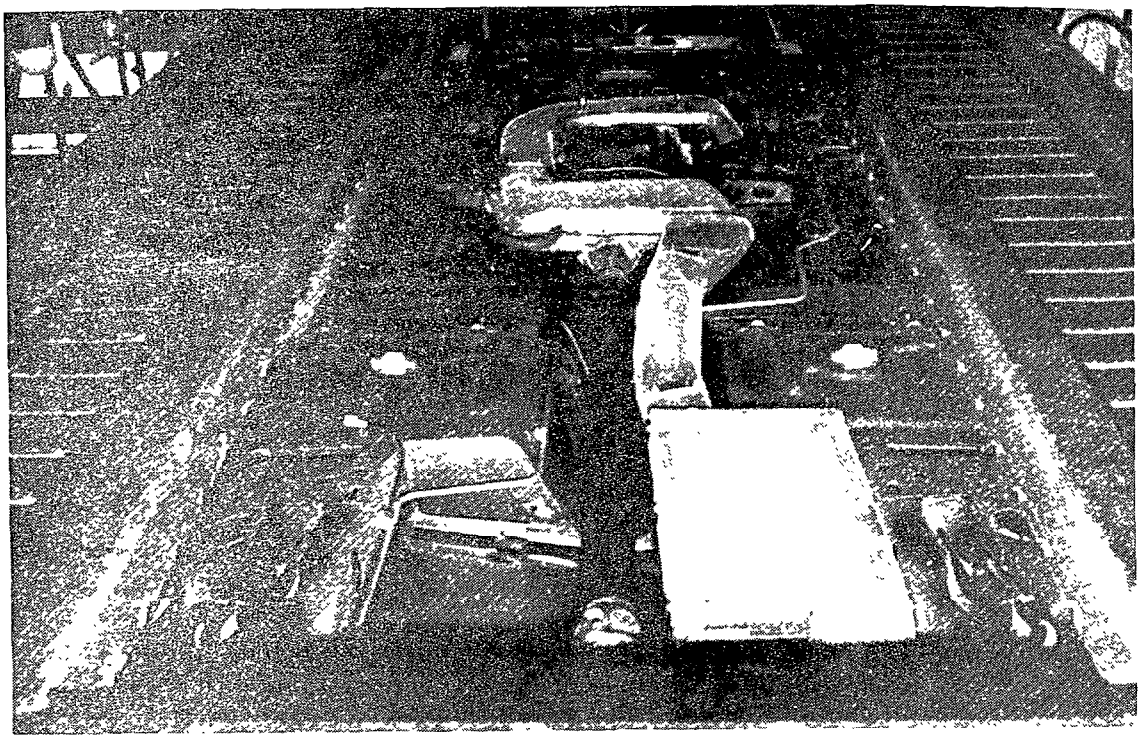
Below is a list of some of the common changes, some relatively minor, others more extensive, required on U.S. cars.

--Amber front end and rear turn signals
--Exhaust temperature alarm
--Exhaust heat shielding
--Head restraints to Japanese standards
--Low current overnight park lamps
--Kilo speed with red ban 100 kilometers per hour (KPH)
--Tail (exhaust) pipe outlet direction
--Front side marker lamp location
--License plate brackets
--Outside rear view mirrors - Japanese field of view and breakaway design
--Head lamps - LH rule of road
--License lamp illumination
--Overspeed warning device
--Rear bumper clothing device
--Seating dimensional compliance
--Back-up lamp - intensity, aim and leakage
--Turn signal operation - flash rate and positive out between flashes
--Rear reflectors to Japanese standards
--Instrument/control symbols.

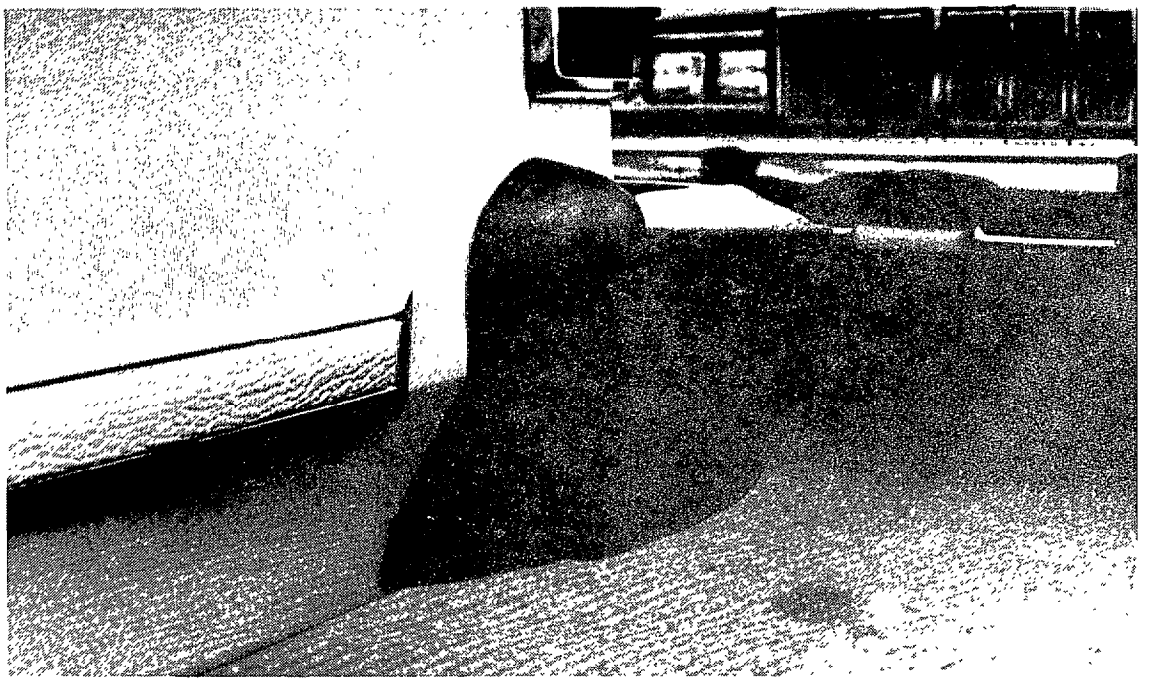
These changes, along with repairs necessitated mostly by shipping, are made at homologation plants. With the exception of Ford, which has its own homologation facility, American manufacturers export to Japan through dealers who make the necessary modifications at their plants. The following photographs, taken at Ford's facility, depict a few of the modifications required on their vehicles. The homologation costs given in Table 5 refer to small cars; on larger cars, the costs are appreciably greater.



INSTALLATION OF VARIOUS REFLECTORS



HEAT SHIELD INSTALLATION ON EXHAUST STANDARDS



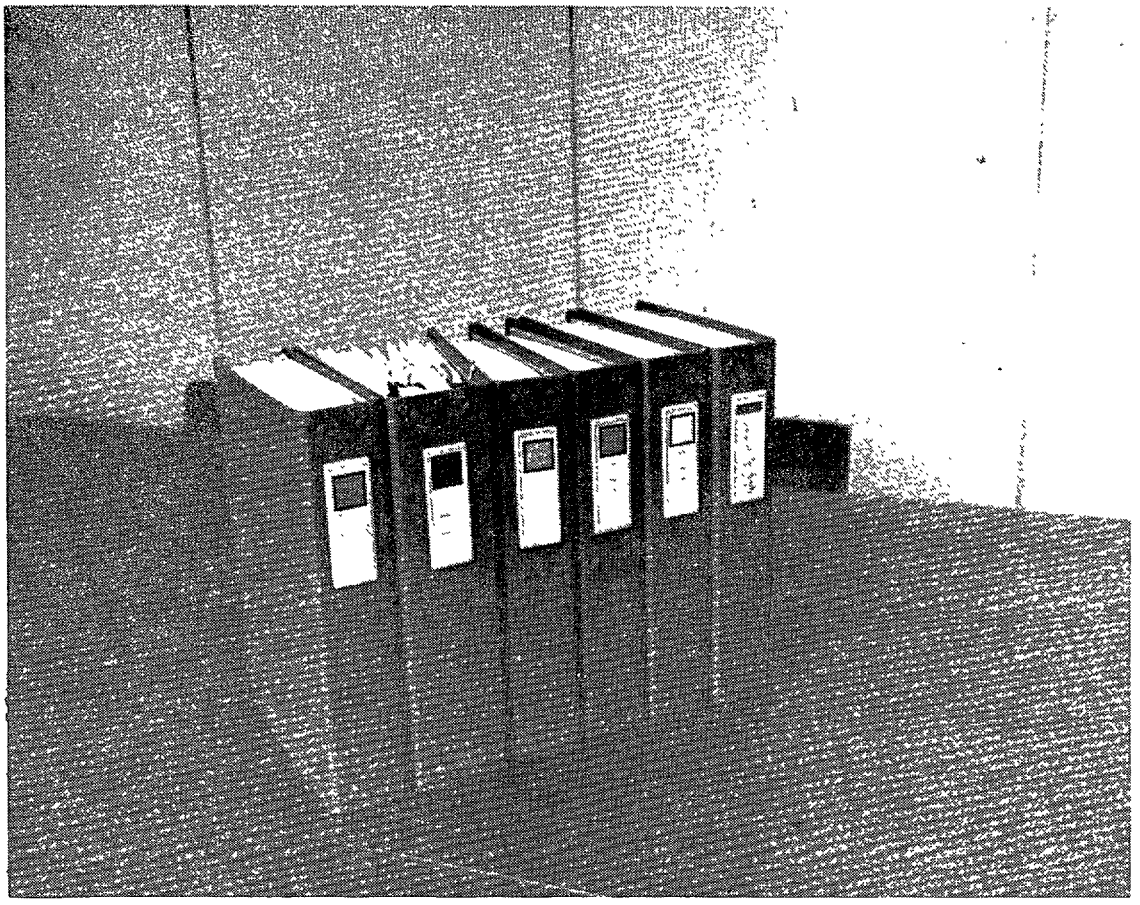
Rubber Bumper Installation
dubbed "Kimono Guard"

While some progress has been made, American manufacturers still feel that a complete review of the modification requirements by the Japanese Government is warranted with a view to retaining only those which are absolutely necessary.

Approval process

The Ministry of Transport has two distinct types of approval processes to insure compliance with safety and environmental standards. Japanese manufacturers use one system for motor vehicles mass produced to meet those standards. The Japanese producer submits documentation to the Ministry of Transport that the type of vehicle has met the standards and also submits a tested and untested vehicle. If the automobile type is approved, the manufacturer can then "self certify" and forego further inspections for this type of automobile.

For foreign automobiles, the system is more complicated and time consuming. Importers must submit documentation and a sample vehicle on which tests are to be conducted. Upon approval of the vehicle, the documentation is distributed to inspection centers but, thereafter, every automobile must undergo an inspection. Following is an illustration of the extent of documentation required of an American manufacturer for one auto model with four engine options.



Documentation for one auto model-
4 engine options

Although inspected once by Japanese officials in the United States for safety requirements and modified in Japan to obtain approval for type notification (with accompanying documentation), each automobile, prior to sale must be taken to a land office for inspection. American manufacturers complain that this procedure normally takes a full day, and point out that the documentation, time and cost to obtain an approval averages about $200 per car. The position of the U.S. automotive industry is that the Ministry of Transport should permit "self certification" similar to that offered producers selling foreign cars in the United States. The proposed process could be coupled with a sampling technique to insure compliance with Japanese regulations.

The Japanese Government has recently adopted a number of new regulations in response to some of these complaints. On foreign cars, Japan has deferred for 3 years until 1980, its stringent 1978 exhaust standards and has simplified its emissions testing procedures for U.S. items considered equivalent to those of Japan. Ironically enough these rigorous emissions standards, were adopted from those in the United States Clean Air Act of 1970, scheduled to take effect in 1975 and 1976, they were subsequently deferred. While the Japanese automobile industry (like the U.S. industry) claimed that the standards were beyond its compliance capability, the Japanese Government believed that the United States would not have adopted an impossible program for an industry as important as automobiles. Further, with exports to the United States of key importance, the Japanese Government insisted that its industry meet the standards. 1/

In addition to suspending its emission standards on foreign cars temporarily, the Japanese Government for the first time, in 1977, sent examiners to the United States to perform safety and emission testing "on-site," a procedure which will lessen the time and costs for meeting approval.

CONCLUSION

The scale of the imbalance in the bilateral auto trade is the product of two broad factors, one governmental and the other market. Earlier, Japan protected its domestic market through high tariffs, discriminatory commodity taxes and foreign exchange allocations while the U.S. market was open. Japan's protections continued up to 1971. A dominant market factor is that Japan with its small-car specialization came upon an immense opportunity in the American market whereas we, with our large-car specialization came upon only a very thin, top-slice of theirs.

To reduce the imbalance, U.S. producers see their best opportunity in competing with Japanese cars in the American market rather than in the Japanese market, though they do intend to pay that market greater attention. Further, they are strongly encouraging Japanese makers to produce in the

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1/For the preceding points and for the account of how the Japanese industry did overcome this perception and did meet the standards of the Clean Air Act, see Julian Gresser, Fujikura and Morishima, Environmental Law In Japan, (MIT Press, forthcoming).

American market. Both Toyota and Nissan have conducted feasibility studies for locating plants here; however, neither have any immediate plans to do so. Honda is exploring the feasibility of adding an automotive unit adjoining its motorcycle plant in Marysville, Ohio. While Japanese manufacturing or assembly facilities in the United States would reduce the trade imbalance, it should be noted that they would have an effect on dividend payments to Japan, thereby reducing the surplus which the United States enjoys in the service account (dividend payments are so classified) and thus affecting the current account balance.

In the 1970's, Japan's automobile industry relied increasingly upon exports. We speculate that increased emphasis on exports came about not out of the sluggishness of Japanese domestic demand, but because, after the 1973 oil crisis, there was an enormously greater interest in small cars which Japan builds so well.

There is still much that Japan can do to improve opportunities for foreign manufactures in the Japanese market. Test procedures can be streamlined, minor standards that do not affect safety can be dropped, and road motor tax increases by size of car can be made proportional to the increased gasoline required rather than greater. However, even if all these changes were to be made, the economics of land and energy would dictate that the mass market in Japan is for small cars alone.

Table 7

Japan's Production and Exports
of Cars, Trucks and Buses
1956-77

Year	Production	Exports	Percent
	Units		
1956	111,066	2,447	2.2
1957	181,977	6,554	3.6
1958	188,303	10,243	5.4
1959	262,814	19,285	7.3
1960	481,551	38,809	8.1
1961	813,879	57,037	7.0
1962	990,706	66,690	6.7
1963	1,283,531	98,564	7.7
1964	1,702,475	150,421	8.8
1965	1,875,614	194,168	10.4
1966	2,286,399	255,734	11.2
1967	3,146,486	362,245	11.5
1968	4,085,826	612,429	15.0
1969	4,674,932	858,068	18.4
1970	5,289,157	1,086,776	20.5
1971	5,810,774	1,779,024	30.6
1972	6,294,438	1,965,490	31.2
1973	7,082,757	2,067,556	29.2
1974	6,551,840	2,618,087	40.0
1975	6,941,591	2,677,612	38.6
1976	7,841,447	3,709,608	47.3
1977	8,514,522	4,352,817	51.1

CHAPTER 4

TELECOMMUNICATIONS

Telecommunications services and equipment throughout the world are generally provided either by government corporations or by private firms regulated by government agencies. For example, 49.2 percent of telephones in worldwide service are government operated. Excluding the United States, which accounts for the largest number of privately-operated telephones, 80.1 percent of telephones in service are government operated.

Regulation and operation of telecommunications networks in developed countries (excluding the United States) is organizationally similar. In European countries, for example, post, telephone, and telegraph authorities (PTT), through their approval procedures, control the access of any supplier to the market. Similarly, in Japan, a public corporation--Nippon Telephone and Telegraph (NTT)--regulates access to the Japanese telecommunications market. The U.S. telecommunication network differs from those of Europe and Japan in that the primary suppliers of services and equipment are private corporations subject to regulation and oversight by an independent government agency--the Federal Communications Commission.

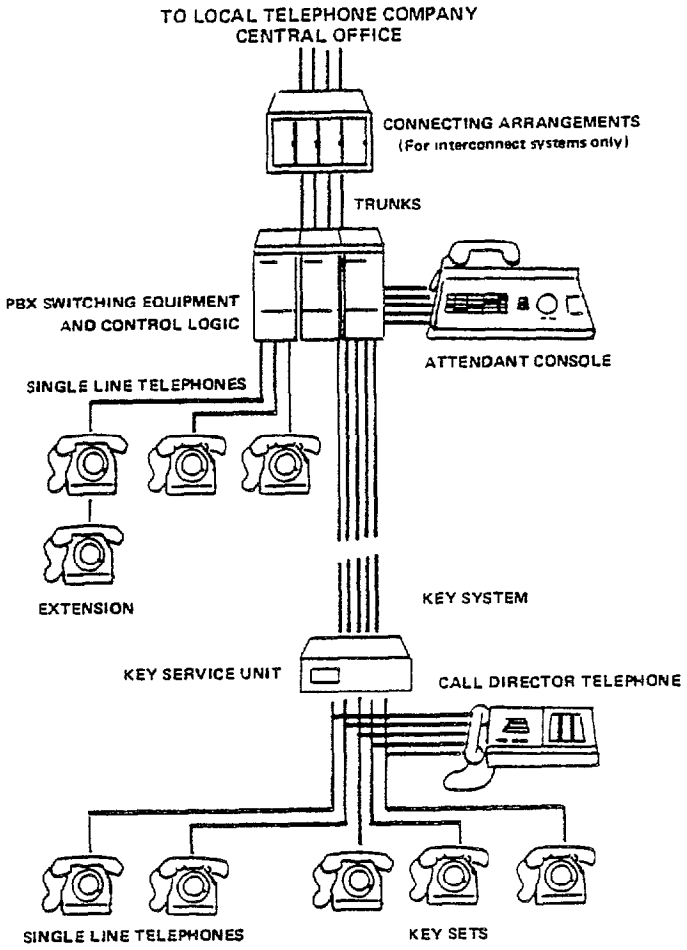
In the following pages we describe the various components of the telecommunications market, provide more specific details of the U.S., European, and Japanese telecommunications networks and their regulation; and finally, discuss in detail the Japanese telecommunications market and U.S. access to that market.

COMPONENTS OF THE TELECOMMUNICATIONS MARKET

There are essentially three segments within the telecommunications market: the exchange, transmission, and terminal segments. Generally speaking, the exchange and transmission segments of the market, which consist of central office switching equipment, satellite and radio communications equipment, cables, wires, and other main-line equipment, are closely regulated by government corporations or by government regulatory agencies. Equipment for these segments of the market is generally procured from a few select local suppliers closely affiliated with the government operators of the telephone system. In an industrialized country, roughly 60 percent of total capital investment in the telecommunications network is in exchange and transmission equipment.

The third segment of the telecommunications market--the terminal segment or the interconnect market--refers to owner premises, subscriber or peripheral equipment. Generally, this segment of the market accounts for roughly 10-15 percent of total capital investment in the telecommunications network in an industrialized country. Terminals, usually telephones, connect end-users to the telephone system. A terminal may be a telephone instrument, a computer, an internal private intercommunications system within a building, or other device for transferring information. A terminal may in itself be a computer telephone system. The private branch exchange (PBX) key set telephone system shown in Chart 1 below is such a system.

CHART 1
PBX SYSTEM INCLUDING KEY SYSTEM



SOURCE: A BASELINE STUDY OF THE TELEPHONE TERMINAL AND SWITCHING EQUIPMENT INDUSTRY. USITC PUBLICATION 946, U.S. INTERNATIONAL TRADE COMMISSION, FEBRUARY 1979, WASH D.C.

From an international perspective, definitional problems arise in distinguishing between the central office and interconnect markets. The United States, through court decisions and FCC regulations discussed below, makes a clearcut distinction between the two markets. The definition of the interconnect market is circumscribed not only by the type of equipment, but also by the individual who has responsibility for its purchase, installation and maintenance. For example, a person who buys a telephone from a store and installs it in his home is also responsible for its maintenance. This telephone instrument is definitionally considered to be a terminal interconnect device. However, when an individual rents the instrument from the local phone company which has responsibility for its maintenance, the telephone is not considered an interconnect device, but rather a part of the central office equipment. This distinction between interconnect and central office equipment is extremely important in our subsequent discussion of NTT.

U.S. TELECOMMUNICATIONS MARKET

The U.S. telecommunications industry is regulated primarily by the Communications Act of 1934 which created the Federal Communications Commission (FCC) to establish and regulate "in the public interest" all forms of telephone, telegraph, and wireless communications.

The U.S. market is supplied primarily by two companies. American Telephone and Telegraph Co. (AT&T) is the largest supplier, General Telephone & Electronics (GTE) is a small second, while other firms supply the remainder. About two-thirds of AT&T's equipment is procured from Western Electric, Inc., a subsidiary of AT&T, with the remainder from other suppliers. In this sense, AT&T and Western Electric's relationship is somewhat similar to that of foreign telephone service operators and their preferred suppliers. A major difference does exist, however, between the United States and other developed countries in that AT&T, although primary supplier, is no longer the sole supplier of telephone services. In recent years, the U.S. market has seen several other private corporations provide long distance services, and a number of firms, including foreign firms, supply equipment to private end-users which hook into AT&T's central switching equipment.

Two important legal decisions affect the nature and organization of the U.S. telecommunications industry and market. Prior to 1956, complete end-to-end service was supplied by operating telephone companies which owned all

telecommunications equipment. Alien attachments to telephone instruments were prohibited. In 1948, the Hushaphone Co., which had designed a soft rubber cup to fit around the mouthpiece of a telephone instrument to funnel the speaker's voice into the transmitter, filed a complaint with the FCC petitioning the Commission to order telephone companies to amend their tariffs to allow use of the instrument. 1/ AT&T argued that such attachments caused technical harm and therefore should not be allowed. The FCC dismissed the petition after a hearing in 1955, but its decision was overturned by the U.S. Court of Appeals for the District of Columbia Circuit. Consequently, the FCC required the Bell Telephone Co., to amend its tariffs to limit restrictions on attachments to the telephone system to "hard wire devices," or devices which are acoustically connected. This decision was the precursor to the Carterfone decision in 1968.

In 1966, the Carterfone Co. filed an antitrust suit against AT&T in response to AT&T's refusal to interpret its tariffs to permit the connection of the Carterfone device to the telephone instrument. This device was an acoustic coupler which connected radio transceivers to the telephone instrument. The case was dismissed by a Federal District Court on the grounds that the FCC had initial jurisdiction to make the decision. The FCC, which at the time was investigating similar issues in several different proceedings, ruled in favor of the Carterfone Co., in 1968. The decision, and a subsequent advisory committee report, led AT&T to issue a tariff covering a much broader range of equipment than merely Carterfone devices, with the result that direct connection with telephone lines was allowed through equipment called protective couplers.

Subsequently, in 1974, the FCC established a registration program for terminal equipment. Under this program, if a manufacturer's equipment meets the standards necessary to protect the telephone system and the user from harm, the FCC issues a registration number allowing direct connection of the equipment to the telephone system without the use of protective devices. The initial program did not cover telephone sets, key sets, or PBX equipment but, except for the latter, these were included in the registration program in 1977. Because of technical problems in designing a standard interface, PBXs were not covered by the registration program until 1978, when these problems were corrected.

1/AT&T and its subsidiaries had a system of tariffs which effectively barred "foreign" (i.e. non-Western Electric) attachments to telephone equipment.

The effect of these decisions on the U.S. telecommunications market has been to open the market substantially to direct competition in both mainline and interconnect/peripheral equipment. FCC regulations merely require that equipment not harm the user or the integrity of the central telephone system.

OTHER DEVELOPED COUNTRIES' TELECOMMUNICATIONS MARKETS (EUROPE)

According to an International Trade Commission survey of 37 U.S. telecommunications firms which export, the primary factors inhibiting ability of U.S. firms to export are foreign regulations, local buying practices, and varying transmission and signal switching standards. Most respondents to the survey commented that the United States is highly advanced in technological design and expertise, and thus capable of competing abroad. Foremost among the nontariff barriers (NTBs) identified by survey respondents is the preferential treatment given to domestic or in-country suppliers in both industrialized and developing countries.

Post, telephone and telegraph authority approval 1/

In most countries, market access to imported telephone and switching equipment is dependent upon post, telephone and telegraph authority (PTT) approval. As in the case of Japan, PTT approval procedures are designed to favor local suppliers. National telephone equipment standards are normally modeled on a national supplier's product. Thus, national PTTs in Europe have standardized on different design lines for the telephone instrument; and regulations on technology, design, and size for other types of telephone equipment vary from country to country. Additionally, telecommunications policies in the European Economic Community (EEC) generally require local sourcing of equipment. Furthermore, documentation of approved technical characteristics and standards in European countries is often undefined or unavailable, and approval procedures are time-consuming. U.S. exporters report that sales of advanced switching equipment to Europe are limited by local PTT lack of specification standards in technological areas where national companies have lagged behind.

1/The information in this section is derived predominantly from a survey of importers and exporters conducted by the ITC for its report entitled: A Baseline Study of the Telephone Terminal and Switching Equipment Industry: USITC Publication 946, February 1979.

Government procurement policies

Governmental procurement programs also favor in-country firms and make it difficult for U.S. firms to obtain contracts for telecommunications equipment unless they establish manufacturing facilities in the country. This is particularly true in the terminal and switching product areas, where the government is usually the predominant purchaser.

Safety standards

In Europe, 16 national agencies administer electrical safety standards in 16 countries, although there are two international agencies 1/ which formulate and publish electrical standards. To market in Europe, telephone equipment manufacturers must be able to meet the safety standards in whatever country sales are anticipated.

There is, however, an easier route for would-be foreign suppliers who can submit their equipment for testing under an alternative Certification Body (CB) program. Two European testing agencies are selected for product testing, and a CB Certificate is awarded upon approval of the product(s) by these agencies. This certification should enable the manufacturer to meet the approval standards of the remaining European countries, although authority for final approval remains with the individual safety agencies.

Tariff rates

EEC tariff rates applied to telephone apparatus and equipment apparently do not present a major obstacle to U.S. exports according to ITC's survey. The average EEC rate on such equipment is 7.5 percent while the U.S. rate is 8.5 percent. Japan's tariff on electronic switchboards is 12 percent present rate; (statutory rate is 15 percent) and on other telephone apparatus is 6 percent.

1/The International Electrotechnical Commission (IEC) and the International Commission on Rules for the Approval of Electrical Equipment (CEE) both formulate and publish electrical standards; however, since each national product safety agency writes its own standards, these may deviate somewhat from international standards.

TELECOMMUNICATIONS NETWORK AND MARKET IN JAPAN

The Nippon Telegraph and Telephone Corporation (NTT) is the only company in Japan empowered to approve the use in Japan of communications equipment supplied by any company--Japanese or foreign. As the primary developer, operator, and regulator of the Japanese communications system, NTT in effect has absolute control of the Japanese communications market. The applicable requirements and procedures to be followed for sales of equipment to either the direct procurement (exchange and transmission segments) or interconnect (terminal segment) market are essentially identical for products manufactured inside and outside Japan.

The main problems generally encountered by non-Japanese manufacturers are the following:

--product specification/performance requirements in Japan are different from prevailing requirements in other countries, and are stated in general terms;

--published materials which define the applicable requirements and the application/approval procedure are available only in Japanese; applications and supporting technical information must be submitted in Japanese.1/

--for most types of communication equipment the approval procedure involves local on-site inspection by NTT personnel, so that in practice an application can be made only for a specific scheduled installation at a customer site.

NTT and its "Family"

Japan has repeatedly, in the MTN and elsewhere, argued that NTT is not a government agency; on the basis of this argument, Japan has attempted to justify its position that NTT is not subject to the recently negotiated MTN government procurement code. However, the facts indicate that NTT is in effect a government agency. NTT was founded in 1952 with government money as a public corporation to handle domestic communications.

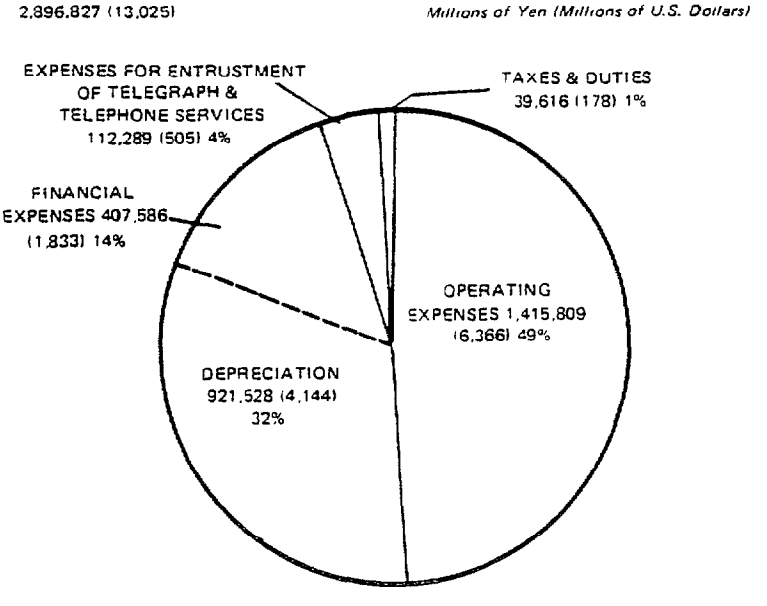
1/This is not unusual. Specifications, requirements and information submitted for approval in any country are in the native language.

Its budget is reviewed annually by the Japanese Diet, which also approves the appointment of its directors. The Public Telephone Communications Law provided for the creation of NTT, while its operations are regulated by the Nippon Telegraph and Telephone Public Corporation Law.

What is commonly referred to as NTT's family consists of its four major suppliers: Nippon Electric, Oki, Fujitsu and Hitachi. A variety of telecommunications, technology, and service-related research and development projects are being conducted to provide improved telecommunications in Japan. This R&D, especially in the telephone exchange and transmission markets, is carried on with close technical coordination--in the words of one Japanese official, "a joint effort"--between NTT and its family. NTT allegedly subsidizes a large proportion of the family's R&D. An informed source told us that over 2 percent of NTT's profits are expended on R&D conducted by NTT family members, although we were unable to find any documentation of this fact. Operating expenses and revenues for 1977 are shown in Charts 2 and 3.

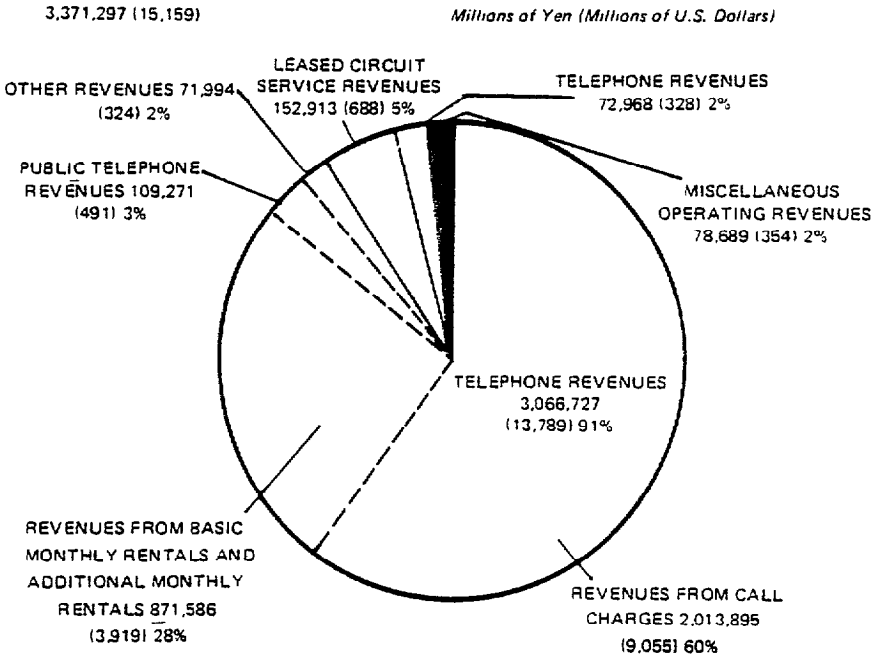
CHART 2

NTT'S TOTAL OPERATING EXPENSES (FISCAL 1977)



Source: Annual Report 1977/78; Nippon Telegraph and Telephone Public Corporation.

CHART 3
NTT'S TOTAL OPERATING REVENUES (FISCAL 1977)



SOURCE: ANNUAL REPORT 1977/78: NIPPON TELEGRAPH AND TELEPHONE PUBLIC CORPORATION

Japan's Telecommunications Market

As detailed in Chart 4, NTT has sole responsibility for the procurement of the equipment in the exchange and transmission segments of market (direct procurement market), while the terminal segment--the interconnect or peripheral market--is theoretically opened to more direct competition.

NTT's definitions of the direct and interconnect markets, however, are substantially different from the U.S. definitions. In NTT's view, and AT&T's view prior to the Hushaphone and Carterfone decisions, any piece of equipment which connects or "plugs into" NTT transmission lines is within the central communications system and thus subject to NTT regulation. 1/

1/See section above on the U.S. telecommunications market.

NTT also has a "primary instrument requirement" which essentially requires that in every installation at least one piece of equipment must be NTT equipment to maintain the integrity of the total system. Furthermore, subscriber equipment must be installed by NTT licensed installation companies which also maintain the equipment. On the basis of these definitions, it could be argued that there is no interconnect market in Japan. However, for the purposes of our ensuing discussion, equipment normally considered in the interconnect market in Europe and the United States--subscriber or owner premises equipment such as private automatic branch exchanges (PABXs), key telephones, etc.--will be referred to as interconnect devices. 1/

NTT obtains virtually all of its equipment for the exchange and transmission markets from one or several of its four family members, with a negligible amount from one of the 200 other "designated" suppliers. Roughly 96 percent of NTT's procurement is on a negotiated basis, largely from NTT family members. The remaining 4 percent is on the basis of tenders from "designated" suppliers with only 0.4 percent of these tenders being awarded to foreign suppliers. There is no formal procedure for becoming one of NTT's "designated" suppliers and it is NTT's stated policy not to add any companies, domestic or foreign, to its list of "designated" suppliers. NTT's customary advice to most foreign manufacturers attempting to market equipment in Japan is to suggest that the manufacturer select a Japanese licensee to produce the equipment in Japan, thereby ensuring that the equipment will meet NTT standards.

Table 1 shows a breakdown of consumption of telecommunications equipment in Japan by type of equipment and by sector. As indicated, the public sector accounts for over one-half of consumption of telecommunications equipment, with NTT alone accounting for 44 percent of total consumption in 1977. The private sector and exports each account for about a quarter of total consumption.

In Japan, the interconnect market is open to the point where, in theory, anyone may supply equipment either directly to NTT or to end-users. In practice, however, according to an informed Japanese business official, supplying this market is at best difficult because of complex procedural problems.

1/Key telephones are those with several incoming and/or outgoing lines, most often used in offices.

Table 1

Consumption of Telecommunications Equipment in Japan 1972-77

(millions of yen)

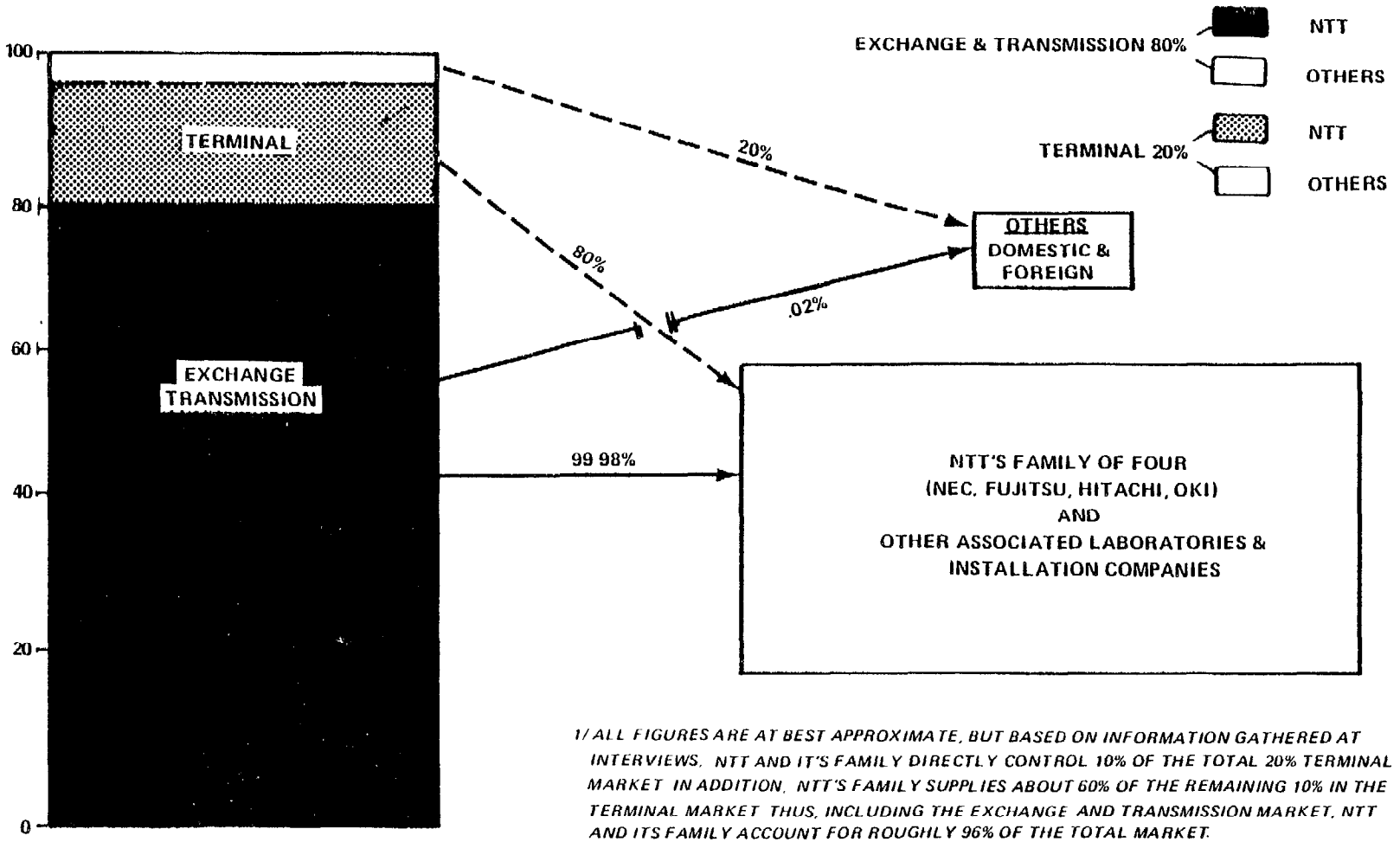
	1972	1973	1974	1975	1976	1977	1977 % of Total
Type of Equipment							
Telecommunications Equipment, Total	554,521	617,449	595,102	621,763	586,304	704,538	
Wire Telecom. Equip.	467,169	524,532	484,557	489,500	471,054	568,890	80.7
Telephone Equip.	41,957	44,031	35,787	31,569	31,948	30,583	4.3
Telephone Exchange	175,530	185,930	169,471	183,616	175,922	207,452	29.4
Applied Telephone Equip.	32,730	52,998	47,928	47,009	50,223	64,352	9.1
Telegraph Equipment	59,741	66,535	73,338	55,586	38,222	47,091	6.7
Carrier Equipment	85,710	95,422	94,638	107,235	105,990	139,591	19.8
Parts	71,501	79,616	63,395	64,485	68,990	79,821	11.3
Radio Communications Equip.	77,352	92,917	110,545	132,263	115,250	135,648	19.3
Sector							
Total Consumption (See Line 1 Above)	554,521	617,449	595,102	621,763	586,304	704,538	
Public Sector (Government)	350,770	361,452	358,126	353,268	300,353	370,574	52.5
NTT	306,535	307,858	301,549	303,530	259,492	310,611	44.0
Other	44,235	53,594	56,577	48,738	30,861	59,963	8.4
Private Sector	132,542	175,344	148,503	139,960	146,745	167,154	23.0
Manufacturers	43,970	71,344	54,645	59,321	66,149	77,080	10.9
Non-Manufacturers	88,482	103,675	93,858	80,639	80,596	90,074	12.7
Exports	61,299	80,653	88,473	129,535	139,206	166,810	25.6

Source: Communication Industries Association Of Japan.

Note: Figures do not in all cases add. Cited as in source.

CHART 4

MARKET SHARE AND SUPPLY SYSTEM IN JAPANESE TELECOMMUNICATIONS MARKET



1/ ALL FIGURES ARE AT BEST APPROXIMATE, BUT BASED ON INFORMATION GATHERED AT INTERVIEWS. NTT AND IT'S FAMILY DIRECTLY CONTROL 10% OF THE TOTAL 20% TERMINAL MARKET IN ADDITION, NTT'S FAMILY SUPPLIES ABOUT 60% OF THE REMAINING 10% IN THE TERMINAL MARKET THUS, INCLUDING THE EXCHANGE AND TRANSMISSION MARKET, NTT AND ITS FAMILY ACCOUNT FOR ROUGHLY 96% OF THE TOTAL MARKET.

SOURCE: COMPILED BY GAO FROM INTERVIEWS WITH U.S. AND JAPANESE TELECOMMUNICATION INDUSTRY REPRESENTATIVES AND OTHERS.

As an example, the official told us that even one of the largest and most reputable electronics firms in Japan, Matsushita Electric, had been unable to penetrate this market. 1/ Chart 4 diagrams the supply system outlined in the above discussion.

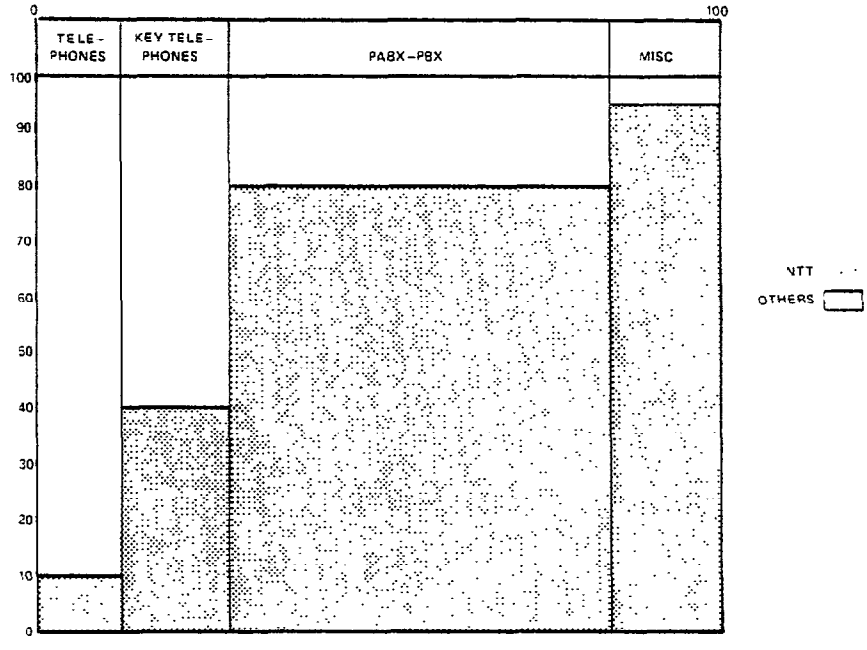
Terminal or interconnect market

The items of primary interest to Japan in the interconnect market are PABXs, key telephones, answering telephones, wireless telephones, mobile phones, recording devices attached to telephones, etc. The largest segment of the market, however, is in PABX and key-telephone equipment. Ordinary telephones for purchase are not in great demand because NTT rents and installs these to individual households in Japan.

Chart 5 shows the approximate shares held by NTT and others in the interconnect market:

CHART 5

APPROXIMATE SIZE OF MARKET AND MARKET SHARES OF SUPPLIERS ON A PURCHASE BASIS 1/



1/ ALL FIGURES ARE ESTIMATES ON THE BASIS OF DISCUSSIONS WITH KNOWLEDGEABLE OFFICIALS

SOURCE COMPILED FROM INTERVIEWS BY GAO

NTT and its family supply virtually the entire interconnect market with the remainder of the market supplied by domestic and foreign electronics and telecommunications firms.

1/The exception to this is that Matsushita has made small-scale sales of facsimile equipment to some end-users in the interconnect market.

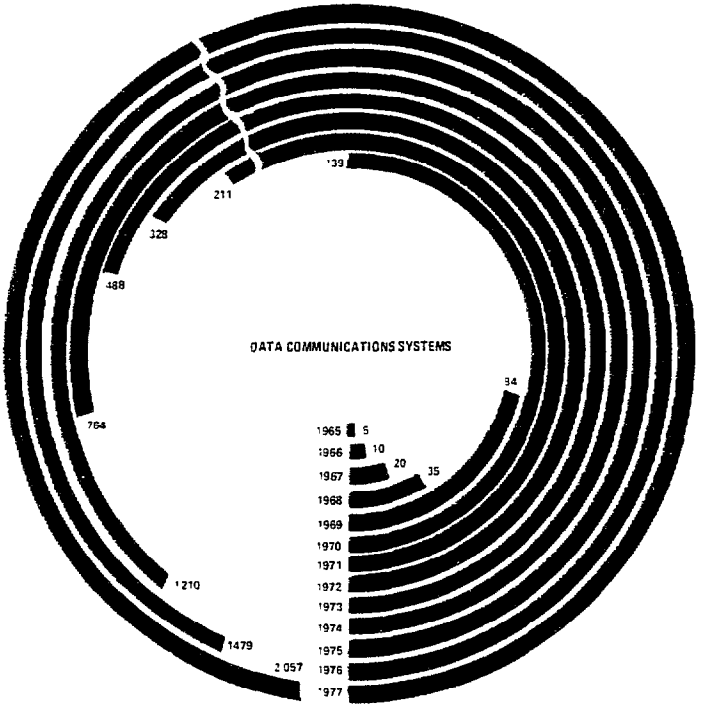
Data transmission services

NTT acts as a common carrier in supplying data communication services in Japan. Initiated in 1964, following the adoption of seat reservation systems by the Japanese National Railway (JNR) and Japan Air Lines (JAL), the data transmission system has grown rapidly since 1971. Since 1965, despite strict regulation of computer center hookups with subscriber terminals over NTT's communication network, data communications grew very rapidly as shown in Chart 6. The ratio of computers utilized in telecommunications systems to the total number of computer systems in Japan reached 4.9 percent by March 1975. Chart 7 explains the types of activities and transactions which are effectively conducted with data transmission systems.

Commercial data transmission by private companies was initiated by a U.S. firm in Japan in 1972 and by a Japanese firm in the same year. In 1976, 29 companies were offering these services in Japan. (See Chart 8.) Presently, these firms are offering services such as transmission of stock information, commercial analysis, management computation, program development and statistical and analytical services for small- and medium-sized companies.

CHART 6

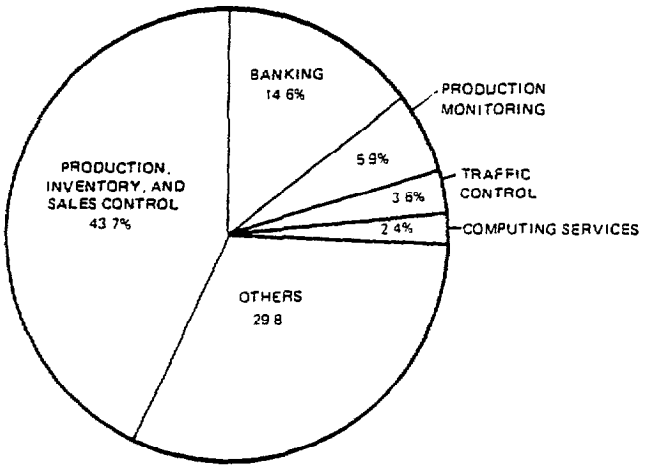
GROWTH OF DATA COMMUNICATIONS SYSTEMS 1965-1977



SOURCE EDP IN JAPAN JAPAN ELECTRONIC COMPUTER CO LTD 976 1978

CHART 7

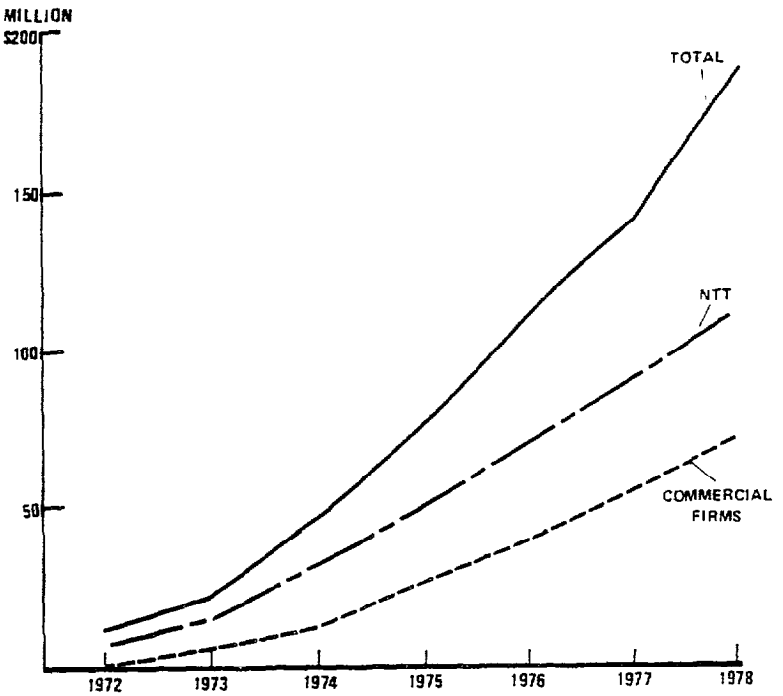
DATA COMMUNICATIONS MARKET BY APPLICATION
(AS OF MARCH 1977)



SOURCE EDP IN JAPAN 1976, JAPAN ELECTRONIC COMPUTER CO LTD

CHART 8

DATA COMMUNICATIONS MARKET AND SUPPLIERS



SOURCE EDP IN JAPAN 1976, JAPAN ELECTRONIC COMPUTER CO LTD

Size of the market

The total telecommunications market including both NTT direct procurement and the peripheral market was estimated at close to $4 billion in 1977. 1/ The Department of Commerce does not expect the market to expand rapidly over the next 4 to 5 years. 2/ Commerce forecasts an average annual growth of about 5.3 percent per year, which would mean that the Japanese telecommunications market could reach $5.1 billion by 1982. This anticipated growth is largely expected to be supported by advances in facsimile and fiber optics equipment and by anticipated increases in the number of telephones in private automobiles and other vehicles. Another area of growth potential is in digital switching equipment which will modernize Japan's communication network.

In 1977, imports accounted for only about 2.7 percent of the market. Sales by foreign companies to the telecommunications market are essentially limited to specialized equipment and it is anticipated that domestic suppliers will continue to maintain a strong market position in the next several years.

PROCEDURAL PROBLEMS IMPEDING ENTRANCE INTO THE MARKET

Entrance into either the direct procurement or interconnect markets is complicated by difficult procedural requirements and imprecise specifications for equipment. The major impediment is NTT's type- and case-by-case (installation) approval system. Although general specifications are publicly announced by NTT through the Japanese Gazette (comparable to the U.S. Federal Register) detailed specifications are generally not publicly disclosed on the grounds that they are proprietary to NTT or to the company which developed the product. With the close coordination that exists between

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1/Determining the actual size of the Japanese telecommunications market is, at best, difficult. Department of Commerce forecasts are contained in Commerce's publication, U.S. Export Opportunities to Japan, published in 1978, and include figures for consumer electronics radio and TV broadcast equipment. Estimates of the market size not including this equipment are about $3 billion.

2/Although this may be accurate, growth in particular sectors of the telecommunications market is expected to be substantial; e.g., the data communications market.

NTT and its family, these four firms are presumably aware of the unannounced specifications and, therefore, have an obvious advantage in selling to the Japanese telecommunications market.

Regarded by most as a major NTB, the type and case-approval systems cause serious problems for foreigners. Under the type approval system, NTT requires that potential suppliers submit the following detailed information about the equipment:

--name of product and manufacturing address,

--installation site,

--results of reliability tests of parts and components which are incorporated into the system,

--connection diagrams,

--configuration drawing (blueprints), and

--manual translated into Japanese.

Additionally, a sample product must be submitted for product testing. One distributor of telecommunications equipment informed us that many U.S. firms are hesitant to provide much of this information because of its proprietary nature. Additionally, information received by an NTT local office is frequently returned with requests for more information. This can often create lengthy delays in processing the approval form. Allegations have been made that the type of detailed information required in some instances has been "shared" by NTT with its family members who later develop and market similar equipment.

Type approval obtained for the sale of equipment presumably is required only once unless changes to the model are made. However, given the rapid rate of technological change and innovation in the industry, this requirement may pose serious problems for foreign companies exporting to Japan.

When reliability tests meet NTT technical standards, type approval is granted for parts and components to be incorporated into a system. The granting of type approval in theory implies blanket approval for all installations of the approved equipment. Actually, this approval is only for the equipment itself and not for specific installations.

Depending on the type of equipment involved, there may, in addition, be a continuous requirement for local inspection of each installation. Since type approval is more difficult to obtain than individual approval, it seems inadvisable to obtain such approval in those cases where the local inspection requirement applies. Additionally, before an application can be submitted for type approval, "several" units of the equipment must be installed (with individual approval) and these units must have operated trouble-free, normally for a 6-month period. Further, problems arise because NTT requires that not only equipment but manufacturing facilities as well be inspected for quality control. However, NTT has reportedly never made such overseas inspections.

The end-user of the type-approved product is then required to submit to a local NTT telephone office the "form for installation" which requires the following data:

--name of telephone subscriber and address,

--equipment installation site,

--brief description of equipment to be installed,

--name of NTT authorized installation company 1/, and

--expected date of operation of equipment.

On the basis of the above information, a local NTT official inspects the equipment at the installation site. Approval to begin operation is granted if the equipment passes inspection.

Each end-user is required to submit the above-mentioned form to an NTT local office for individual approval each time the end-user wishes to install equipment. The end-user is notified in writing of the results of the NTT inspection. If there is anything wrong with the application, the equipment or its installation, NTT makes provisions to contact the supplier and verbally explain the deficiencies. The entire process can take as little as 3 months or as long as a year or more.

1/NTT and its family are affiliated with as many as 200 NTT-licensed installation companies which are the only firms permitted to install telecommunications and peripheral equipment hooking up to NTT-lines.

MTN AND TELECOMMUNICATIONS

NTT's procurement system has recently, both in bilateral negotiations and in the multilateral trade negotiations (MTN), become an extremely sensitive and emotional issue. The government procurement code, aimed at opening government purchases to international bidding, has successfully been negotiated at the MTN in Geneva and is to be implemented January 1, 1981. The U.S. objective in these negotiations was to obtain greater access to foreign government contracts for U.S. firms. To this end, the United States initially offered about $16 billion worth of government procurement, and now has offered $12.5 billion annually to foreign bidding while the EEC offered $10.5 billion. In exchange, the U.S. government initially hoped that the Japanese government would open a total of $8 to $10 billion and more recently, $7.5 billion worth of procurement to bidding by foreign suppliers.1/ As part of this arrangement, the U.S. government asked that NTT procurements through competitive bidding be enlarged from their present 4 percent of contracts and that the amount of procurement of main-line equipment from abroad (presently about 0.4 percent of NTT purchases or $17 million) be increased.

On June 2, 1979, the United States and Japan agreed to work for "mutual reciprocity . . . in access opportunities" to each other's markets, including the market for telecommunications equipment. According to a joint communique 2/ issued by the United States and Japan, the two countries will try to reach an agreement on telecommunications coverage no later than December 31, 1980, prior to the effective date of the government procurement code. In the interim, the two governments agree to facilitate foreign telecommunications sales, allow foreign firms to participate in research and development programs leading to procurement, and orient foreign firms to market requirements.

1/The Office of the Special Trade Representative, responsible for negotiating this package, considered several factors in arriving at this $7.5 billion figure. Primary among these were relative GDP levels, the relative amount of government intervention in the private sector, and the absolute size of the government sector.

2/For text see Appendix III.

TRADE PATTERNS

Total U.S. shipments, imports and exports of telephone and telegraph equipment for 1977 are shown in Table 2.

Table 2

U.S. Imports and Exports of Telecommunications Equipment by Principal Source/Markets for 1977
(1,000 dollars)

	U.S. imports a/	Percent of market b/	Exports c/	Share of U.S. exports (percent)
Telecommunications Equipment - Total	106,791	100	156,372	100
Canada	50,164	47	46,898	29
Japan, Korea	35,633	33	2,343	1
France, Germany, Sweden, Italy	4,801	4	9,290	6
Iran	0	0	20,626	13
Mexico	6,294	6	6,250	4
All others	9,899	9	70,965	45

a/Imports include telephone instruments, switching equipment and parts.

b/Figures may not add due to rounding.

c/Exports include telephone terminal and switching equipment.

Source: International Trade Commission, A Baseline Study of the Telephone Terminal and Switching Equipment Industry, USITC Publication 946 U.S. February, 1979, Wash., D.C.

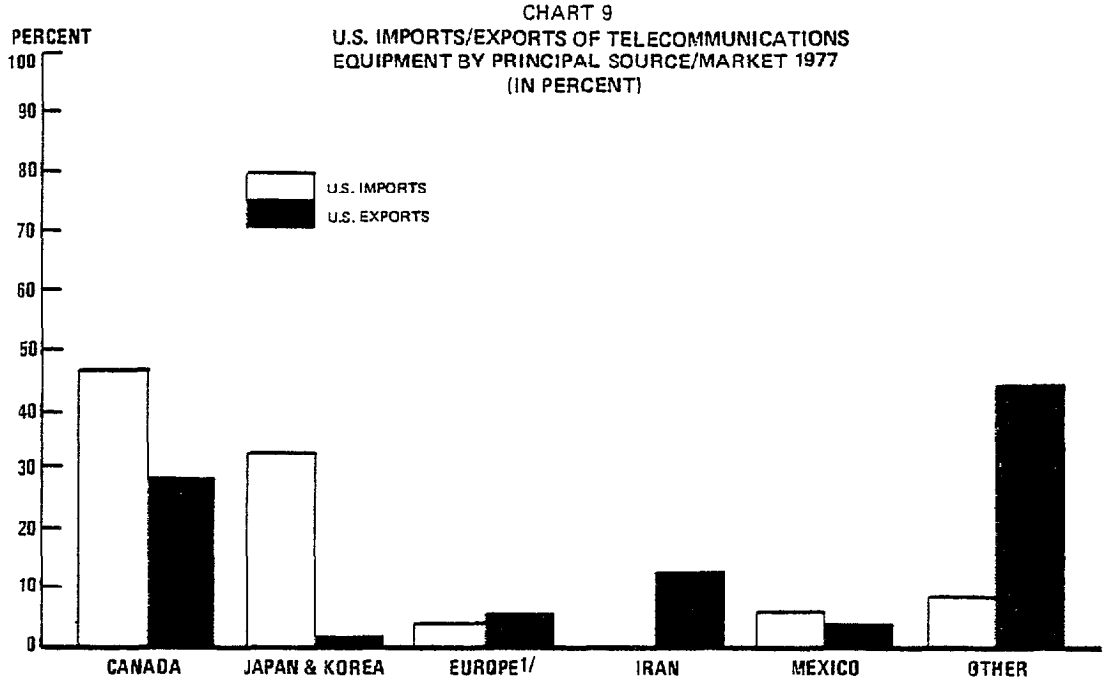
According to these figures, the United States ran a global surplus in telecommunications equipment trade of $1.27 million in 1977, a slight increase over the $1.25 million surplus posted for 1976. The bilateral balance of trade with Japan, however, was in deficit, posting at $33.3 million in 1977, a 32.5 percent increase over the 1976 deficit of $25.1 million. The bulk of U.S. exports to Japan during this period were telephone terminals and telephone equipment and parts. As is evident in Chart 9, the largest single market for U.S. telecommunications equipment exports is Canada. In 1977, Canada and Iran accounted for 29 and 13 percent of U.S.

exports, respectively. Europe, 1/ Mexico, and Japan/Korea accounted for 5, 4, and 1 percent of the U.S. exports in 1977, respectively. Although our exports to Europe are only slightly higher than those to Japan, the furor over access to the Japanese market arises over the scale of the imbalance in our telecommunication trade with Japan.

As shown in Chart 9, Canada is the source of most U.S. telecommunications equipment imports (47 percent) with Japan and Korea holding a 33 percent share of the import market. Europe and Mexico are relatively minor suppliers of the U.S. market with import shares of 4 and 6 percent, respectively.

Actual dollar value of trade in telecommunications equipment is small, reflecting the necessity for U.S. industry to invest in manufacturing facilities abroad, in order to compete as domestic manufacturers for communications equipment bids. Sales by U.S. firms manufacturing overseas are not reflected in import-export statistics.

CHART 9
U.S. IMPORTS/EXPORTS OF TELECOMMUNICATIONS EQUIPMENT BY PRINCIPAL SOURCE/MARKET 1977
(IN PERCENT)



1/ INCLUDES FRANCE, GERMANY, SWEDEN, ITALY.

SOURCE: SEE TABLE 2

1/ France, Germany, Sweden, Italy.

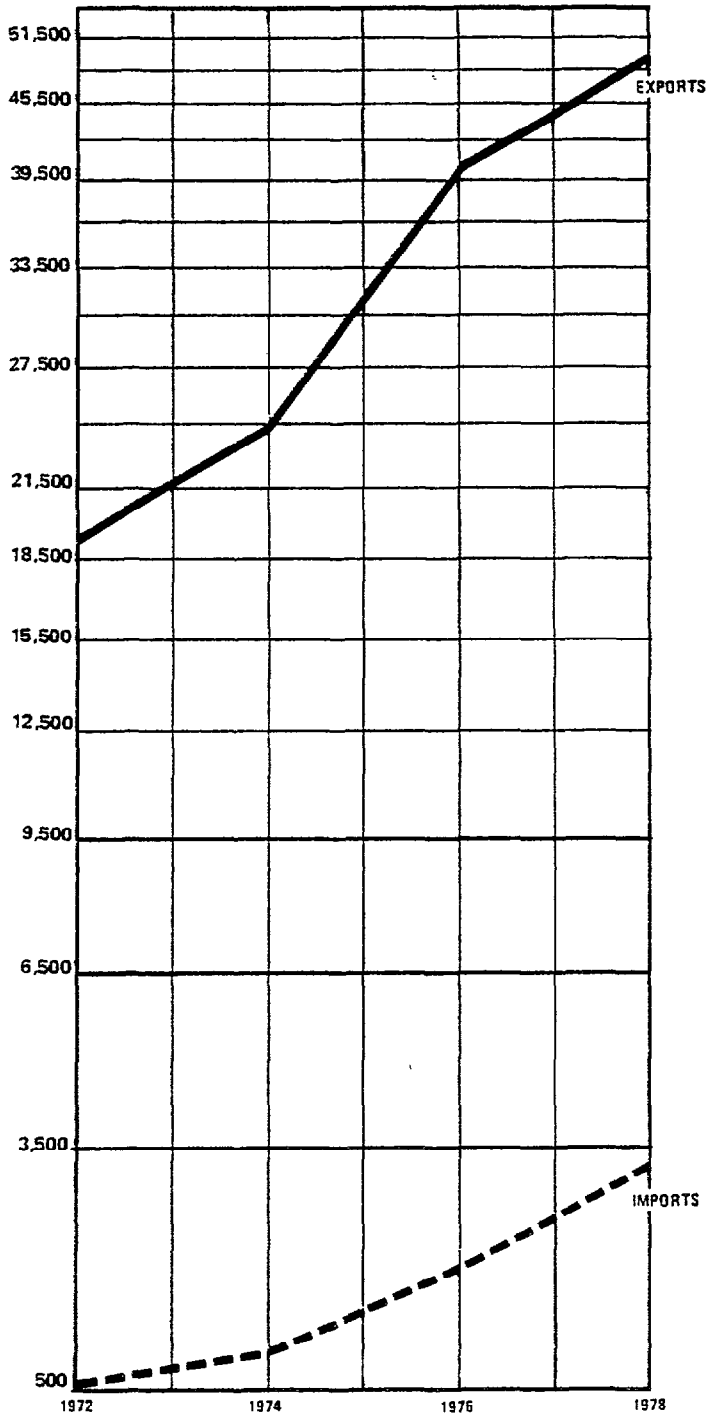
U.S. industry sources seem to agree that the most lucrative export markets for the United States are the less developed countries (LDCs). European procurement of main-line equipment, although perhaps not as restrictive as Japan's, is still not as "open" as in the United States. Furthermore, U.S. industry representatives apparently agree that, in fact, only small segments of any telecommunications market could reasonably be opened to competitive-sealed bidding. They believe that preferential treatment of local suppliers and government buy-national practices require that a firm establish itself as a domestic supplier in order to compete effectively.

Chart 10 shows Japan's imports and exports of telecommunications equipment. As indicated, Japan's surplus in trade with the world in telecommunications equipment approached $2.2 million in 1978. Chart 11 shows the source and market for Japan's imports and exports. The United States is the primary supplier in the import market accounting for 53 percent share of the $14.7 million import market; it receives about 7 percent of Japan's exports of $23.5 million.

Despite the U.S. industry's limited success, it is still anxious to have access to the market. There is, however, a great deal of skepticism on the part of the U.S. industry--even were NTT to be covered by the government procurement code--as to its ability to enter the market. One company explained that although the U.S. industry is technologically and price-competitive, procedural problems, (such as those described above) will prevent the United States from capturing a substantial portion of the Japanese telecommunications market.

CHART 10

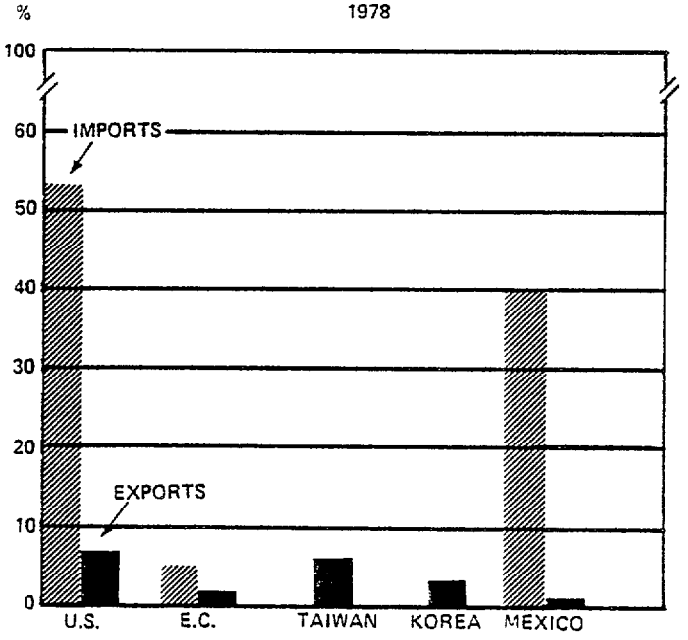
JAPANESE IMPORTS AND EXPORTS OF
TELECOMMUNICATIONS EQUIPMENT
1972 - 1978
(YEN - MILLIONS)



SOURCE: JAPAN EXPORTS AND IMPORTS, JAPAN TARIFF ASSOC.

CHART 11

PERCENT MARKET SHARE OF JAPANESE IMPORTS
AND EXPORTS OF TELECOMMUNICATIONS EQUIPMENT
1978



SOURCE JAPAN EXPORTS AND IMPORTS JAPAN TARIFF ASSOC 1978.

CONCLUSION

The telecommunications market in Japan has remained a conspicuous exception to the recent liberalization of trade barriers. An array of NTBs prevents U.S. access to the Japanese market. Primary among these is the lack of clear definition between central office and interconnect markets and NTT's policies regarding equipment and installation approval. A second area preventing U.S. entrance into the market is NTT's use of sole-source procurement rather than negotiated or competitive bid procedures in obtaining its equipment. Given these problems, and despite the recent conclusion of a multilateral government procurement code and a bilateral mutual reciprocity agreement, there is not likely to be a substantial decline in the bilateral telecommunications trade deficit.

Despite relatively equal levels of U.S. exports to several European countries and to Japan signifying that one market is not appreciable more accessible than the other, the disproportionate levels of exports from these countries to the United States serve as a clue to the source of U.S. complaints about Japan. Access to the Japanese telecommunications market has become a sensitive issue because of

the level of Japanese exports to the United States. Japan is a major exporter to the American market; Europe is not. Additionally, U.S. exports to Europe do not accurately reflect actual U.S. sales into the European market because of U.S. subsidiary production in Europe. Although it is difficult to pinpoint the exact level of U.S. production of telecommunications equipment in Europe, the fact that U.S. firms are able to produce and sell in the European market further mitigates perceived access problems.

The lack of clear definition distinguishing central office and interconnect markets further limits the U.S. ability to enter the Japanese market. What definition does exist is substantially different from that operational in the United States today. Given NTT's "primary instrument requirement," its view that any instrument which connects to NTT transmission lines is within the central communication system and therefore subject to NTT regulation, and its policies regarding equipment and installation approval, it is virtually impossible for foreign firms, and in fact Japanese firms not members of the NTT family, to sell to NTT.

In addition to these problems, foreign sales to the Japanese telecommunications market are further impeded by NTT's use of sole-source procurement. Most procurement of mainline telecommunications equipment the world over is on the basis of negotiated bids with designated local suppliers. There is little argument that negotiated bids, in contrast to open competitive bidding, are in many instances the more rational method of procurement, decreasing high R&D costs. However, NTT's method of sole-source procurement, where one or two firms are selected to provide needed equipment, effectively bars any foreign or domestic suppliers outside the four family members. A system of negotiated contracts, where several firms are invited to bid on an impending purchase, seems a more rational and equitable route and within the standards set by the government procurement code.

Discussions with U.S. Government and industry representatives indicate that despite the recently concluded "mutual reciprocity" agreement between the United States and Japan, many serious problems still exist. Both industry and government officials believe that the United States and Japan view this agreement differently. Although the U.S. perception is that this agreement will now facilitate resolution of the government procurement issue between the two countries, the Japanese perception apparently is that the timeframe of the agreement allows them an 18-month delay.

Following a recent meeting with NTT officials, U.S. industry representatives reported that NTT told them that during the 18-month negotiating period (July 1, 1979, to December 31, 1980) NTT was constrained from making any foreign purchases. Additionally, NTT stated the U.S. firms could, of course, sell into the interconnect market; however, should they desire to sell into the central exchange market, NTT recommended that they sell to a member of the NTT family, who would then market the product. Given procedural constraints preventing entrance into the interconnect market and NTT's attitude regarding sales to the central exchange market, U.S. industry representatives conclude that there is not much hope for making substantial gains in the Japanese telecommunications market.

One final point is noteworthy. The government procurement code, as negotiated in the MTN, applies to government purchases across the board. In the case of Japan, although the code affects procurement by most government entities, it has increasingly been identified as relating solely to the Japanese telecommunications market and to NTT. Additionally, the "mutual reciprocity" agreement reached between the United States and Japan on June 2, 1979, although primarily focused on NTT and Japan's telecommunications market, provides more generally for "mutual access to each others' markets." Thus, the $7.5 billion worth of procurement which the United States hopes will be open to foreign suppliers will not be limited to bidding by foreign manufacturers for NTT contracts. Moreover, since the U.S. telecommunications market is privately operated whereas the Japanese market is government operated, and since the procurement code relates to government purchases (in the United States purchases by the federal government only), we agree with U.S. industry's assessment that the code will not lead to a substantial decline in the deficit in U.S.-Japan telecommunications trade.

Despite these views, however, GAO believes that efforts should be continued to provide reciprocity in access to each of the two markets, and, further, to provide for inclusion of foreign firms in negotiated contracts with NTT. Moreover, efforts should be made to allow foreign firms greater access to Japan's peripheral or interconnect market. This access would provide an opportunity for exports of equipment to Japan in an area where the United States is highly competitive in both price and technology.

CHAPTER 5

COLOR TELEVISION

INTRODUCTION

The issue of U.S. imports of color television receivers (CTRs) from Japan is critical because of the scale of the bilateral imbalance and the fact that in 1968-78, some 60,000 U.S. jobs in television manufacturing have been eliminated. Simultaneously, imports of U.S. TV sets produced overseas increased from 20 percent in 1970 to 70 percent in 1975, as more and more U.S. producers shut down their U.S. production facilities and began producing in Taiwan, Korea, and Mexico.

U.S. CTR manufacturers contend that much of the success of the Japanese in the U.S. market has been due to their violations of U.S. trade laws and international trade agreements. Domestic producers further complain that Japanese producers have free and open access to U.S. markets, while U.S. manufacturers are prevented from entering the Japanese market by a myriad of NTBs. On the other hand, Japanese producers contend that because U.S. products are inferior in quality and performance, they do not sell well in the Japanese market, and that U.S. manufacturers have not tried hard enough to sell them.

Our case study firm, Zenith Radio Corporation, has been experiencing declining profits, forcing the recent closure of several U.S. production facilities with the concomitant loss of jobs in the United States. Zenith has moved this production to Taiwan. During the 1950's, our case participant was marketing its products in Japan mostly in military post exchanges serving U.S. occupation forces. Although, since that time, Zenith has attempted on numerous occasions to penetrate the Japanese market, it has met with little success.

Company profile

Zenith is the leading American manufacturer of CTRs with about 22 percent of the market. In 1977, our case firm recorded sales of $957 million and employed about 20,000 people in its manufacture of all consumer electronics products and parts in the United States. It averages more expenditures on R&D (3 percent of sales) than other CTR manufacturers (averaging 2 percent of sales), and has concentrated its R&D efforts mainly on the technical upgrading of its CTRs.

Zenith exports have been increasing over the last 8 years. At present, our case participant is operating in 12 countries, mostly LDCs, through licensing arrangements. Under these arrangements, it exports CTR kits and sub-assemblies to domestic manufacturers who assemble and market the finished products under the Zenith brand name. Zenith's finished product exports to foreign distributors have also increased (over 50 percent) in the last 8 years.

Following acquisition of new production facilities in Pennsylvania in 1974, Zenith began to experience declining profits specifically because of strong competition from both U.S. and Japanese CTR manufacturers and generally because of the state of the economy following the oil embargo. In 1977, our case participant announced that its production of CTRs in various plants would be moved offshore to Mexico and Taiwan, resulting in the loss of about 3,500 U.S. jobs in sub-assembly operations. Should it decide against producing stereo cabinetry and speakers here, another 1,500 U.S. jobs will be lost.

Of all U.S. CTR manufacturers, Zenith has been the most active in challenging Japanese competition in the color television market through recourse to court and administrative procedures. It lost its countervailing duty suit in the U.S. Supreme Court, but has suits pending alleging violations of anti-trust and failure to enforce the Treasury's 1971 antidumping decision against several Japanese CTR manufacturers and importers.

History of Zenith's attempts to develop a market in Japan

In 1961 and 1962, Zenith made concurrent attempts with Nichimen Co., Ltd. and C. Itoh & Co., Ltd., both major Japanese trading companies, to enter the Japanese market. Zenith was provided with extensive research on the market distribution system and feasibility studies for marketing CTRs in Japan. Company representatives stated that both Zenith and the trading companies were very enthusiastic about the potential business. However, efforts to realize this potential were thwarted when both Japanese companies were unable to obtain the necessary foreign exchange allocation from the

Japanese Ministry of International Trade and Industry (MITI). 1/

Between 1963 and 1970, despite favorable market conditions, Zenith reports that it was unable to penetrate the market because of the "policies and practices of the Japanese Government," i.e., the Foreign Exchange and Trade Control Law and other barriers such as approval systems and administrative guidance. For example, Nichimen Co., reported that following extensive publicity surrounding the planned sales of 500 Zenith TVs in Japan, Nichimen's sales program was halted by pressures within Japan such as:

--Japanese Electronic Industry Association (EIA) pressure on the Japanese government;

--EIA's pressure on leading chain and department stores; and

--attempts to persuade Nichimen "not to indulge too aggressively in the distribution of [Zenith] products."

Nichimen recommended that Zenith obtain congressional backing and commence a public relations campaign to bring pressure on the Japanese Government and MITI for the "removal of obstacles on the import of electronic products into Japan."

A second area of complaint was the requirement that all commercial imports into Japan must have an import license and/or a quota allocation. 2/ Although there were three types of approval systems--the import quota system

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1/Under the Japanese Foreign Exchange and Foreign Trade Control Law (Law 228, Dec. 1949), MITI controlled the use of foreign exchange for imports. Upon attaining IMF Article 8 status on April 1, 1964, controls of this nature were abandoned. Foreign exchange controls were replaced with the automatic approval, automatic import quota, and import quota systems discussed in the next few pages.

2/Theoretically, this should have been abandoned with IMF Article 8 status in 1964; however, the automatic import quota was not abolished until February 1972 and the automatic approval system was not abolished until December 1972.

(IQ), the automatic import quota (AIQ), and the automatic approval system (AA)--in Zenith's case, the AIQ system had the greatest impact. The AIQ included TVs, phonographs, and other consumer electronics products. Under this system MITI set reportedly "secret" quotas on the import of products on the AIQ list and granted import licenses on the basis of circumstances in each individual case and product category. Zenith stated that this system was not "automatic" because MITI had the right of restricting imports by not approving the quota application or by establishing very low quotas. Although TVs and other electronic products were moved out of this category into the most liberal automatic approval (AA) list in August 1971, parts and components remained on the AIQ list until October 1971, when they were moved to the AA list. In December 1972, this system was abolished. These approval systems affected the U.S. industry's ability to provide effective after-sales servicing and maintenance. A new market entry study made for Zenith in 1970 still concluded that "while completed products enter the Japanese market freely, entry of necessary repair parts would still require government approval on a case-by-case basis." Furthermore, the study concluded that even if "completed products were to enter the market, there was evidence which led them to believe that distribution channels could be affected by the Japanese government's exercise of administrative guidance."

Zenith cites the Sears Roebuck & Co., experience in Japan in 1973--which Sears denies--as an example of the problems in penetrating the Japanese market. In this instance, Sears, through Seibu Department Stores, made available its catalogue to the Japanese consumer. Zenith asserts that a note in the catalogue states that all quoted prices (in dollars) should be multiplied by 300 yen to arrive at the Japanese price for the goods. However, according to Zenith, a note in the TV section of the catalogue stated that all TV prices were to be multiplied by 600 yen to arrive at the Japanese price. 1/ A spokesman for Sears stated that this was not the case. He added that the exchange rates used was the same for all products, and was changed daily on the basis of official daily rates.

1/A $295 Sears CTR at the 300 yen rate sold for just under 90,000 yen in the Japanese market compared with 177,000 yen at the 600 yen rate. Comparable domestic models were selling for about 150,000 yen.

In 1977, subsequent to the abortive attempts mentioned earlier, Zenith again began considering entrance into the Japanese market. In this next effort, Zenith asked a Japanese firm for assistance in penetrating the Japanese market. Following extensive research, feasibility studies and market analysis, both Zenith and the Japanese firm determined that there was much to be gained by both sides in a cooperative effort. Market analysis suggested that Zenith products and prices were competitive with comparable domestic brands in Japan, as shown below. The original intent of the joint effort was to capture 16 percent of the market with 19-inch (20-inch in Japan) CTRs and 3 percent of the market with 25-inch (26-inch in Japan) CTRs. Additionally, it was felt that establishing a market for these larger CTRs would allow potential for future marketing of smaller sets.

CTR size	Price Zenith model	Price Japanese models
19-inch	$567a/	$ 760 - 903
25-inch	811b/	1,231 - 1,250

Note: yen/dollar conversion made from International Financial Statistics, International Monetary Fund, Japan table, line af.

a/Price includes a 50 percent distribution margin after freight duties, taxes, etc. for the Japanese firm.

b/Price includes 50 percent distribution margin for the Japanese firm.

Source: Zenith Radio Corp.

It was decided that a wholly-owned subsidiary of the Japanese firm would aid Zenith in penetrating the market. Zenith has been meeting with the subsidiary firm regularly for the past 2 years to work out import, marketing, and distribution details, but for reasons unknown, actual entrance into the market has been stymied. In Zenith's opinion, the delays are not due to Japanese government actions or administrative guidance, but rather to "business considerations." As of this writing, there has been no conclusion to these negotiations; however, Zenith stated that a formal marketing plan had been received from the Japanese firm and was being reviewed by management.

BARRIERS TO U.S. ENTRANCE INTO THE JAPANESE MARKET

During the 1960's and early 1970's, Zenith complained that a myriad of NTBs prevented the entry of U.S. CTRs into the Japanese market. Among the most important of these were the approval systems for product acceptance, the distribution system, the commodity tax, and the availability of foreign exchange allocations. The latter is no longer a factor because of liberalization by the Japanese Government. The commodity tax adds to the cost of U.S. products in Japan. The tax, which is similar to U.S. state sales taxes, ranges from zero to 30 percent on CTRs depending upon technical factors and time period, and is paid by the domestic manufacturer on an ex-factory price basis 1/ in contrast to the importer who pays on a greater base--cif plus duty.

U.S. manufacturers note many problems in entering the Japanese distribution system. As noted below, the Japanese marketing structure is significantly different from the U.S. system. Japanese retail and servicing facilities are generally owned or controlled by the major manufacturers. Exclusive distributorships are heavily, if not totally, financed and supported by CTR manufacturers. As a result, these distributors normally do not carry foreign brands because they fear losing their franchises with their normal suppliers. U.S. electrical and electronic product manufacturers, therefore, must rely on a Japanese firm with an established distributor chain for the sale of their products. One should also note, however, that not all retailers for consumer electronic products are owned or controlled by the major suppliers. Department stores and independent dealers who sell all or several different brands provide outlets for U.S. products.

In our discussions, Japanese industry representatives expressed doubt that any retailer would refuse to sell a product, but from our fieldwork, we find this difficult to believe. In their opinion, the U.S. industry has simply not worked hard enough to establish a distribution system for its products. They conceded, however, that selling through department stores and other such facilities is difficult because of the problem of establishing an effective after-sales servicing system.

1/Zenith attempted to have countervailing duties imposed on imports of Japanese CTRs on the grounds that rebates of the commodity tax amounted to a "bounty" or "grant" within the meaning of the countervailing duty statute. The Supreme Court ruled in 1978 that the rebate of the tax was not a "bounty" or a "grant" and therefore could not be countervailed under the statute previously mentioned.

U.S. industry representatives also complain that Japanese design specifications, quality control and safety standards create problems since in many instances, they are more stringent than those in the United States. We recognize of course that each country has the right to establish its own standards. The Japan Machinery and Metal Institute (JMI) created in 1957 by MITI, conducts inspections and testing and upon completion issues an approval number for the product. In a 1970 letter to C. Itoh & Co., Ltd. Zenith indicated that it would have had to make a number of costly modifications in design and components to meet these standards. After weighing the expense of gearing production for these changes against sales potential, Zenith informed C. Itoh that it would not be "economically feasible for Zenith to enter the Japanese market with television products." Zenith also has claimed that market penetration was further restricted by the required licensing/approval procedures.

An example of the impact that exclusive distributorships and quality and safety standards inspections may have is outlined in a U.S.-Japan Trade Study Group report on electrical appliances. This report points out that the distribution system and product approval systems create "significant difficulties for U.S. exporters and smaller domestic manufacturers alike." Given the similarity in distribution systems and inspections in Japan for consumer electronic products and electrical appliances, we think that this study is relevant to our discussion. In its report dealing with refrigerators, the TSG noted that

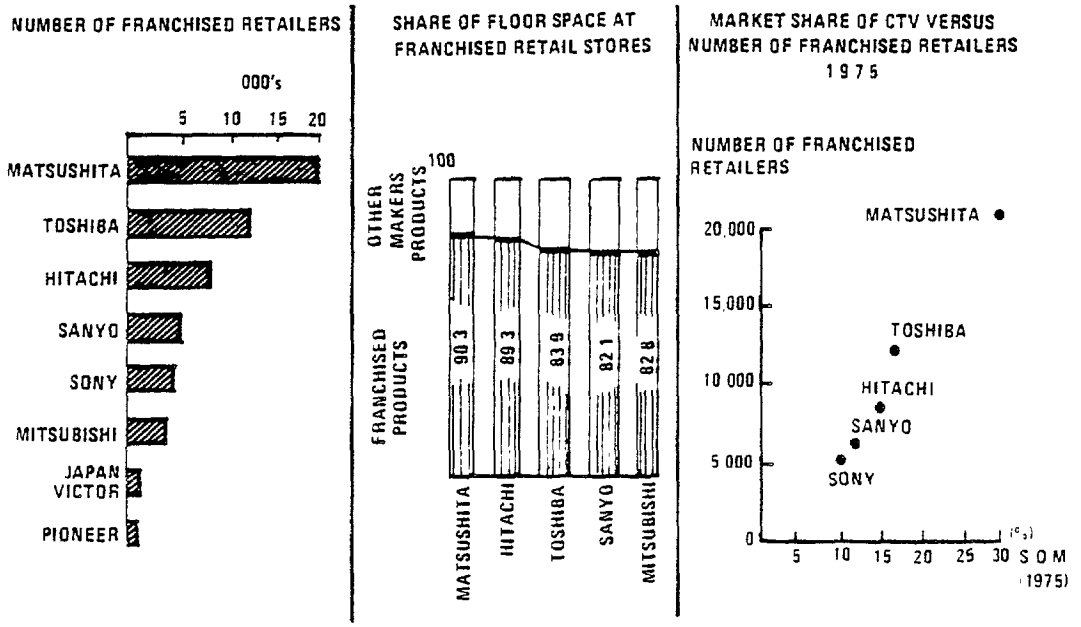
--Japanese manufacturers have extensive franchised retail outlets;

--these outlets commit a minimum of 80 percent of their floor space to their franchisor; and

--market share is directly related to the number of franchised retailers.

CHART 1

DISTRIBUTORSHIPS
FOR ELECTRICAL APPLIANCES
IN JAPAN



SOURCE U S JAPAN TRADE STUDY GROUP

This report also compared the approval systems of the United States and Japan noting, in particular, that

--in Japan the approval procedure takes 2-12 months whereas in the United States it takes 2-4 months; and

--Japan requires testing of products in Japan whereas the United States permits testing in either the United States or Japan.

JAPANESE INDUSTRY POSITION

In talking with several Japanese trading companies and manufacturers across industry lines, we found that they had similar complaints about U.S. industry. Specific to the consumer electrical and electronics cases, however, Japanese representatives outlined three major areas which they believe

disadvantage the United States in the Japanese market: (1) the extent of the U.S. marketing effort, (2) enthusiasm of the exporter, and (3) the U.S. industry's understanding of the market.

In the first instance, Japanese representatives pointed out that usually the U.S. sales price to a Japanese distributor is the same as to a U.S. distributor, despite the fact that the Japanese distributor often bears the cost of advertising, homologation (in some instances), after-sales servicing, market research, dealer training, etc. The Japanese distributor complains that, because he receives no discount in the sales price, in effect he pays for these activities in the United States and then additionally must bear the cost of similar activities in Japan, particularly for advertising. Electrical and electronics companies also noted an unwillingness on the part of U.S. firms to design products for the Japanese market taking into consideration, for example, local tastes, climate, use, etc. In addition, we were told that a large percentage of products shipped by U.S. firms to Japan either do not meet specification requirements or are defective upon arrival.

The Japanese were most critical of U.S. industry in the second area--enthusiasm of the exporter. One representative noted that many of the U.S. firms with whom they deal have very small, if any, international departments with relatively little power within the firm's hierarchical structure. As a result, there seems to be a lack of interest or enthusiasm for export. Additionally, there is very little effort to homologate products to meet Japanese design and safety specifications, and a lack of coordination between domestic and export model changes in design and features. Japanese firms complained that model changes are often made in accordance with U.S. market trends without any concern or focus on the needs and demands of the Japanese market. Furthermore, Japanese companies pointed out that U.S. firms make little follow-up effort in their sales, e.g., meeting with distributors, providing technical and sales assistance, etc.

Finally, Japanese firms complained that U.S. firms simply do not understand the Japanese market. They explained that the Japanese consumer is generally more sophisticated than the average U.S. consumer, demanding much more of products purchased.

In summary, Japanese firms stated that they believe much of the U.S. problem in penetrating the Japanese market is at the corporate policy level; however, they felt as

strongly that the U.S. Government is also at fault for not providing U.S. companies with the incentives necessary to carry out active export programs.

Corporate policy affecting sales of CTRs to Japan

The deleterious effect of miscalculations in corporate policy is gaining more acceptance as a significant factor affecting U.S. sales of CTRs. Essentially, the story is one in which U.S. manufacturers "missed the boat," not only in the case of CTRs, but also in the earlier cases of monochrome TVs, stereo equipment, and transistor radios.

In the case of CTRs, according to one of the major proponents of the theory, 1/ initial Japanese average wholesale prices in 1962 were high compared to U.S. prices ($500 vs. $350 a set), and Japanese sets were smaller. However, due to extraordinary growth in demand in Japan after 1965 and the subsequent dramatic increases in production, costs and prices rapidly declined. Production grew from 98,000 units in 1965 to 6.4 million units in 1970--a 196 percent per annum growth compared to a 41 percent growth rate for the United States--with only 16 percent of this production being exported.

During this period, according to the theory, the rapidly growing Japanese market was relatively unprotected as compared with textiles, steel, or autos. Primarily because the Japanese government never considered consumer electronics a strategic or important industry, its development did not depend on marketing restrictions, high tariff barriers, and other protective measures. Thus, there was little to prevent U.S. exports and market penetration when the United States was the world's low-cost producer. Furthermore, with a lack of competition from the United States, Japanese producers were able to take advantage of a phenomenal growth in demand to produce in great volume. As a result of this volume production, costs and thus prices were significantly reduced, making the Japanese the most formidable of international competitors at the expense of a previously more experienced and competitive U.S. industry.

1/Portions of this section were obtained from J.C. Abegglen and W.V. Rapp, "The Competitive Impact of Japanese Growth" in Jerome B. Cohen, Pacific Partnership: United States-Japan, Japan Society, Inc., Lexington, Mass. 1972, pp. 40-41.

Although there appears to be merit to the foregoing explanation of U.S. problems in penetrating the Japanese market, we diverge with the theory in one particular respect. In GAO's opinion, there were, in fact, barriers which could negatively affect U.S. penetration of the market. The existence of the Foreign Exchange and Foreign Trade Control Law did prevent sales of CTRs to Japan in the early and mid-1960's as previously discussed. Furthermore, restrictions on foreign capital investment in Japan, discussed more fully in our automotive case study, strictly regulated the ability of U.S. industry to establish its own production facilities or joint ventures with Japanese manufacturers. Additionally, as shown in Table 1, duties on the import of foreign CTRs and black and white television receivers were significant. Moreover, although no longer applicable, import approval systems which existed at the time created significant barriers to U.S. entrance into the market. There are numbers of other nontariff barriers which have been documented for us by our case participant. On the basis of such information, it is difficult for us to conclude that miscalculations in U.S. corporate policy alone caused the poor showing of the U.S. consumer electronics industry in Japan.

Table 1

Comparison of U.S./Japanese Tariffs on Color Television Receivers 1965-74 a/

Year	United States Most-Favored Nation	Japan b/ General	GATT	Temporary
		(percent)		
1965	10 ad valorem	30.0	30	
1968	9 " "	30.0	30	
1969	8 " "	30.0	24	
1970	7 " "	30.0	21	
1971	6 " "	7.5	15	
1972	5 " "	7.5	15	5 c/
1973	5 " "	7.5	15	4
1974	5 " "	7.5	1	4

a/There have been no changes in tariffs on CTRs in either the United States or Japan between 1974 and 1978.

b/Japan's tariff schedules are broken into four separate categories including the three listed above and a "preferential" schedule (comparable to the U.S. General System of Preferences). Generally, the order of priority for application of the rates is (1) general, (2) GATT, and (3) temporary. Effectively, the lowest rate, whether general, GATT or temporary, however, is applied.

c/The temporary rates shown for 1972-74 were the result of a unilateral tariff cut on the part of Japan. Because these two rates are lower than the "general" or "GATT" rates, they are the applicable tariff rates for these years.

Source: Compiled from the Tariff Schedules of the United States Annotated, 1965-78; and Japan Tariff Association, 1965-78.

U.S. INDUSTRY POSITION

The most significant factor in the competitive ability of the United States vis-a-vis Japan appears to be the quality and reliability of CTRs produced by both countries. A leading quality-control expert, J. M. Juran, cites several examples which, in his opinion, indicate that Japanese producers have outpaced U.S. producers in this area. Perhaps the most telling of these are Juran's study of Japanese

takeovers of U.S. plants such as Motorola (now Quasar) and Warwick (now a Sanyo facility) where retail failure rates dropped dramatically. Additionally, Juran states that basic differences in financial policies and marketing systems between the United States and Japan also affect quality and reliability differences between the two countries. 1/

Zenith counters these statements citing various independent studies conducted by CTR technicians which indicate that on a quality and performance basis, U.S. CTRs are competitive with Japanese products. Furthermore, Zenith states that during the 1973-74 time period, much of the improvement in quality and reliability of CTRs can be attributed to the widespread introduction of solid-state technology in CTRs. Curiously, solid-state technology was pioneered by the Japanese in the late 1960's when U.S. manufacturers, still bound to tube technology, said solid-state would not be successful.

Because of the time constraints involved in preparing this report, GAO was unable to determine independently the extent of quality and reliability differences in U.S. and Japanese CTRs. We have thus presented, without conclusion, a brief summary of both views.

JAPANESE EXPERIENCE IN THE UNITED STATES

The Japanese success in achieving a highly competitive position in the world market with major Western manufacturers, particularly the United States, has had serious repercussions. In the last decade, Japanese consumer electronics manufacturers have been subject to investigations in the United States under the Antidumping Act of 1921 and Section 337 of the Tariff Act of 1930, an antitrust suit, an escape clause action, a countervailing duty investigation, and an orderly marketing agreement (OMA).

The OMA between Japan and the United States limits Japanese exports of CTRs and color set subassemblies to 1.75 million per year for 3 years beginning July 1, 1977. Table 2 shows U.S. production, imports for consumption, domestic supply and the level of import penetration on a quarterly basis through the end of the first OMA restraint year, and the first half of the second restraint year.

1/J. M. Juran, "Japanese and Western Quality - A Contrast." A paper copyright 1978 by J. M. Juran.

Table 2

COMPLETE COLOR TELEVISION RECEIVERS:
U.S. Production, Imports for Consumption, Domestic Supply, and Import Penetration,
Quarterly and Annual,
First Restraint Year Ending June 30, 1978

Period	U.S. Production	Imports	Domestic Supply 1/	Import Penetration 2/
	(Quantity in units)			
1977				
Third Quarter	1,697,469	689,587	2,387,056	28.89
Fourth Quarter	1,875,268	567,121	2,442,389	23.32
1978				
First Quarter	1,905,075	551,823	2,456,898	22.46
Second Quarter	2,126,304	660,669	2,787,003	23.70
Restraint Year Total	7,604,116	2,469,230	10,073,346	24.51
1978				
Third Quarter	2,069,383	787,187	2,856,570	27.55
Fourth Quarter	2,181,663	775,147	2,956,810	26.22

1/U.S. production plus imports. Exports not shown.

2/Imports as percentage of domestic supply (production plus imports).

Source: Department of Commerce, News, March 9, 1979.

The impact of such imports in the United States is evident given differences in wage rates as shown in Table 3.

Table 3

Estimated Hourly Compensation of Production Workers in CTR Equipment Manufacturing, 1975-78.
(dollars)

	U.S.	Japan	Mexico	Taiwan	Korea
1975	5.69	2.60	1.33	.47	.29
1976	6.15	2.84	1.38	.48	.36
1977	6.63	3.43	1.22	.59	.47
1978 a/	7.50	4.79	1.40	.64	.57

a/Estimated

Source: Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, (unpublished statistics) April 1979.

As imports from Japan decreased with the OMA, imports from Taiwan and Korea, in particular, increased dramatically. As a result, additional agreements were negotiated with Taiwan and Korea in December 1978 limiting exports from these sources as follows:

--from Taiwan during the period February 1, 1979, to June 30, 1979: 127,000 complete sets and incomplete sets with picture tubes, and 270,000 incomplete sets without picture tubes, and from July 1, 1979 to June 30, 1980, 373,000 complete and incomplete sets with picture tubes, and 648,000 incomplete sets without picture tubes;

--from Korea during the period February 1, 1979, to October 31, 1979: 153,000 complete and incomplete sets; from period November 1, 1979, to June 30, 1980: 136,000 complete and incomplete sets.

Japanese investment in U.S. television production 1/

In 1977, one out of every six color TV sets produced in the United States was manufactured by U.S. subsidiaries of

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1/Based largely on information from the U.S.-Japan Trade Council.

Japanese consumer electronics firms; and one out of every six people in the U.S. CTR industry was employed at a Japanese-owned plant. In 1978 and beyond, these ratios are expected to rise because two other Japanese manufacturers have opened production facilities here and a third, which originally had proposed a joint venture with an American firm, has subsequently decided to begin production in the United States. 1/ Additionally, the three subsidiaries which were in operation before this year plan production increases.

The growth of Japanese investment in the U.S. CTR industry is not solely the result of the 1976 OMA. Although there is little doubt that the OMA spurred decisions of the Japanese to begin manufacturing in the United States, when the OMA was signed, three Japanese manufacturers were already producing here. Because of the adverse affect on their exports of factors such as the yen appreciation and rising wages, still other manufacturers were investigating this possibility. In fact, the OMA was designed not only to foster additional Japanese investment in U.S. CTR manufacturing facilities, but also to insure American content in terms of material and labor--about 40 percent according to some industry estimates.

There are now six Japanese consumer electronic companies that have operating or planned production facilities in the United States: Sony Corporation, Matsushita Electric Industrial Co., Sanyo Electric Co., Mitsubishi, Tokyo Shibaura (Toshiba) and Hitachi, Ltd. Estimated output of these facilities, employing about 5,500 people, is about 1.23 million sets per year.

Actual or planned U.S. investment activities of Japanese CTR manufacturers leave only three Japanese firms that produce CTRs under their own brand name without production facilities in the United States: Sharp, 2/ Victor Co., of Japan (JVC), and General Corporation (Teknika brand).

1/Hitachi had hoped to establish a joint-venture with GE for the production of CTRs; however, as a result of a determination by the Justice Department, these efforts have been halted. Hitachi has subsequently decided to establish its own manufacturing facility here in the United States.

2/Sharp recently announced that it would begin production in the United States.

U.S. CTR production expands

Partially due to production by Japanese manufacturers in the United States, U.S. CTR production began recovering in 1976 after hitting a low in 1974. Between 1976 and 1977, CTR production jumped 26.9 percent to about 6.8 million units. At the same time, imports of complete CTRs fell 10.4 percent to 2.5 million sets. Coupled with the expansion of U.S. production, this boosted U.S. manufacturers' share of the apparent 9.3 million set supply to 72.8 percent in 1977 from 65.4 percent in 1976.

U.S. IMPORTS

CTR imports totalled 2.775 million units in 1978, a 9.3 percent increase over the 2.537 million units imported in 1977. Japan accounted for 55.7 percent of consumer electronics products imported in 1978, a decrease from the 62.9 percent share held in 1977.

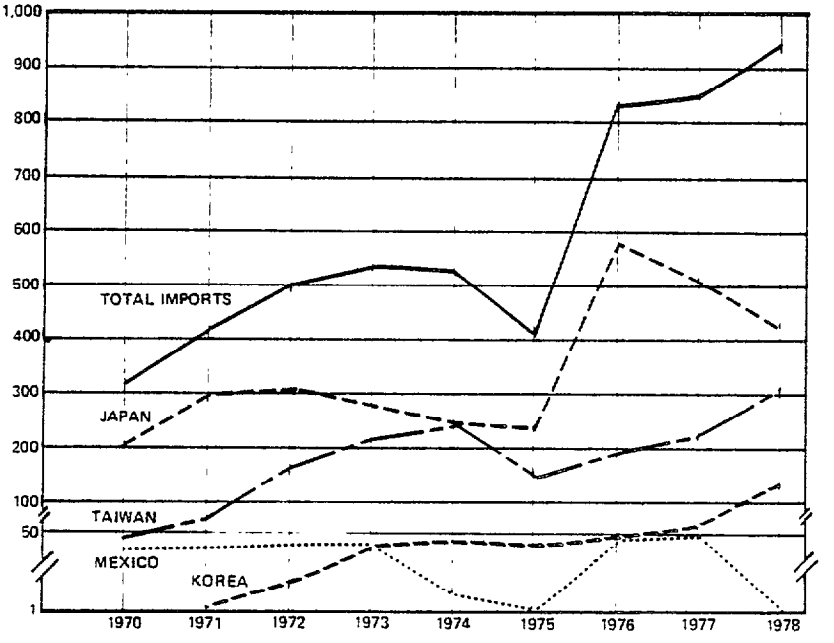
Despite the limits on imports of CTRs from Japan, 1978 CTR imports from the world ran just 59 thousand units less than the record 1976 import posting of 2.834 million units and were up by .236 million units over the posting for 1977. Imports of CTRs from Japan in 1978 dropped 29 percent to 1.4 million units valued at $2.5 billion, but strong gains were registered by Taiwan and Korea, up 94 percent to 624 thousand units and 350 percent to 430 thousand units, respectively. 1/

It is significant to note the proportion of U.S. imports of CTRs which are classified under TSUS 807--a Customs classification which allows CTRs manufactured with U.S. components overseas to enter the country with duties imposed only on the value-added of the CTR. Chart 2 shows U.S. imports of monochrome and color television receivers from selected countries from 1970-78. Chart 3 shows that, of total 1978 imports, TSUS 807 imports made up roughly 20 percent of total U.S. imports and averaged 25 to 30 percent between 1972 and 1975. Over 50 percent of U.S. imports from Taiwan (which has the second largest share of the U.S. import market as shown in Chart 2) fit into the TSUS 807 category. In the case of Mexico, between 1970-74 and 1976-77, nearly 100 percent of U.S. imports were TSUS 807 imports.

1/Recently concluded OMA's limit the exports of CTRs and certain subassemblies thereof from Taiwan and Korea between February 1, 1979 and June 30, 1980.

CHART 2

U.S. IMPORTS OF
MONOCHROME AND COLOR
TELEVISION RECEIVERS FROM
SELECTED COUNTRIES
1970-1978
(DOLLARS-THOUSANDS)



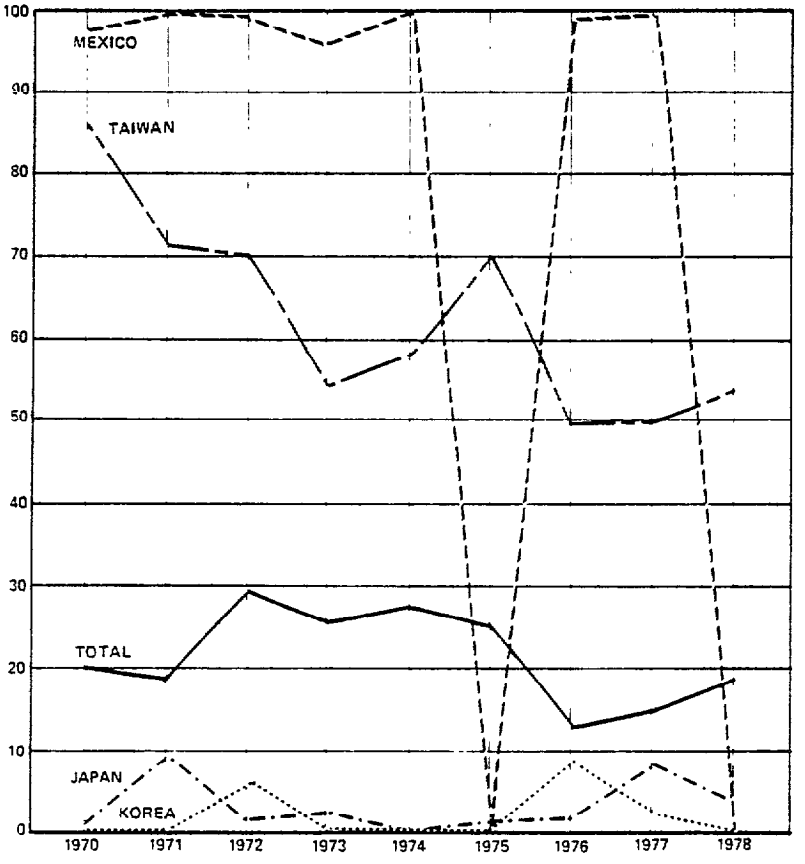
SOURCE COMPILED BY GAO FROM HIGHLIGHTS OF U S EXPORTS AND IMPORTS 1970 1978

Japanese domestic sales and imports

Japanese imports of CTRs from the world present a sharp contrast to the U.S. import position and reflect to some extent the difficulties encountered by foreign producers in entering the market. Between 1975 and 1978, Japanese domestic sales ranged from 5.02 million units to 5.62 million units. Imports from the world, on the other hand, were 11,644, 452, 2,954, and 485 units in 1975, 1976, 1977, and 1978, respectively.

CHART 3

TSUS 807 IMPORTS
OF MONOCHROME AND COLOR
TELEVISION RECEIVERS AS A PERCENT OF
IMPORTS FROM SELECTED COUNTRIES
AND TOTAL IMPORTS
1970-1978



SOURCE: COMPILED BY GAO FROM HIGHLIGHTS OF U.S. EXPORTS AND IMPORTS 1970-1978

CONCLUSION

On the basis of the information obtained in this study, GAO believes that, historically and currently, on both sides, there are serious problems which must be solved through discussion and cooperative effort. We cannot conclude that the blame for the U.S. industry's lack of success in the Japanese market is solely the responsibility of either Japan or of the United States.

From an historical perspective, the fact may be that the United States "missed the boat" regarding exports of CTRs to Japan in the early and mid-sixties. However, several tariff and nontariff barriers which existed at the time, some of which still exist, were certainly factors in this failure.

We believe that it is significant that other countries, e.g., Germany and the Netherlands have also had little or no success in the Japanese market despite active participation in other world markets. That the United States did miss this earlier opportunity, however, may have serious implications for the United States in a market which is and has been well served by domestic manufacturers for the last decade. Although this fact may create further problems for the United States in penetrating the market, given the information presented to us concerning the United States price competitiveness in the Japanese market and indications that there is demand for certain U.S. CTR models, we conclude that efforts to establish a place in the market should not be abandoned. The United States must concentrate on improving its understanding of the Japanese market and consumer, while the Japanese must be cautious to avoid imposing unfair restrictions on U.S. imports.

Efforts to achieve these ends have already begun on both sides. On the part of Japan, many of the tariff and nontariff barriers discussed at various points in this study are no longer in effect, such as the foreign exchange allocation, and import approval systems. Tariffs have been substantially lowered through the Kennedy Round of the MTN, and the regulation of capital investment has been substantially liberalized.

On the U.S. side, discussions with industry representatives indicate that they are making more concerted efforts to recognize the unique characteristics of the Japanese "way of doing business" and to establish a distribution network with emphasis on technical assistance and servicing. The United States must continue these efforts, and at the same time become more flexible with respect to product modifications necessary to meet safety standards in Japan and more responsive to the needs and desires of the Japanese consumer.

CHAPTER 6

MACHINE TOOLS

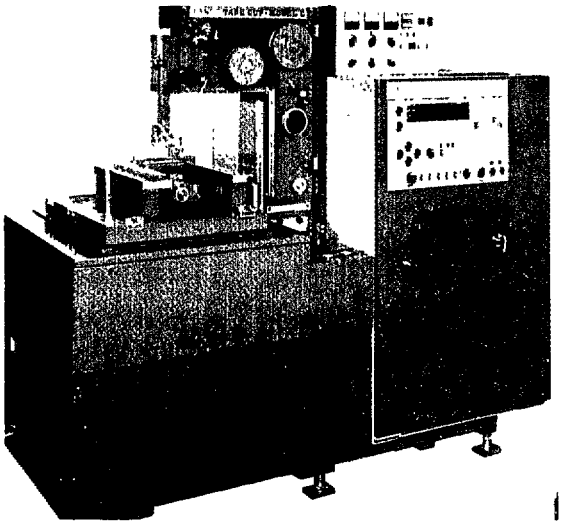
Although the U.S. machine tool industry is relatively small, it supplies essentially all manufacturers with machine tools and parts manufacturing systems. While the total value of U.S. exports of machine tools has grown irregularly, the value of imports of machine tools has been increasing, and in 1978, the United States recorded the first negative machine tool trade balance in recent years.

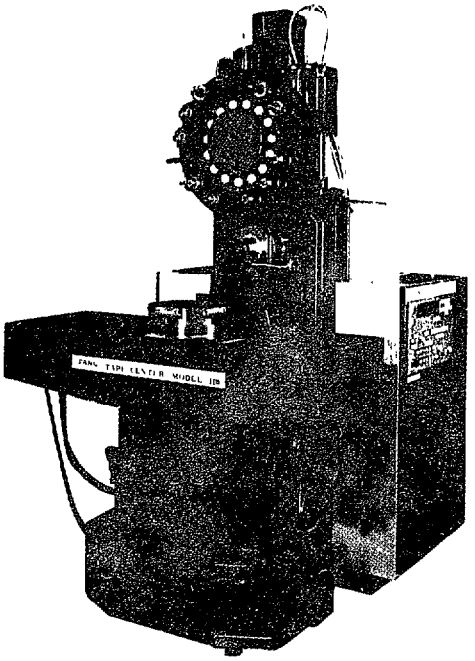
The company that participated in our study has been successful in penetrating the Japanese machine tool market by concentrating on selling high technology metalcutting machine tools as well as computer-controlled manufacturing systems. This firm is the largest producer of machine tools in the United States, with worldwide sales of machine tools and related electronic systems above $500 million in 1978. Some of its major products include computer numerically controlled (CNC) machining centers, precision grinding machines, large profiling machines and CNC turning centers.

Numerical control (NC) is defined as the control of the operation of machines by means of recording a work cycle on perforated cards or tapes, or on magnetic tapes. The programmed numerical values on these tapes are automatically read and decoded to cause a corresponding movement of the machine it is controlling. A numerical control system has two basic elements that operate as an integrated unit--the machine which does the work and the electronic control unit which directs the machine's motion. 1/ Some NC machines operate directly from computers and are referred to as CNC machines. Most NC machines receive instructions in the form of a punched tape which has been produced by a computer-type device. An NC machining center is a type of machine tool which can perform a variety of functions such as milling, boring and drilling, often through automatic tool changing.

1/This description of numerical control is taken from Clifford W. Fawcett, Factors and Issues in the Survival and Growth of the Machine Tool Industry, Doctoral Dissertation, the George Washington University, 1976.

Examples of a CNC machine tool and an NC machining center are pictured below.





Of its total sales of metalcutting machine tools, our case firm exports approximately 15 percent. From the Japanese perspective, it supplied over 25 percent of Japan's imports of machine tools from the U.S. in 1977. However, not all of these export sales originated in the U.S., as the firm also has manufacturing facilities abroad.

The company first began exporting to Japan in 1950, with a Japanese trading company acting as distributor. By 1968, the firm had begun a direct sales and servicing organization with several other U.S. machine tool firms. In 1973, the firm formed its own wholly-owned subsidiary which is responsible for both sales and servicing.

The firm believes that its success in penetrating the Japanese machine tool market is the result of a number of factors. The company was able to establish itself initially by working with a Japanese trading company. The transition to its own direct sales and distribution system was a smooth one, because it was able to retain some employees from the

trading company. Such continuity is important to Japanese customers. Moreover, the firm is set up like a Japanese company, with employee benefits similar to those of Japanese firms. Since the company sells mostly sophisticated equipment that the Japanese are not yet manufacturing, its market is assured for the present. The subsidiary's sales representatives, all Japanese, are "sales engineers," who receive training in the United States. Since servicing is a particularly important aspect of machine tool sales, this too has contributed to the company's success.

Although this firm was successful in developing more than a 25 percent share of U.S. metalcutting machine tool exports to Japan in 1977, total Japanese imports of machine tools decreased between 1974 and 1976, as Japanese machine tools continued to increase both in output and sophistication. For this reason, the firm has begun to establish new product lines, such as plastic processing machinery, and to develop new markets, such as Korea and Singapore. The company also hopes to regain some of the market in less sophisticated (fundamental) machine tools, although countries such as Korea, Taiwan, Singapore, and India are producing these less expensively than Japan. These tools are now being imported into Japan, and this could further weaken the U.S. position in this market.

THE U.S. MACHINE TOOL INDUSTRY

With total production of $3.01 billion in CY 1978, the U.S. machine tool industry, if treated as a single corporation, would rank fourteenth on a list of the largest U.S. industrial corporations. 1/ Although small, this industry supplies essentially all manufacturers, including the (1) automotive, (2) aircraft, (3) bearings, (4) energy-related, (5) farm machinery, (6) refrigeration and service, and (7) general equipment industries. In 1977 the four leading U.S. machine tool firms accounted for over 30 percent of total output, with most of the rest supplied by numerous small firms. Only two plants employed more than 2,500 workers in 1972, although total employment in the industry was 85,000 in 1978, as compared with 76,600 in 1972. A comparison

1/The U.S. industry is broken down into two categories by the government's Standard Industrial Classification System (SIC): metalcutting machine tools (SIC 3541) and metalforming machine tools (SIC 3542). Approximately 75 percent of the output of this industry is in metalcutting machine tools.

of firm size by employment in the United States and Japanese machine tool industries is shown in the following table. 1/

U.S.		Japan	
Employment	Number of plants	Employment	Number of plants
1-49	1,034	1-49	1,480
50-249	172	50-299	133
250-999	61	300 or more	35
1,000 or more	10		

In spite of its small size, the U.S. machine tool industry supplies not only major domestic manufacturers, but also major foreign markets, including Canada, the United Kingdom, Japan, Mexico and Brazil. Nearly 20 percent of the 1978 output of this industry was exported.

An industry in transition 2/

The U.S. machine tool industry underwent a major change in the 1960's as a result of a shift in the buying patterns of machine tool end-users. Due to rising labor costs and improved technology, computer-controlled machines and large machining centers became major factors in the industry. The National Machine Tool Builders' Association (NMTBA) indicates that 23 percent of its member firms now produce some form of numerically controlled (NC) machine tools. In addition, the U.S. machine tool industry has faced increasing foreign competition.

The U.S. Army study cited below indicated that, due to the development of sophisticated processes such as computer control and machining centers, many small firms have had difficulty maintaining adequate research and development programs. The study surveyed 43 firms which indicated that the average research and development expenditure was only about 1.5 percent of sales. The report also showed that, while the U.S. machine tool industry is still a world leader in the

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1/U.S. Bureau of Census, Census of Manufacturers, 1972. MITI, "Census of Manufacturers, 1975: Report by Industries."

2/Most of this section is taken from the U.S. Army Industrial Base Engineering Activity's Machine Tool Industry Study, Rock Island, Ill., 1978.

production of the more technologically advanced machine tools as well as in machine tool engineering and design, the gap between the United States and other countries is narrowing. Tabulations of patent activity provide one way of gauging changes in technology. Activity in patents on metalworking machinery and equipment reached high points in 1965, 1969, and 1971, but there has been a steady increase in the number originating abroad. The study reported that from 1963 to 1972, the percentage of patents on metalworking machinery and equipment originating in the United States fell from 84 to 67.

Not only have many small U.S. machine tool firms had difficulty in keeping up with the demand for innovative, sophisticated production processes, but the industry as a whole has also not maintained a modern production base. The Army Report states that "a survey conducted by American Machinist magazine in 1976 showed that the productive equipment in use by the machine tool industry was, on the average, older than that in use by all machinery manufacturers. For example, the proportion of machine tools over 20 years old in use by the machine tool industry was 36 percent greater than those in use by all machinery manufacturers."1/ Table 1 compares in percentages the age of metalmaking equipment used by machine tool manufacturers and that of all machinery manfacturers.

1/ibid.

Table 1

Inventory of Metalwork Equipment by Age, 1976
Age of Machinery
(percent)

Equipment-Type Industry	Conventional Machine Tools 0-4	5-9	10-19	20-over	NC machine tools
Metalcutting Machines					
All Machinery Manufacturers a/	11	22	35	32	3.0
Machine Tool Manufacturers b/	7	16	37	40	3.9
Metalforming Machines					
All Machinery Manufacturers	11	20	36	33	0.5
Machine Tool Manufacturers	7	18	36	39	-
Joining Equipment					
All Machinery Manufacturers	23	36	30	11	0.1
Machine Tool Manufacturers	16	30	37	17	-
Other Equipment					
All Machinery Manufacturers	18	31	32	19	0.1
Machine Tool Manufacturers	12	25	33	30	-

a/SIC 35; Machinery, except electrical

b/SIC 3541 and 3542; metalcutting and metalforming

Source: U.S. Army Industrial Base Engineering Activity, Machine Tool Industry Study; Rock Island, Illinois, November 1, 1978. Based on a 25 percent sample of companies with 20 or more productive employees.

Only in the area of numerically controlled metalcutting machine tools did the machine tool industry surpass the average of all manufacturers, and most of this equipment is owned by a few of the larger firms. The report concludes that "this reliance on aging, obsolete and depreciated equipment can only weaken the U.S. competitive position in the world market, not only in the machine tool but also in the entire metalworking industry." 1/

While production equipment used in the U.S. machine tool industry is, on the average, older than that used by all machinery manufacturers, there are both large and small machine tool firms which are using new manufacturing technologies. Our case firm, for example, has a modern manufacturing facility, and employs computer-aided design and manufacturing techniques.

GAO believes that the use of aged, obsolete capital equipment has contributed to a decrease in productivity in the U.S. machine tool industry. According to the U.S. Army report, the decline in productivity from 1967 through 1976 averaged .96 percent per year, well below the 2.4 percent gain that overall U.S. manufacturing showed.

The report concluded that, in attempting to increase productivity, the U.S. machine tool industry is hampered by its dispersion among many small firms, and by the lack of diversification of most machine tool firms. In addition, competition for capital for investments which do not directly improve productivity, such as safety and pollution control measures, has also been high in recent years.

JAPANESE MACHINE TOOL INDUSTRY

With total production of $2.3 billion in CY 1978, Japan is the fourth largest producer of machine tools in the world, approaching the U.S. output of $3 billion mentioned earlier. This industry, like its U.S. counterpart, is composed mostly of small firms. While total employment was roughly 54,000 according to 1975 census figures, (compared to 85,000 for the United States in 1978 noted earlier), only 35 of the almost 1,700 machine tool manufacturers in Japan employed more than 300 workers. (For the employment comparison by size, see table in section on the U.S. machine tool industry.) The Japanese industry, like the U.S., also exports a considerable percentage of its output--CY 1978 exports

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1/ibid.

accounted for over 44 percent of production, as compared with the U.S. industry's exports, which were almost 20 percent of its output.

Japanese production of machine tools increased rapidly in the 1960s; in 1970, Japanese firms produced $867.6 million worth of machine tools, as compared with $125.5 million in 1960. Japanese manufacturers also began to recognize the need for more highly sophisticated production processes, as did U.S. manufacturers. According to the U.S. Army machine tool study, the close relationship between Japanese business and government has enhanced Japanese machine tool builders' ability to develop advanced manufacturing technologies. The report indicates that Japanese machine tool builders have been pursuing three different avenues in the development of a flexible computer-controlled machining system; the development of one of these three approaches has been designated a 6-year national project. Started in 1977, it is concerned with the building block module approach, which employs standardized modules of beds, tables, columns, and other parts of a diversified machining system, whose production capabilities can be expanded or reduced to meet the manufacturer's needs. The concept was originated by a U.S. firm.

Japanese advisory groups have also recommended that the government provide assistance to firms for research and development activities. Thus, the Industrial Structure Council, comprised of leading business and industry officials, was established in the early 1960s to serve as an advisory organ to MITI on industrial policy. A report 1/ on the Japanese Machine and Information Industry approved by the Council stated that

> "Special tax consideration and related remedies to promote research activities are as important as ever."

The report notes that joint research among various firms is a problem, due to the risks involved, and also to the difficulties of evenly distributing development financing. The Council then suggests that these firms

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1/This report was translated into English by the Economic Research Institute, Japan Society for the Promotion of the Machine Industry, March 1978. The English version is considered tentative.

". . . pool part of their respective earnings during the good times [for] a joint research fund, with the government making a financial contribution to this fund in the form of a subsidy."1/

From this recommendation it is evident that the Council sees the Japanese government as having an important role in formulating plans both for the direction an industry should take, and the growth path it should follow.

According to the U.S. Army study, the Japanese machine tool industry, unlike the U.S. industry, has developed highly automated production processes for manufacturing machine tools. Thus, the Japanese industry has concentrated not only on the development of sophisticated machine tool technologies, but also on the modernization and automation of its production base. We believe that these highly automated production processes have contributed to a higher average annual percentage change in manufacturing productivity in Japan than in the United States, although specific figures for the Japanese machine tool industry are not available.

U.S.-JAPAN BILATERAL TRADE

Although a leader in innovation in this industry, the United States is no longer the largest machine tool producer; it is second after Germany, and is followed by the U.S.S.R. and Japan. Together these four countries account for $11.09 billion, or almost 60 percent of total world production.

The United States is, however, the largest machine tool consumer, with Japan its largest foreign supplier. In 1978, Japan exported over $220 million worth of machine tools to the United States, representing almost a 31 percent share of the U.S. import market. In contrast, the United States recorded the first negative machine tool trade balance in recent years, with imports exceeding exports by about $150 million. This was due not only to a sharp increase in imports, but also to fluctuations in exports, as indicated in Table 2.

1/ibid.

Table 2

U.S. World Imports And Exports Of Machine Tools
CY 1972 - 1978
(thousands)

imports, value in foreign country; exports, value at U.S. port

	Metalcutting		Metalforming		Total	
Year	Imports	Exports	Imports	Exports	Imports	Exports
1972	$ 82,560	$148,329	$ 31,438	$111,705	$113,998	$260,034
1973	125,974	205,472	41,082	145,063	167,057a/	350,535
1974	209,098	264,347	61,642	179,468	270,740	443,815
1975	248,147	343,116	69,431	224,528	317,578	567,644
1976	245,321	289,808	72,983	256,725	318,304	546,533
1977	319,249	257,666	81,655	194,398	400,904	452,064
1978	582,165	366,459	133,117	193,741	715,282	560,200

a/Total does not add due to rounding.

Source: U.S. Department of Commerce, Census Report No. EM 522 (Exports), as reproduced by N.M.T.B.A.
U.S. Department of Commerce, Census Report No. IM 146 (Imports), as reproduced by N.M.T.B.A.

U.S. exports to Japan have also grown irregularly, while U.S. imports from Japan have been increasing with a 109 percent increase from CY 1977 to 1978, as shown in Table 3.

Table 3

U.S.-Japan Bilateral Imports And Exports Of Machine Tools

CY 1972 - 1978
(thousands)

imports, value in foreign country; exports, value at U.S. port

	Metalcutting		Metalforming		Total	
Year	Imports	Exports	Imports	Exports	Imports	Exports
1972	$ 13,432	$17,697	$ 1,263	$13,610	$ 14,695	$31,307
1973	19,075	24,404	2,931	15,822	22,006	40,226
1974	40,996	29,608	6,449	19,527	47,445	49,135
1975	53,064	23,575	9,520	14,987	62,584	38,563
1976	54,812	15,616	12,504	11,421	67,316	27,037
1977	89,124	12,132	16,580	9,944	105,704	22,076
1978	193,705	30,898	26,923	8,082	220,628	38,980

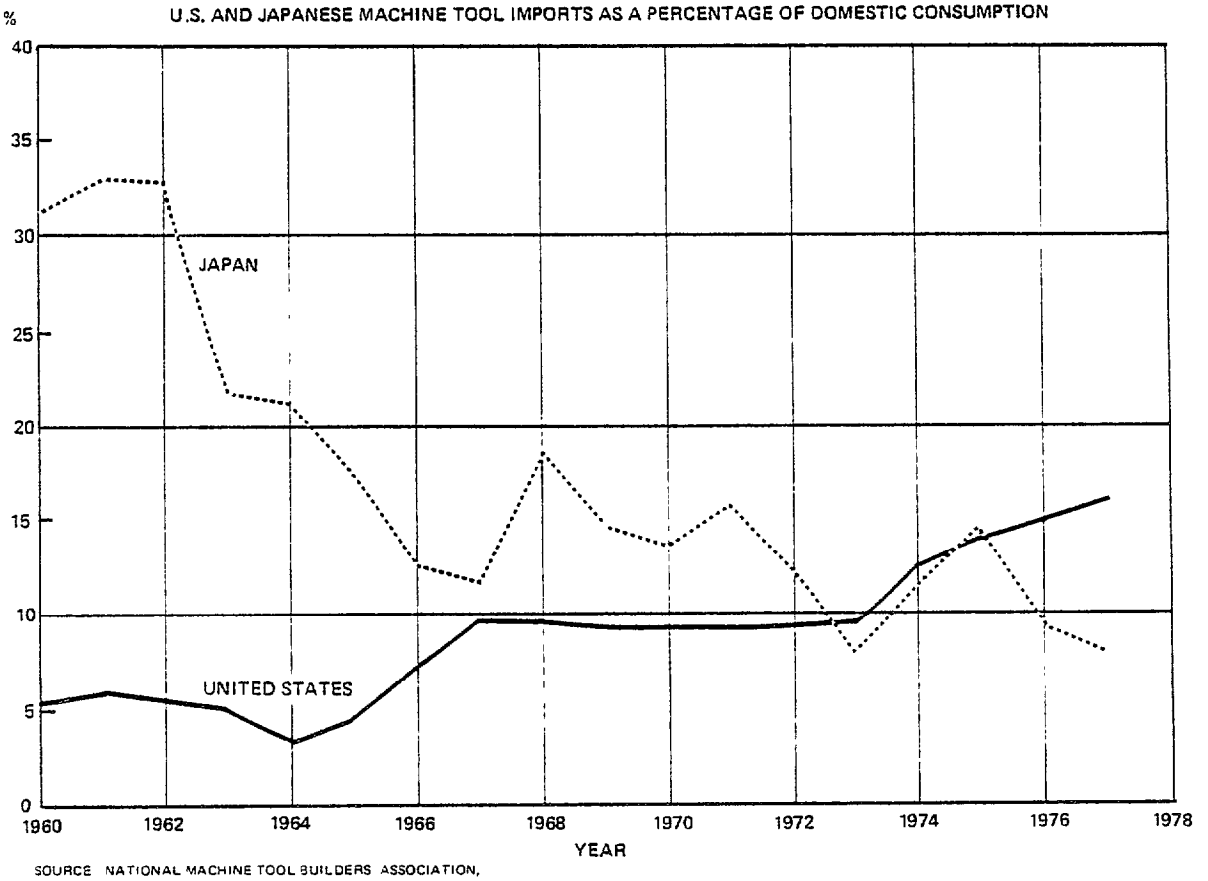
Source: U.S. Department of Commerce, Census Report No. EM 522 (Exports), as reproduced by N.M.T.B.A.
U.S. Department of Commerce, Census Report No. IM 146 (Imports), as reproduced by N.M.T.B.A.

As noted earlier, imports from Japan now account for almost 31 percent of total U.S. machine tool imports, as compared with 13 percent in 1972. U.S. machine tool exports to Japan as a percentage of total U.S. machine tool exports dropped from 12 percent in 1972 to 7 percent in 1978.

There is also a marked difference in the growth of the U.S. and Japanese machine tool import markets. While imports as a percentage of Japanese machine tool consumption have been declining, imports as a percentage of total U.S. machine tool consumption have been increasing. Thus, Japan has gained market share in an expanding U.S. machine tool import market. The United States, on the other hand, has had difficulty maintaining a market share in a shrinking Japanese machine tool import market. Since 1960, Japanese machine tool imports as a percentage of apparent domestic machine tool consumption

decreased from 31 percent to 8 percent in 1977, while U.S. machine tool imports as a percentage of apparent domestic machine tool consumption increased from 5.4 percent to 15.8 percent, as indicated in Chart 1.

CHART 1



SOURCE NATIONAL MACHINE TOOL BUILDERS ASSOCIATION, ECONOMIC HANDBOOK OF THE MACHINE TOOL INDUSTRY 1978 1979

U.S. exports of machine tools to Japan

The principal U.S. machine tools exported to Japan include lathes, NC machining centers, drilling machines and precision grinding machines. Market shares of the three leading supplier countries in the Japanese machine tool import market, CY 1975-1978, are cited below. 1/

Year	Total Japanese Imports (thousands)	U.S. % of total	German % of total	Swiss % of total	Three-Country % of total
1975	$ 77,669	28.0	33.8	11.5	73.3
1976	49,922	39.5	15.3	19.0	73.8
1977	64,455	22.4	29.1	18.8	70.3
1978	120,492	34.4	33.1	14.5	82.0

One major reason for the fluctuation in U.S. machine tool exports to Japan has been the increase in Japanese machine tool production. Between 1955 and 1964, the Japanese machine tool industry grew rapidly, and continues to supply its domestic market with an increasing percentage of its needs. (See section on the Japanese machine tool industry.) However, there are other reasons why U.S. machine tool exports to Japan have fluctuated. Some reasons cited by Japanese machine tool importers include:

--the lack of price competitiveness of U.S. fundamental machine tools. The United States faces competition from Taiwan and Singapore, whose fundamental machine tools are cheaper;

--the long delivery time of U.S. machine tools as compared with Japanese-manufactured machine tools;

--the poor record of U.S. machine tool firms in followup servicing, particularly in the area of NC machine tools;

--the lack of product adaptation. While the machine tools used in Japan are basically the same as those used in the U.S., certain details could be adapted to make United States machine tools more competitive. For example, handles

1/Japan Machine Tool Builders' Association.

should be lower, and machine tools exported to Japan should be equipped with automatic loading; and

--the failure of U.S. machine tool producers to offer adequate discounts. U.S. exporters usually allow a 10-15 percent discount while European machine tool builders normally allow 20-30 percent.

It is difficult to compare directly the relative prices of U.S. and Japanese machine tools in foreign markets given the standard practice of price discounting. However, we believe two factors which affect production costs and therefore have an impact on competitiveness are (1) the age of capital equipment in use and (2) productivity. As mentioned earlier, the Japanese machine tool industry has a more modernized production base than the U.S. industry, and Japanese productivity in manufacturing is higher than U.S. productivity.

The U.S. Army machine tool study states that, while U.S. machine tools have become less price-competitive, U.S. machine tool exports are also hindered by long lead times and delayed deliveries. This has hurt the U.S. machine tool industry in the domestic market also, as foreign machine tool builders offer prompt delivery at economical prices.

The report also states that long lead times appear to be a characteristic of the U.S. industry. Since many of the machine tools are custom-built for specific orders, only a limited number of standard machine tools are carried in inventory. In addition, due to its cyclical nature, the industry uses backlogs to cushion itself in the event of a decline in demand for its products.

In contrast, foreign producers such as the Japanese must carry their standard products in inventory in order to counteract the long ocean shipping times. They have concentrated on exporting machine tools which can be mass produced and, for the most part, employ newer, more highly automated production processes. This enables them to produce comparable hardware in less time, at competitive price and quality. The following table compares, on a quarterly basis, order backlogs for machine tools in the United States, Germany and Japan for CY 1977 and 1978. 1/

1/National Machine Tool Builders' Association.

Year	Quarter	Monthly Order Backlog 1/ U.S.	Japan	Germany
1977	1	9.7	4.9	6.2
	2	9.2	8.9	6.2
	3	11.4	5.5	6.5
	4	9.6	7.8	6.4
1978	1	10.7	5.3	6.7
	2	10.5	7.0	7.0
	3	13.6	5.3	7.3
	4	12.3	5.9	7.5

According to the U.S. Army study on machine tools, most U.S. firms are quoting delivery times of anywhere from 6 months to 3 years, while the Japanese and West Germans have shorter lead times due to their use of extremely automated production methods. In addition, some NC machining centers are produced on a production line, not individually, as in the United States.

U.S. IMPORTS OF MACHINE TOOLS FROM JAPAN

Although requested to review U.S. successes and non-successes in penetrating the Japanese market, we have also chosen to address the Japanese success in penetrating the U.S. machine tool market, as this has become a major concern of the U.S. industry. An estimated 23 percent of Japan's machine tool exports went to the United States in 1977, according to the Japan Machine Tool Builders' Association. Japan now holds a 31 percent share of the U.S. machine tool import market, as compared with a 13 percent share in 1972.

In spite of the yen appreciation which has made Japanese machine tools more expensive, (between 1973 and 1978, Japanese machine tool prices doubled in dollar terms) their exports of machine tools to the United States continue to grow and to be price competitive. According to one large U.S. machine tool manufacturer, there are a number of reasons why Japanese machine tools are less expensive. The fact that Japanese production processes are highly automated, particularly for NC machine tools, allows Japanese firms to produce comparable products at lower costs. Moreover, certain Japanese machine tools are not designed to last as long as some U.S.-made machine tools. Since technology

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1/These figures represent the unweighted average of backlogs, divided by total monthly shipments.

is changing so rapidly, it is no longer necessary for a machine tool to last 10-15 years. Japanese machine tools are lighter in weight, and therefore, use less material than U.S. products and finally, Japanese steel, a major component, is less expensive than U.S. steel.

Toward the end of 1977, some U.S. machine tool manufacturers were accusing the Japanese machine tool industry of dumping. In response, Japan's Ministry of International Trade and Industry (MITI) established a check price system designed to raise export prices. However, neither the check price system nor the rise in the Japanese yen has affected Japanese exports of NC lathes and machining centers to the United States. In addition to offering speedy delivery and enhanced quality, some Japanese machine tool manufacturers have set up servicing centers for their products in the United States, and all of these factors have contributed to Japan's successful penetration of the U.S. market.

JAPANESE BARRIERS

According to an official at the Office of the Special Trade Representative, the average applied Japanese-imposed tariff rate on machine tools is 6.0 percent as compared with the U.S.-imposed average applied rate of 7.6 percent. However, the Machine Tool Traders' Association of Japan, an importers' association, claims that NC machine tools are charged at a higher tariff rate than machine tools without numerical control. For example, two types of NC machine tools were charged at 8.0 percent and 7.2 percent, while comparable machine tools without NC controls were charged at 6.5 and 5.2 percent, respectively. In addition, they claim that computerized numerical control units on machine tools are classified as computers, and the entire tool is charged at this rate (17.5 percent). However, this rate is ultimately expected to come down to 4.9 percent as a result of the Tokyo round of GATT negotiations.

In 1974, Japanese customs mandated that all machine tool imports be calibrated using the metric system. This has not, however, posed a problem for U.S. machine tools, as U.S. manufacturers have either converted to metric or built machines to both inch and metric standards. In most cases, the standard inch machines need only minor adjustments to produce metric parts. 1/

1/Clifford W. Fawcett, op.cit.

According to executives from our case firm, Japanese pollution control standards are strict, but they do not specifically discriminate against the United States. Although U.S. machine tool manufacturers claim that the Japanese are reluctant to import U.S. machine tools, there have been some major purchases. For example, one major Japanese auto manufacturer has announced plans to purchase $6 million worth of machine tools from the United States. 1/

CONCLUSION

According to executives both from our case firm and the Machine Tool Traders' Association, U.S. firms should continue to be successful in exporting to Japan two types of machine tools: highly sophisticated machine tools where U.S. products have a technological edge, and customized, made-to-order machine tools that cannot be mass-produced. The best application of sophisticated processes such as numerical control and computer numerical control is not in large-quantity production lines, but in small job-shop operations, as these processes offer the small shops the advantages of increased productivity, standardization and automation, while retaining flexibility. 2/ It is estimated that 80 percent of CNC machine tools in Japan are used in low-to-medium volume production. 3/

As indicated earlier, U.S. manufacturers of fundamental machine tools will face increasing competition from countries such as Korea and Singapore. Japanese machine tool manufacturers also face increasing competition from producers in some developing countries in the area of fundamental machine tool production. These manufacturers may continue to try to increase exports of NC machine tools and machining centers to the United States, as well as to establish production facilities in the United States. As end-users such as Japanese auto parts manufacturers begin production in the U.S., more Japanese machine tool manufacturers may follow suit.

1/Peat, Marwick, Mitchell & Co., The Japanese Market for Machine Tools and Related Equipment, 1978. Prepared for the U.S. Department of Commerce.

2/Clifford W. Fawcett, op.cit.

3/Peat, Marwick, Mitchell & Co., op.cit.

The Japanese success in penetrating the U.S. machine tool market cannot be explained by the dumping argument, as Japan continues to export to the U.S. despite export price increases. On the supply side, factors such as productivity, age of capital equipment, R&D expenditures, and government assistance affect an industry's ability to compete in the world market, and Japan appears to have surpassed the U.S. in all of these areas. In addition, such marketing factors as length of delivery time and servicing have an impact upon an industry's competitiveness, and Japan appears to have the edge in these areas as well.

CHAPTER 7

LOGS AND LUMBER

In what is virtually a one-way trade, U.S. forest product exports to Japan totaled $1.37 billion in 1977, while U.S. forest products imports from Japan totaled $131 million. A breakdown of these exports in millions of dollars and percentages indicates their importance as a valuable source of income for the United States: 1/

Softwood logs	$ 812.3	59.3%
Hardwood logs	7.4	.5
Softwood lumber	104.7	7.6
Hardwood lumber	2.3	.2
Pulp and waste paper	182.8	13.3
Pulpwood in chip form	168.2	12.3
Paper and paperboard	61.9	4.5
Other	30.1	2.2
Total	$1,369.7	

Although Japan is a major market for U.S. forest products, accounting for 29 percent of total U.S. exports of these products in 1977, there are a number of problem areas in this trade, including (1) the predominance of logs over lumber as a wood product export to Japan, (2) the difficulties involved in exporting lumber to Japan, and (3) the existence of formal and informal U.S.-imposed log export controls. In addition, Canadian trade has such an important influence on the U.S. lumber market and on U.S.-Japan bilateral trade in logs and lumber that it has been included in the discussion.

In 1962, a freak storm in the Pacific Northwest blew down 11 billion acres of timber, providing producers with a large surplus. Our case firm, along with other U.S. timber exporters, was then able to sharply expand its exports of logs to Japan. At the same time, because of Japan's high growth rate, Japanese demand for two types of Pacific Northwest softwood timber--Western hemlock and Douglas fir--was accelerating, while domestic demand was not great.

Our case firm exports mostly pulp, logs and wood chips to Japan, with total export sales to Japan of over $400 million in 1978. The company indicated that the logs exported to Japan are of a higher quality than those demanded by

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1/The Weyerhaeuser Company.

the U.S. housing market, which is the single largest market for lumber. They estimate that 90 percent of their West Coast log exports are shipped to Japan.

Although this firm set up a technical/liaison service office in Tokyo in 1963, it has chosen to rely on Japanese trading companies and major converters for distribution of its products. Because the company exports mostly wood products which must be converted, it has little contact with end-users, and does not face the possible marketing problems of a consumer products manufacturer. An exception to this is the sale of U.S. whiteboard, which is thinner than Japanese whiteboard, and is used to make milk cartons. The company found it necessary to provide technical assistance to Japanese dairies in order to market this product successfully. The firm has also set up a joint venture with a Japanese pulp and paper firm to produce newsprint in the Pacific Northwest. It considers this a good way to acquire the cultural and marketing information necessary for successful penetration of this market.

Although this firm also has operations in Canada, Indonesia, and Malaysia, company executives indicated that the timber from these operations does not compete with U.S. timber in the Japanese market. They consider their South Sea log exports to Japan, which are mostly hardwood, to be complementary to their U.S. exports of softwood logs. Most of the lumber produced in their Canadian mills is destined for the U.S. and Canadian housing construction market.

JAPANESE MARKET FOR LOGS

Japan imported approximately two-thirds of its logs for domestic consumption in 1976. Major foreign suppliers of softwood logs were the United States, the U.S.S.R., New Zealand, Indonesia and Canada, in that order. Japan also imports hardwood logs from such countries as Indonesia and Malaysia, with these accounting for less than one percent of U.S. log exports to Japan. Import market shares of major log exporting countries, CY 1972-77, are shown in Table 1.

Table 1

Import Market Shares of Major Log Exporting Countries
(percentages)

Year	U.S.	Indonesia	U.S.S.R.	New Zealand	Canada
1972	25.3	21.6	16.5	4.4	.6
1973	22.3	23.7	15.3	3.5	.2
1974	20.2	28.1	17.2	2.7	.4
1975	27.0	21.3	20.0	1.3	.5
1976	24.6	23.6	18.1	2.0	.6
1977	25.1	23.6	18.6	2.1	1.1

Source: Based on statistics from the Food and Agriculture Organization of the U.N., Yearbook of Forest Products, 1972-77.

As will be noted from these statistics, there has been little change in market shares during the period 1972-77.

Japanese housing construction is the single most important market for imported logs. In 1975, housing construction accounted for approximately 54 percent of all building construction in Japan. In 1976, 61.2 percent of all imported logs were converted into sawn lumber for construction, while over 99 percent of all imported North American logs were converted into sawn lumber, as Table 2 indicates.

Table 2

Japanese Wood Products from Logs by Source of Supplier
Unit: Thousand Cubic Meters

Usage	Supplier: Domestic	North American	Other Foreign	Total
Sawn lumber	21,378	15,051	18,618	55,047
Pulp	2,856	-	401	3,257
Plywood	659	-	12,073	12,732
Other	10,378	89	360	10,827
Totals	35,271	15,140	31,452	81,863
Sawn Lumber as % of total	60.6	99.4	59.2	67.2

Source: Ministry of Agriculture and Forestry.

Softwood log exports to Japan accounted for 90.2 percent of all U.S. softwood log exports in 1977, amounting to $812 million. According to executives at our case firm, the United States has maintained its competitive position among other suppliers for a number of reasons. The United States has a large land-base for timber, and the U.S. Pacific Northwest has the proper soil structure and climate for timber production. Moreover, the U.S. forest industry is more advanced than the Russian or Canadian industries in the area of forest regeneration. The infrastructure (roads, ports, etc.) is already in place in the U.S. Pacific Northwest as compared to areas such as Siberia.

While the Japanese have reforested for centuries, and are working to expand such efforts, the demand for timber grows with the expansion of their economy, according to executives at our case firm. Thus they anticipate that the need for imports will remain high. They also stated that although two-thirds of Japan is forested, harvesting is very expensive, due to the poor infrastructure and the steepness of the land; the Japanese forest industry is characterized by small plantations, with emphasis placed on cultivating high-quality, high-priced timber.

JAPANESE MARKET FOR LUMBER

While relying heavily upon foreign-source logs, Japan imports a relatively small amount of lumber. In 1976 Japan was dependent upon imported lumber for only 7.5 percent of its apparent domestic consumption, with Canada and the United States the predominant foreign supplier countries.

In lumber, market shares of leading exporting countries, 1972 through 1977, can be seen in Table 3.

Table 3

Market Shares of Major Lumber Exporting Countries
(percentages)

Year	U.S.	Canada	Korea	U.S.S.R.
1972	36.1	40.0	-	4.3
1973	37.7	37.3	5.3	3.9
1974	38.7	34.7	6.1	3.7
1975	42.2	38.2	4.2	4.0
1976	33.5	44.9	6.6	3.4
1977	28.0	47.6	6.3	3.4

Source: Based on statistics from the Food and Agriculture Organization of the U.N., Yearbook of Forest Products.

As the above table indicates, between 1972 and 1977, both the United States and the U.S.S.R. lost market shares in lumber, while Canada and Korea gained. Both strong Canadian competition and heavy overseas inventories contributed to the U.S. loss of market share in 1977. Korean lumber exports do not appear to have been a factor in the U.S. market share loss, although at least 84 percent, if not more, of the lumber exported from Korea to Japan is sawn from U.S. logs. In 1976, for example, the U.S. exported 685,000 cubic meters of softwood logs to Korea; Korea re-exported 179,000 cubic meters of lumber sawn from these logs to Japan. Korean lumber exports to Japan totaled 213,000 cubic meters.

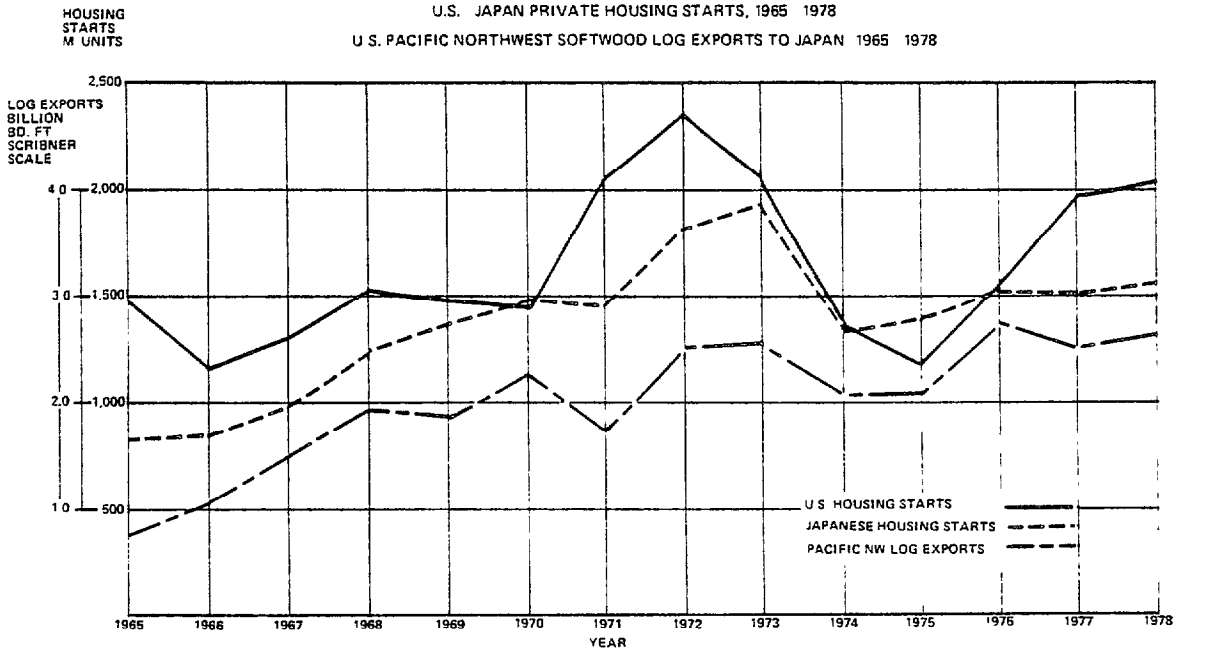
According to executives from our case firm, Canada has been more successful than the United States in promoting lumber exports to Japan for a variety of reasons. The Canadian forest industry is primarily export-oriented, as its domestic housing market is small, only about 12 percent of the size of the U.S. market. Moreover, the Canadian Government is actively involved in promoting Canadian forest product

exports to Japan. Some sawmills in the Canadian province of British Columbia produce lumber specifically for the Japanese housing market, cutting it to Japanese standards. Since 1906, British Columbia has banned most log exports, as a means of promoting these lumber exports. In addition, the Council of Forest Industries (COFI) of British Columbia established offices in Japan in 1974 and 1975 to help promote platform frame construction as a housing construction method. (See below.) Furthermore, Canada is interested in diversifying its lumber export markets, as it presently exports 80 percent of its lumber to the United States.

THE JAPANESE HOUSING MARKET

As indicated earlier, the Japanese housing market is the single most important market for both log and lumber imports. In addition, the housing markets in both the United States and Japan are cyclical, and are also considered to be pivotal, since increases or cutbacks in lumber production are largely determined by this market. 1/ Chart 1 depicts U.S. and Japanese housing starts from 1965 to 1977.

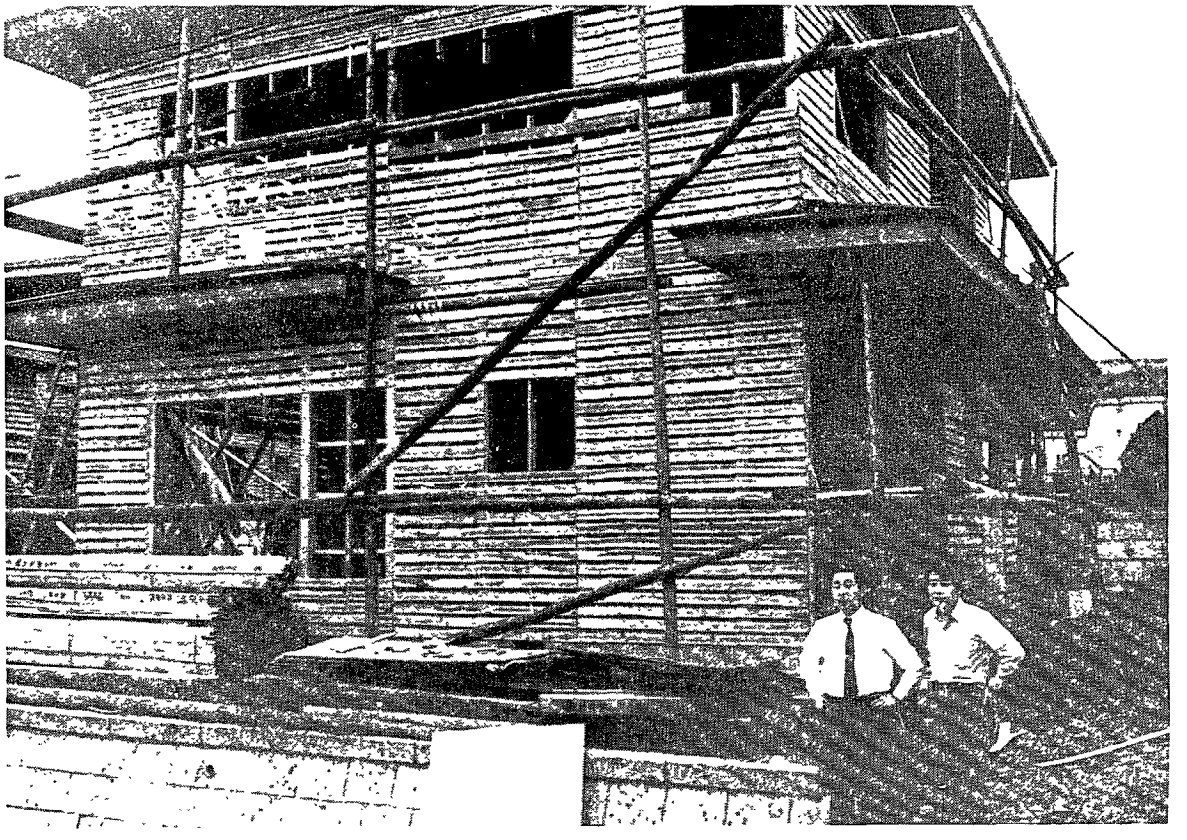
CHART 1



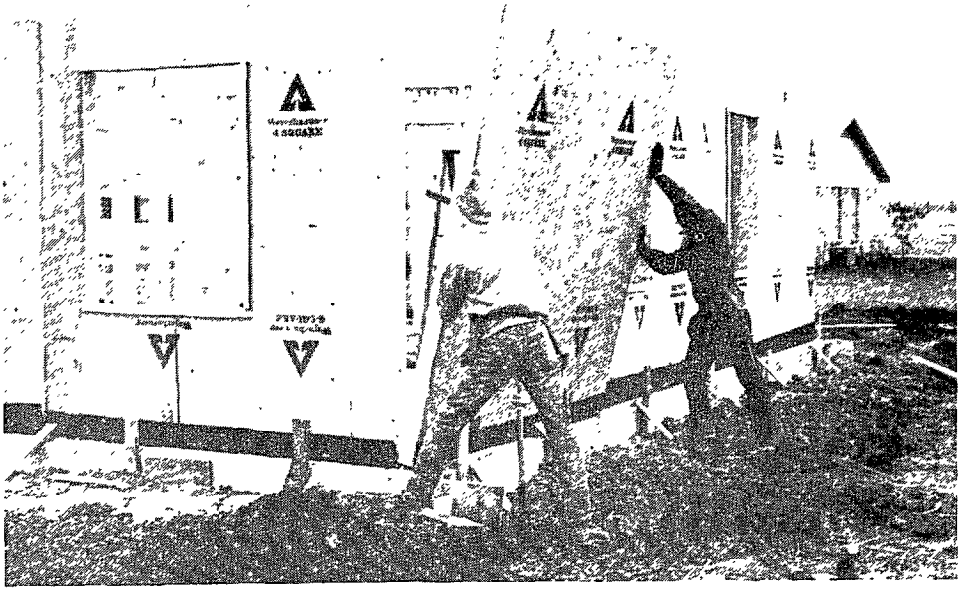
SOURCE FOR U S HOUSING STARTS U S BUREAU OF THE CENSUS STATISTICAL ABSTRACTS OF THE UNITED STATES '977 '978 FOR JAPANESE HOUSING STARTS UNPUBLISHED STATISTICS PREPARED BY AMERICAN WOOD PRODUCTS ASSOC FOR EXPORT OF LOGS U S DEPT OF AGRICULTURE PRODUCTION PRICES EMPLOYMENT AND TRADE IN NORTHWEST FOREST NDUSTRIES SECOND QUARTER 1978

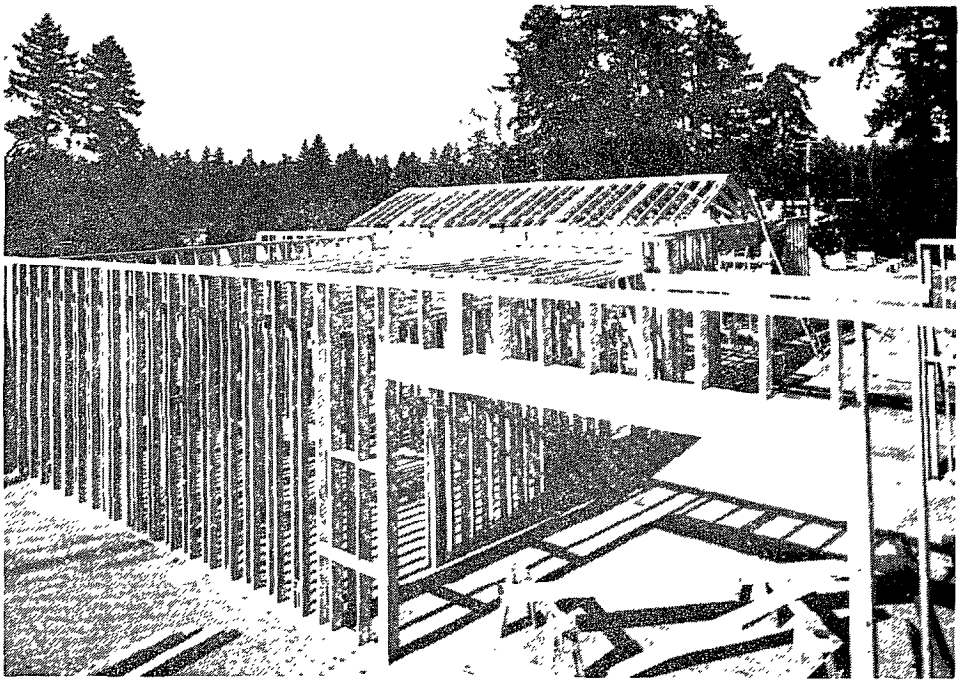
1/National Forest Products Association (N.F.P.A.)

The traditional housing construction method in Japan, called post and beam, requires heavy, defect-free lumber for beams and supports and uses small pieces of lumber to form the exterior, as depicted below.



The sizes of lumber used in this method are different from those used in the U.S. and Canada. The U.S.-Canadian method, referred to as wood frame platform construction, uses two-by-fours and standardized wall sections, as pictured below. In contrast, the truss unit in Japan is the 4" x 4".





Although the Japanese Ministry of Construction officially recognized the U.S.-Canadian housing construction method as acceptable in 1974 in an attempt to standardize construction systems and methods in Japan with those used elsewhere, there has been little change in Japanese housing construction. Of the 1.5 million housing units built in 1978, only .7 percent were constructed using the platform frame method, known in Japan as "two-by-four construction." According to a representative of the American Wood Products Association, while the number of housing units using the "two-by-four" method built since 1974 doubled in 1978, many Japanese are still hesitant to accept this method. Executives from our case firm indicated that one reason could be the fact that the "two-by-four" houses being built by at least one major construction company are as expensive to purchase as houses using traditional building methods. They also told us that in Japan, land accounts for as much as 80 percent of the cost of a house as compared with 25-30 percent in the United States.

Case firm executives said that while some firms in both the Canadian and U.S. lumber industries produce some lumber sizes required for traditional Japanese housing construction, these companies would prefer to export U.S.-Canadian lumber sizes. A breakdown of dimension (two-by-four) lumber imported from the Pacific Northwest in CY 1978 indicates that approximately 85 percent was supplied by British Columbia. 1/

Unit: Thousand Cubic Meters

	Volume	Percent of total
British Columbia	80.5	84.88
Washington State	13.1	13.85
Oregon	1.2	1.26
Total	94.8	

However, dimension lumber exported from North America was only 3.3 percent of total lumber exports. While most of the North American lumber that Japan imports is either cut in sizes suitable to traditional housing construction, or cut as waney (a semi-processed type of lumber that is recut in Japan), logs are the predominant U.S. softwood timber export, as previously noted.

1/Based on statistics supplied by the American Wood Products Association.

JAPANESE PREFERENCE FOR LOGS

We believe that two major reasons why Japan imports mostly logs rather than lumber from the United States are that (1) increased lumber imports threaten the Japanese lumber industry, and (2) U.S. mills have been reluctant to convert in order to produce lumber suitable for the present Japanese housing market, as they want to be ready to meet demands of the U.S. housing market. However, according to industry representatives and U.S. Embassy officials, recent changes in Japanese import regulations have had a positive effect on U.S. lumber exports. While the Japanese do not recognize lumber grading marks stamped outside Japan, reinspection regulations have recently been relaxed, according to a representative from our case firm. In addition, as of June 1978, Japan revised its grading standards to match more closely those of the United States, in order to alleviate quality classification problems. However, in spite of these recent changes in regulations, the bulk of lumber consumed in Japan is also sawn there.

The Japanese sawmill industry is characterized by thousands of small lumber mills; it is estimated that 67 percent of the mills employ less than 10 people. 1/ The lumber produced in these mills is more finely cut than that in U.S. mills, and more of the log is recovered in this slower, finer cutting process. The following table compares U.S., Canadian, and Japanese sawmills in 1976. 2/

	Number of Mills	Production (thousands cubic meter)	Output per mill
U.S.	1,600	68,720	43
British Columbia	165	22,400	135
Japan	23,482	39,200	1.7

In testimony before the International Economic Policy and Trade Subcommittee of the House International Relations Committee on April 21, 1978, a representative from a major U.S. forest products firm stated:

"A large increase in finished lumber exports to Japan obviously threaten her lumber industry which

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1/American Wood Products Association (A.W.P.A.)

2/ibid.

> employs over 240,000 persons. There have already been sawmill owner movements...protesting the increased volumes of lumber imports into Japan. Japan's domestic forest owners are also petitioning the government to limit the flow of wood products imports, especially softwood lumber, into the country. Added to the pressures is the current overcapacity in Japan's lumber and plywood industries. Lumber is operating at 83 percent capacity..." 1/

Thus it appears that any marked increase in lumber imports would be met by strong opposition from both Japanese sawmill and forest owners.

We found disagreement among members of the U.S. wood products industry as to whether the United States should attempt to export more lumber (and other processed products such as plywood) rather than logs, or if the United States should be exporting logs at all. During upturns in the U.S. housing market, the Japanese demand for U.S. forest products is viewed as competition which forces up the price and restricts the supply of U.S. lumber. This attitude has led to both formal and informal U.S. log export controls.

U.S. LOG EXPORT RESTRICTIONS

Federal

Since 1969 the annual export of timber from Federal lands west of the 100th meridian except Alaska has been restricted. 2/ (See table at end of chapter.) The Morse Amendment 3/ limited exports of unprocessed timber from this area to 350 million board feet for each of the calendar years 1969-1971. Since 1973, Interior Department regulations have prohibited these log exports except for specific quantities of grades and species determined by the Secretary of Interior to be surplus to domestic lumber and plywood manufacturing needs.

1/The Weyerhaeuser Company.

2/Alaskan national forests have been under Federal restriction since 1928.

3/Section 401 of the Foreign Assistance Act of 1968, P.L. 90-554, October 8, 1968, 82 Stat. 960, 966, 16 U.S.C. 617.

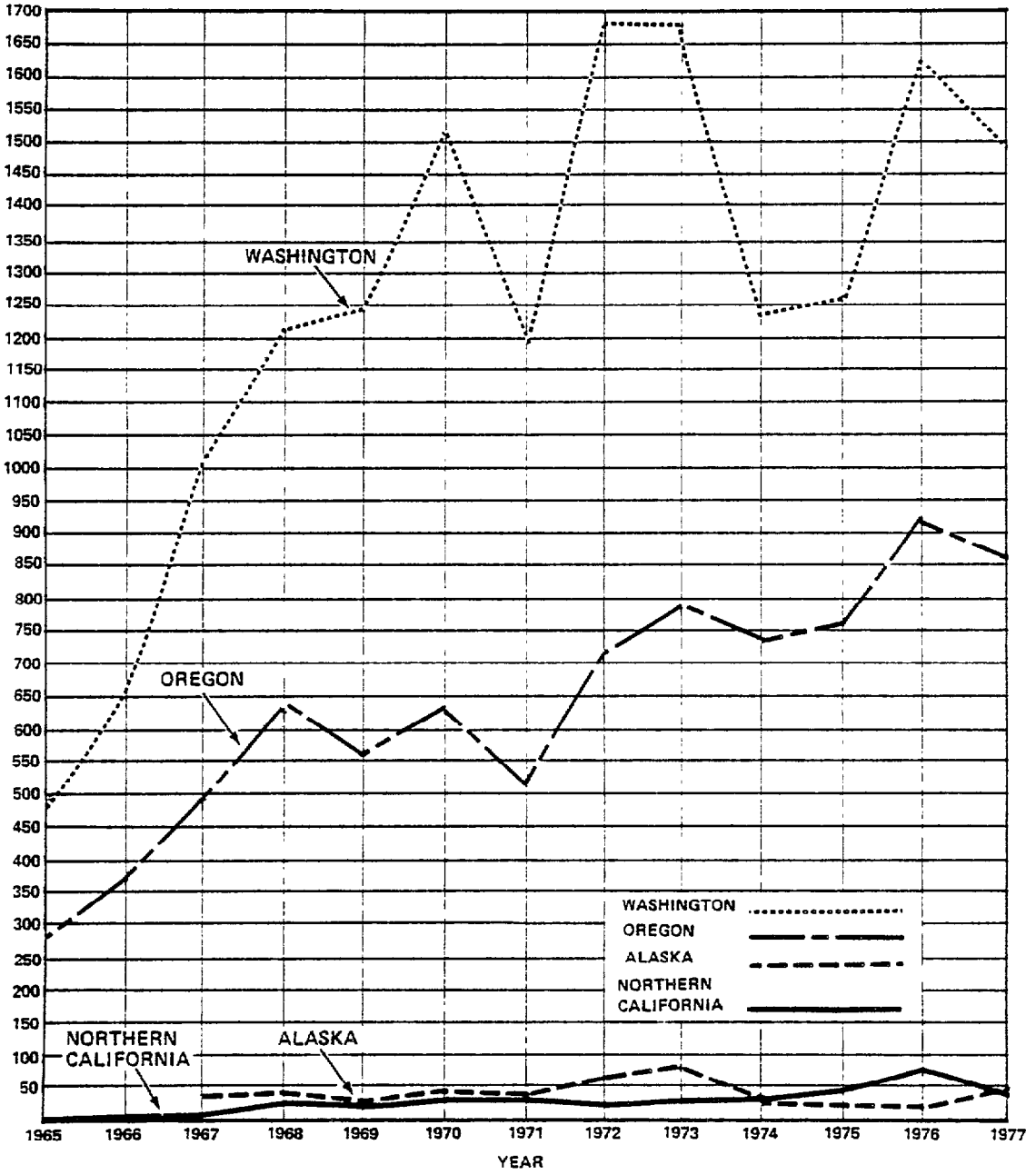
State

In addition to this Federal restriction, the states of Alaska, Oregon, California and Idaho have imposed log export controls on state forests. (See table at end of chapter.) Chart 2 illustrates the timber supply patterns in Washington, Oregon, Northern California and Alaska. According to one U.S. forest products executive, the large number of exports from Washington as compared with Oregon is a result of both log export controls and a species preference, i.e. Western hemlock, more commonly found in Washington than Oregon, is preferred to Douglas fir.

CHART 2

MILLION BOARD FEET, SCRIBNER SCALE

U.S. PACIFIC NORTHWEST SOFTWOOD LOG EXPORTS TO JAPAN, BY STATE 1965 - 1977



SOURCE: U.S. DEPARTMENT OF AGRICULTURE, PRODUCTION, PRICES, EMPLOYMENT, AND TRADE IN NORTHWEST FOREST INDUSTRIES, SECOND QUARTER, 1978

Table 4 presents a breakdown of the amount of timberland affected by Federal and state log export restrictions in Washington, Oregon and California.

Table 4

Proportion of Total Timber Harvest Prohibited from Export

State	Total timber harvest by State	Portion of total harvest prohibited from export by Federal controls		Portion of total harvest prohibited from export by State controls		Portion of total harvest prohibited from export by Federal or State controls	
		million board feet	percent	million board feet	percent	million board feet	percent
Washington	6,185	1,099	17.8	—	—	1,099	17.8
Oregon	7,371	3,305	44.8	160	2.2	3,465	47.0
California	4,334	1,569	36.2	35	0.8	1,604	37.0
Total	17,890	5,973	33.4	195	1.1	6,168	34.5

Source: Gary R. Lindell Log Export Restrictions of the Western States and British Columbia, 1978.

While Oregon has a larger timber harvest than Washington State, a larger portion of Oregon's timber land is subject to Federal and state log export restrictions. As a result of this and the species preference, a greater percentage of Washington State's timber harvest is exported, as noted in table 5.

Table 5

1975 U.S. Log Exports to Japan
from Washington, Oregon and California
(million board feet)

	Exports to Japan	Exports to Japan % of total harvest	Total exports	Exports as % of total harvest
Washington	1,257	20.3%	1,429	23.1%
Oregon	758	10.3	798	10.8
California	83	1.9	91	2.1
Total	2,098		2,318	

Source: Florence K. Ruderman, Production, Prices, Employment and Trade in Northwest Forest Industries.

In addition to these formal restrictions, there has been an informal agreement between the U.S. and Japanese Governments since 1976 to limit U.S. exports of logs and cants (a log whose sides have been squared) to approximately 10 million cubic meters, according to an official at the U.S. Department of Agriculture Forest Service. Yearly Japanese log imports from the United States since then have been no greater than 10.22 million cubic meters.

Those groups that oppose log exports, primarily sawmill owners, some forest product labor organizations and environmentalists, contend that log exports drive up the price of domestic logs and lumber, and that unlimited exports would deplete the U.S. timber supply. They also argue that more restrictive log export controls would have a positive effect on the U.S. balance-of-trade, as logs which would have been exported would instead be processed as lumber, either for export or for the domestic market. If the lumber were processed for the domestic market, the United States would need to import less from Canada. They favor controls to help promote the export of value-added processed timber products such as lumber, instead of logs.

Those who support log exports, including major timber owners, longshoremen, port authorities and teamsters, contend that no conclusive case has been made linking log exports to the increase in domestic log prices. Further, log exports help provide the capital needed to replenish timber supplies. They point out that there is no guarantee that a ban on log exports would induce the Japanese to import more U.S. lumber, particularly since most U.S. mills do not cut to Japanese standards. They also argue that more restrictive log export controls would have a negative effect on the U.S. balance-of-trade, because the U.S. lumber industry would not have the capacity to process those logs which would have been exported. In addition, Japan might increase lumber purchases from Canada, thereby reducing the amount of lumber available to the U.S. market and, most likely, increasing the total U.S. bill for lumber imports.

Both of the above balance-of-trade arguments are speculative, based as they are on assumptions about what would happen to this triangular trading pattern if changes were made in the U.S.-imposed log export restrictions. There is, surprisingly, no consensus as to the impact of present controls on the U.S. balance-of-trade. 1/

1/David K. Darr, "Floating Exchange Rates and Log Export Policy," Journal of Forestry, Volume 75, No. 2, February 1977.

U.S. Pacific Northwest log exporters contend that they export logs to Japan because they cannot compete with the Canadian forest industry in supplying lumber to the sizeable U.S. housing markets in the Midwest and East. They claim that Canadian lumber can be transported to the U.S. market at lower costs, in part because the Jones Act 1/ prohibits the use of foreign vessels in transporting goods between points in the United States. In 1978, Canada supplied the U.S. housing market with approximately 30 percent of its lumber and is virtually the only foreign source of lumber in this market. In the same year, U.S. imports of lumber and sawmill products from Canada totaled $2.3 billion, while exports of logs and lumber to Japan totaled $951 million, according to statistics compiled by the National Forest Products Association. However, one major U.S. log exporter contends that the revenues from exported logs enable the U.S. to purchase about 25 percent more lumber from Canada than could be produced from the volume of logs exported.

CONCLUSION

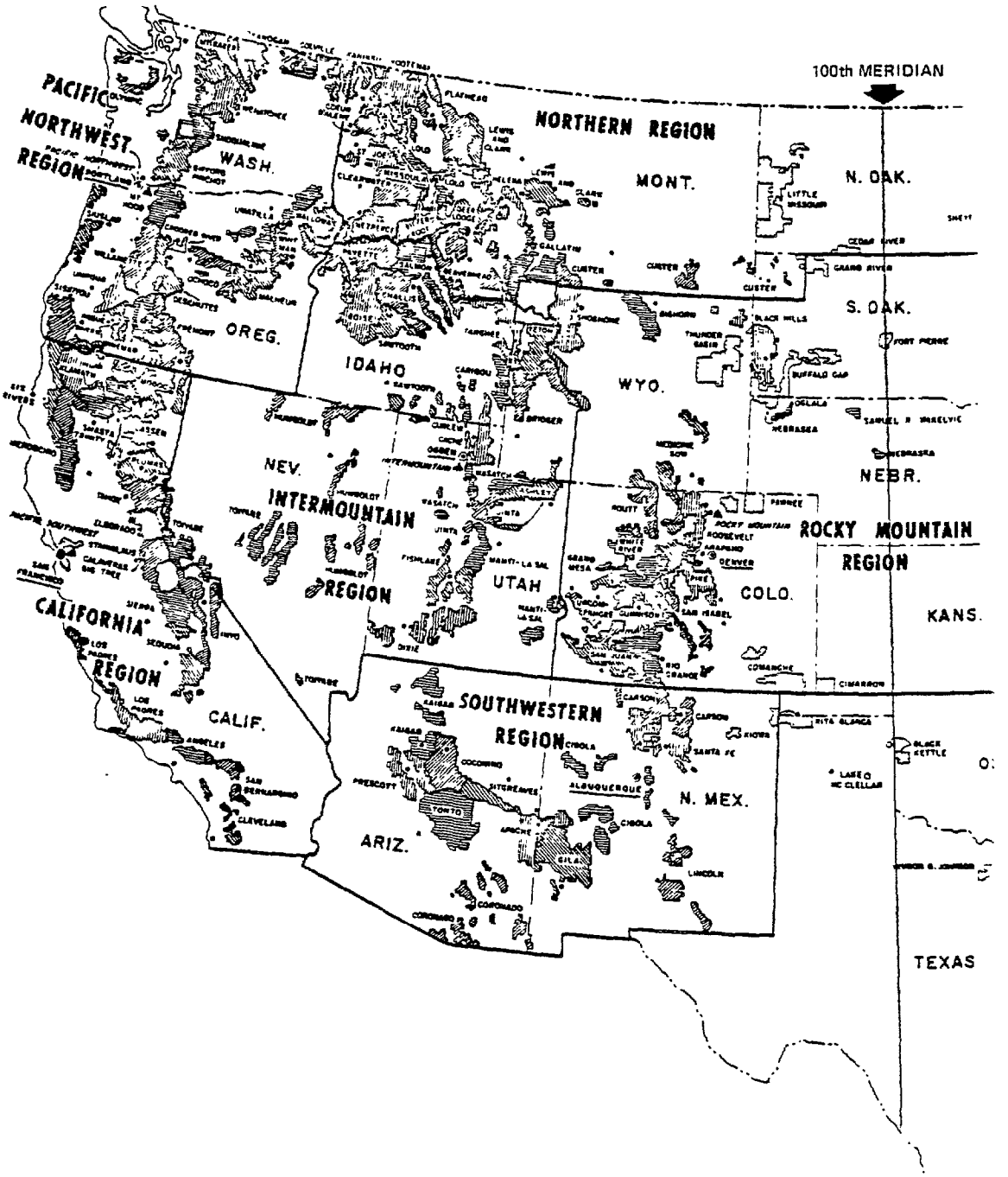
Thus, while U.S. forest products are an important segment of U.S-Japan trade, accounting for 13 percent of total U.S. exports to Japan in 1977, 2/ balance-of-trade considerations are in conflict with domestic concerns. We did not find any clear consensus as to whether the United States should increase its exports of value-added forest products such as lumber; this fact, coupled with the relative ease with which large private forest products firms can export logs to Japan as compared to lumber, has created a situation in which an unprocessed product is the predominant export item. However, U.S. forest products executives and industry representatives told us that they foresee an increase in exports of U.S. lumber as the Japanese sawmill industry is reduced by eliminating small, inefficient firms, and as more houses are built using U.S.-Canadian housing construction methods.

1/Title 46, section 883, "Transportation of merchandise between points in United States in other than domestic built or rebuilt and documented vessels."

2/Based on statistics compiled by the Weyerhaeuser Company.

CHART 3

THE NATIONAL FOREST SYSTEM WEST OF THE 100th MERIDIAN



SOURCE U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE

TABLE 7

Comparison of log export restrictions

Geographic area	Lands affected	General limitations	Exemptions	Definition of primary processing	Definition of substitution
All areas west of 100th meridian in contiguous 48 States.	National Forests	No export of unprocessed National Forest timber nor substitution for timber exported from private lands.	Port-Orford-cedar, Alaska cedar Sales having appraised value less than $2,000.	Cants 8-3/4 inches in thickness or less, lumber and squares, chips & pulp, green veneer and plywood, poles and piling.	With respect to historical levels, the purchaser continues to export and increases purchase of National Forest timber, or increases export of private timber while continuing purchase or harvest of National Forest timber
All areas west of 100th meridian in contiguous 48 States.	Bureau of Land Management	No export of unprocessed BLM timber nor substitution for exported private timber	Negotiated right-of-way timber sales. Port-Orford-cedar Alaska-cedar.	Cants and squares 8-3/4 inches n thickness or less, lumber, chips and pulp, green veneer and plywood, poles and piling	With respect to historical pattern both purchase of BLM timber and export of private timber increase
Alaska	National Forests	No export of unprocessed timber from State	Alaska-cedar western redcedar on long-term sale to Ketchikan Pulp Company	Cants 8-3/4 inches in thickness or less, green veneer, poles and piling, pulp, and chips	NA
Alaska	State of Alaska	No export of unprocessed timber from State	With prior approval, small volumes of all species except spruce and hemlock may be exported for experimental purposes	Cants 12 inches or less in thickness, squares any thickness with one-third each dimension thickness and width allowed in wane, chips from logging and mill waste, chips from roundwood in interior Alaska	NA
Oregon	State of Oregon	Export of unprocessed timber by permit only based on unavailability or domestic markets	Port-Orford-cedar	That stage of manufacture next beyond the log form	NA
Oregon	McQuinn Strip portion of Warm Springs Reservation	Until January 1, 1992, timber from the McQuinn Strip must be designated for primary manufacture in the U S	None	Lumber, chips or pulp, green veneer, poles and piling Cants 8-3/4 inches in thickness or less	NA
California	State of California	No export of unprocessed timber nor substitution of State timber for timber exported from private lands	None	Squares not exceeding 6 inches x 12 inches	Replacement of State timber for timber exported from private land within 200 miles of State timber sale area
Idaho	State of Idaho	State timber must receive primary manufacture within State	Pulpwood	Cants provided not subsequently remanufactured out-of-State by same firm; lumber, poles	NA
British Columbia	All lands	Export of unprocessed timber or chips from Province only by permit based on surplus Export tax on Provincial logs	None	Lumber meeting wane requirements for No 3 Common Utility under Export B list	NA

NA - not applicable.

Source: Gary R. Lindell, Log Export Restrictions of the Western States and British Columbia

Pacific Northwest Forest and Range Experiment Station,
U.S.D.A. Forest Service

CHAPTER 8

SOYBEANS

Our agricultural case study focuses on exports of soybeans to Japan and on the American Soybean Association (ASA), a trade association representing producers in 24 states and responsible for developing, promoting and maintaining markets for U.S. soybeans. The Tokyo office of ASA is one of the oldest "cooperator" offices in the U.S. Department of Agriculture's (USDA) Foreign Agricultural Service (FAS) System. 1/ FAS provides joint funding for the marketing and promotional activities of groups such as the ASA. The ASA is funded through third party cooperatives, contributors, and FAS funds. With respect to Japan, the ASA annually submits an extensive market development and promotion plan to the FAS requesting joint funding for the activities outlined in the plan. In fiscal year 1979, FAS allocated $522,000 to ASA to help develop and maintain the U.S. soybean market in Japan.

THE JAPANESE MARKET

Japan imports four basic kinds of soy products: (1) soybeans, (2) soybean meal, (3) soy protein, and (4) soy oil. Japan is roughly 91 percent import dependent for its supply of soybeans, as shown in Table 1. The primary suppliers of soybeans to the Japanese market are the United States, the People's Republic of China (PRC), and Brazil. The United States is by far the dominant supplier of the Japanese import market and its market share has grown steadily over the years, reaching 95.2 percent of the import market in 1977. The PRC is a small second supplier to the Japanese total import market holding 6.2 percent in 1973 with a drop in market share to 2.7 percent in 1977. Brazil trails behind the PRC with about a 1.6 percent share of the import market in 1977. Table 2 shows Japanese imports of soybeans between 1973 and 1977 by country of origin.

1/"Cooperator" is a USDA term for an agricultural trade group with which it engages in trade promotion.

Table 1

Soybeans Supply and Disposition
(1,000 metric tons)

Category	1973	1974	1975	1976	1977	1978 a/
Supply						
Beginning stocks	278	401	220	248	340	301
Domestic	53	60	60	55	55	98
Imports	3,635	3,244	3,334	3,554	3,662	3,860
Total supply	3,966	3,705	3,614	3,837	4,057	4,259
Imports as % of total supply	91.7	87.6	92.3	92.6	90.3	90.6
Disposition						
Crushing	2,739	2,729	2,620	2,701	2,878	3,097
Traditional foods	796	726	716	730	745	760
Feed	30	30	30	30	30	30
Loss				36	36	36
Total disposition	3,565	3,485	3,366	3,497	3,689	3,923
Ending stocks	401	220	248	340	301	301

a/ Projection by Ministry of Agriculture and Forestry

Note: Figures are as given in primary source.

Source: Japan Ministry of Agriculture and Forestry as cited in "Japan Regional Market Development Plan," American Soybean Assoc., October 1, 1978-September 30, 1979

Table 2

Japanese Imports of Soybeans
Calendar Years 1973-77
(1,000 metric tons)

Country	1973	1974	1975	1976	1977
U.S	3,210	2,924	3,041	3,287	3,482
Brazil	185	82	44	126	58
China	226	232	240	133	98
Others	14	6	9	8	18
Total	3,635	3,244	3,334	3,554	3,656
Market share a/					
U.S.	88.3	90.1	91.2	92.5	95.2
Brazil	5.1	2.5	1.3	3.5	1.6
China	6.2	7.2	7.2	3.7	2.7

a/Percentages calculated by GAO.

Note: Figures are as given in primary source.

Source: Japanese Ministry of Finance as cited in "Japan Regional Market Development Plan," American Soybean Assoc., October 1, 1978 - September 30, 1979.

Although exports of unprocessed soybeans are by far the largest component of our soy exports to Japan, the U.S. figures prominently in exports of soybean meal used in the production of animal feed grains. In 1977, a growth in demand of 14.4 percent for feed grains accounted for a 62.7 percent increase in soybean meal imports. Between 1976 and 1977, soybean meal imports increased from 193,000 metric tons (MT) to 314,000 MT. Imports from the United States grew by 99 percent from 119,000 MT to 237,000 MT, raising the U.S. share of the soybean meal market to 75.5 percent. Brazil was our most serious competitor with a 24.2 percent market share.

Exports of soybeans and meal for production of foods for human consumption and of soy oil do not figure quite as prominently in U.S. exports of soy products, roughly totaling 781,000 MT. The United States has an 83 percent share in the traditional foods market and very small shares in the soy protein and oil import markets.

Japan's dependence on imported soybean, meal, soy protein and oil is expected to increase as fish consumption decreases. The imposition of the 200-mile territorial fishing limit by the Soviet Union and the United States, resulting in a 10-15 percent reduction in catch, is expected to guarantee future increases in demand for imports of soy protein and soybean meal. Additionally, with the gradual growth in consumption (about .66 percent per capita per annum) of meat, demand for soybeans for feed grains is expected to remain strong. Furthermore, given the decreasing farm population (9 percent since 1972) and the limited amount of land for agricultural production, Japan's heavy dependence on imports of a variety of agricultural products will continue to remain strong. Finally, increasing demand for soybean oil, soybean meal, traditional foods and soy protein will likely be oriented toward U.S. soybeans in the next few years due to the adverse effects of a drought on Brazilian and PRC production.

ASA EFFORTS IN THE JAPANESE MARKET

Unlike certain other agricultural commodity markets in Japan, the soybean market is a long established one. Traditionally, soybeans have been an integral part of the Japanese diet. As a result, efforts to enter the Japanese market focus primarily on maintaining traditionally established markets and activities aimed at developing and popularizing new uses of soybeans and soybean products.

The ASA engages in a number of activities designed to both increase the present market for U.S. soybeans in Japan, and to develop new uses for soy products. Some of their activities include:

--participation in the school lunch program, including school lunch seminars featuring discussions on soy protein;

--publication of trade reports and newsletters, including American Soybean and ASA Newsletter;

--participation in various food shows and exhibits; and

--sponsorship of various U.S. specialists' visits to Japan to provide technical assistance to farmers, research scientists, feed and vegetable oil companies, etc.

Through these activities ASA maintains contact with direct recipients (major crushers and food producers), indirect users (feed-mill owners, large farmers and cooperatives), and influential parties (trade press, government agencies, food nutritionists). The Association feels these activities will help maintain the U.S. soybean's competitive position in the Japanese market. All of these activities are aimed at promoting the use of soy not only for human consumption but also for livestock consumption. The concentration of ASA efforts is presently directed towards increasing the use of soy oil as opposed to other vegetable and seed oils in Japan.

FACTORS AFFECTING U.S. SOYBEAN EXPORTS TO JAPAN

A number of factors affect the level and extent of market penetration of U.S. soybean exports; however, for the most part, these factors have a greater effect on the competitive ability of the United States within the market than on the penetrability of the Japanese market by the United States.

Soybean embargo: reliability of supply

In June 1973, as a result of pressures on both meat and dairy prices, the United States imposed a temporary embargo on the exports of soybeans which was replaced 5 days later by a system of export licenses administered by the Department of Commerce for commodities in short supply. 1/ The Commerce Department announced that 2.3 million tons of soybeans would be available for export to the world, which represented only 50 percent of the amount of outstanding contracts for the remainder of the year. Additionally, Commerce stated that 750,000 tons of soybean oil cake and meal would be available for export, representing only 40 percent of reported contracts. Contractual amounts were cut impartially on the basis of these percentages. Controls on the exports of soybeans (popularly referred to as the embargo) sent shock waves throughout soybean consuming nations, particularly Japan, which had already consumed 2 million tons of U.S. soybeans and had contracts for at least 700,000 more tons through September of that year. Licenses were issued

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1/The system of export controls was administered under the authority of the Export Administration Act of 1969, as amended.

on the basis of contracts in effect on or before June 13, 1973. Only in the case of soybeans for human consumption were contracts permitted to be honored in full. This licensing system was in effect until the beginning of the new crop year in September 1973.

The soybean embargo, albeit short, had a strong psychological effect on the Japanese. Despite the fact that exports of soybeans from the United States did not drop substantially and, in fact, were higher than U.S. exports in 1974, 1975, and 1976, ASA officials reported that the situation remained chaotic and that the Japanese were extremely concerned about their import dependence on the United States and on the U.S. reliability as a primary supplier of soybeans. 1/ The issue of reliability of supply has recurred with the Japanese in a number of areas--e.g., the 1973 oil embargo, control of coal exports from the United States, etc. For a nation as dependent as Japan on imports of food and natural resources for their economic well-being, any disturbance in supply causes a great deal of concern. However, despite the psychological impact of the soybean embargo, ASA reports that it has had relatively little effect on the marketing of soybeans in Japan. This fact is borne out by Japanese import statistics for 1973-77 in Table 2.

Competition from other producers: Brazil, the PRC, and Canada

Although not a direct result of the soybean embargo, Japanese attempts to diversify their soybean supply sources were certainly encouraged by the disruptive effect of the embargo. Prior to the 1973 embargo, Japan had invested in the production of soybeans in Brazil as an alternate supply source. Despite hopes to the contrary, Brazil, for a number of reasons, has not figured largely as a major competitor to the United States. In fact, as shown in Table 2, Brazil's exports to Japan have been even less than those of the PRC. The Japanese have not considered Brazil the most dependable of suppliers of soybeans because

--Brazilian production fluctuates on the average about 10-15 percent per year (as compared with U.S. production fluctuations of only 5 percent per year);

1/In November 1975, the United States and Japan entered into an agreement by which 14 million tons of grains and soybeans (3 million tons of soybeans) would be supplied to Japan each year for the three fiscal years--1975/76, 1976/77, 1977/78.

--the Brazilian soybean is of lesser quality than either the U.S. or PRC bean (a reddish outer coloring makes it suitable for production of soy oil but not meal, which leaves Brazil out of the traditional foods and meal markets);

--the additional transportation time involved from Brazil to Japan (vs. U.S. to Japan) often causes heat damage to the beans; and

--Brazilian policy has been to export the processed rather than the unprocessed soybean which runs counter to Japan's desire to protect its large investment in the crushing industry.

United States soybean exports have experienced far greater competitive pressures from the PRC than from Brazil; however, since 1975 PRC exports have not had a major impact on U.S. exports. Because of the Japanese perception that the Chinese soybean is of greater quality than that of the United States, exports from the PRC had been strongest for use in the traditional foods industry, particularly for the production of miso, a Japanese bean soup. Prior to 1975, as shown in Table 3, the PRC maintained approximately a 25 percent share of the market in soybeans for traditional foods which, in addition to miso, include tofu and aburaage, shoyu, nato and kinako. By far the largest percentage of these imports was for the production of miso. After 1975, however, because of the PRC's inability to supply enough soybean to meet domestic needs, China substantially cut its exports to Japan. Again, Table 3 shows that China went from a 29 percent market share in traditional foods in 1975 to a 13 percent share in 1976, while the PRC share of the miso market dropped from 88.9 percent in 1975 to 42 percent in 1976. These decreases in PRC exports were largely replaced with exports from the United States. The U.S share of the miso market jumped from 8.4 percent in 1975 to 51.4 percent in 1976. ASA was able, through promotional activities, to convince Japanese purchasers that the U.S. soybean was at least as high in quality as the PRC soybean and thus was able to capture a substantial portion of the lost PRC market share. However, with the normalization of relations with China and China's need for foreign exchange for industrialization, exports of products such as soybeans are likely to grow. ASA Tokyo officials stated that China has reportedly agreed to supply Japan with 200-250,000 MT of soybeans in 1979, for use by the miso industry alone. This

would be a sizeable increase over PRC exports in previous years. ASA officials believe, however, that by actively pursuing their marketing and promotional activities, they will preclude any major competitive threat from increased PRC exports.

Table 3

Utilization of Soybeans and Soybean Meal in Traditional Foods by Origin
(1,000 metric tons)

	1972	1973	1974	1975	1976
U.S.	721.40	701.40	669.40	638.70	781.00
China	233.70	228.80	239.40	272.70	122.00
Canada				6.50	8.00
Brazil				1.00	2.50
Japanese, domestic	33.90	31.30	32.70	26.60	26.50
Total	989.00	961.50	941.50	945.50	940.00
% Market Share					
U.S.	73	73	71	68	83
China	24	24	25	29	13
Canada	-	-	-	1	1
Brazil	-	-	-	1/	1/
Japanese, domestic	3	3	3	3	3

1/Negligible

Source: Compiled from ASA information.

A major competitive threat to the U.S. soybean market in Japan comes from imports of Canadian rapeseed. Both rapeseed and processed soy are used in making cooking oils and are important nutritionally as additives in livestock and poultry feed grains. Table 4 shows import figures for both soybean and rapeseed and other miscellaneous products. ASA officials stated that their continued development and promotion of soy oil markets will be necessary to prevent the encroachment of Canadian rapeseed oil in the Japanese soy market. Additionally, with the Canadian development of a low arusic acid content rapeseed strain, which will

make rapeseed meal more attractive as an additive for feedgrains, the importance of continued market promotion of soy oil is underscored.

Table 4

Imports of Oilseeds
(1,000 metric tons)

Oilseed	1973	1974	1975	1976	1977
Soybeans	3,635	3,244	3,334	3,554	3,602
Rapeseed	687	672	659	718	769
Cottonseed	159	123	116	95	95
Copra	134	86	90	111	98
Linseed	111	83	70	97	81
Others a/	266	194	182	209	206
Total b/	5,027	4,421	4,476	4,810	4,873
Share of soybeans (percentage)	72.3	73.4	74.5	73.9	73.9

a/"Others" includes peanuts, sesameseed, safflowerseed, casterseed, kapokseed, palm kernel, mustardseed, sunflowers, hempseed.

b/Totals are as given in source.

Primary Source: Ministry of Finance.

Barriers to U.S. entrance to the market

There are very few major trade barriers hindering U.S. access to the Japanese soybean market as is evidenced by the 91 percent share of the market held by the United States. The tariff structure, as it relates to soybean and soybean products does, however, underscore one factor which affects the nature and level of soybean exports. Tariffs on the imports of unprocessed soybeans are relatively low; however, those on processed soybeans are almost double (9 percent vs. 16 percent) those on unprocessed beans. This is an obvious attempt by the Japanese government to protect as much of the value-added of processing as possible for their domestic industry. The MTN settlement in agriculture, concluded with Japan on December 5, 1978, included provisions to bind the current free rate for unprocessed soybean imports and to slightly lower tariffs on processed beans.

Because the market distribution system for soybeans in Japan involves a number of middlemen, it is alleged that consumers are charged excessively high prices for soybeans and soybean products. Our discussion with ASA officials, however, indicates that, in their opinion, prices are obviously increased to account for the various stages of processing, etc., but certainly not to the extent that the U.S. soybean becomes noncompetitive. Generally, U.S. beans are sold through one of the major agri-business firms such as Cargill or Continental. These firms sell to Japanese trading companies which have received orders from various sectors of the Japanese soybean industry, e.g., crushers. The processers in turn sell the processed bean to feedgrain firms; tofu, miso, and other manufacturers in the traditional food industry; wholesalers, etc., who then sell to the consumer. This system is not substantially different from many agriculture product distribution systems where processing of the product is necessary. ASA officials reported that part of the price increases, in addition to that resulting from the value added in processing, results from the cultural differences in the relationships between manufacturers and distributors. For example, Japanese companies handle financing for distributors which adds to costs, and these costs are naturally passed on in prices. ASA reiterated, however, that this did not create significant problems in the marketability of the product.

CONCLUSION

Given Japan's overall import dependence for soybeans and soybean products, it is not surprising that there are essentially no major trade barriers to the entrance of U.S. soybeans into the Japanese market. The activities of the ASA in Japan have nevertheless had a significant favorable impact on the U.S. share of the Japanese import market, and will continue to be important as competitive pressures from the PRC and Canada, in particular, begin to grow.

CHAPTER 9

UNDERLYING ECONOMIC FACTORS AFFECTING TRADE

Valuable as case studies are for getting at specific issues in bilateral trade, they cannot illustrate the full range of economic factors affecting the flow of goods. Case studies do not point up basic factors which influence aggregate demand or overall price competitiveness. Instead, they provide "windows" on business successes or on problems such as tariff and nontariff barriers and certain business practices. In this section of our report we discuss more general and fundamental economic issues as they relate to trade.

DOMESTIC DEMAND

When domestic demand is strong, demand for imports as well as for domestically-produced goods is strong. Hence the importance attached to creating favorable demand for goods--domestic and foreign--in repeated policy statements, at Trilateral Commission meetings, at summit conferences, in communiques, etc.

The common formulation of this point usually calls for a strong GNP performance. For example, in the Strauss-Ushiba communique of January 13, 1978, (see Appendix I), one finds the pledge:

> Both sides agreed to take major steps to achieve high levels of noninflationary, economic growth. The Government of Japan reiterated its recently adopted real growth target of 7 percent for Japan fiscal year 1978 [April 1, 1978 - March 31, 1979] and stated its intention to take all reasonable and appropriate measures, including those previously announced with respect to public expenditures, in order to achieve this target.
>
> The government of the United States confirmed its intention to pursue policies aimed at the maintenance of substantial, noninflationary economic growth, as will be detailed by President Carter.

As events proved, both countries' pledges were wide of performance. Instead of growing at 7 percent, Japan's

real GNP grew at 5.5 percent 1/ while the United States, instead of maintaining "substantial, noninflationary growth," witnessed an increase in the wholesale price index of 10.1 percent between December 1977 and October 1978 2/ and a growth in GNP in real terms in 1978 of 3.9 percent, by preliminary figures. 3/

GNP (GDP) and Trade,
The Historical Record

Charts 1 and 2 plot the record of imports and GDP 4/ for Japan and the United States 1963-77 using the 3 years, 1960-62 as 100. Imports are divided between imports from the world excluding the bilateral relationship and imports within the bilateral relationship. The Japan chart shows very clearly the pull of GDP on trade, while the U.S. chart shows it much less strongly. In the Japan chart, both "imports from the world" and "imports from the United States," while below the GDP line, 1963-72, show roughly parallel high growth. The 1973 surge of "imports from the world" above the GDP line reflects OPEC and other price increases. On the other hand, the fall in U.S. export performance to Japan in 1975 may seem strange given the U.S. strong trade surplus that year, but examination of the year-to-year U.S. import and export figure reveals that the 1975 trade surplus was significantly a "reduction-in-import" phenomenon. If one turns to the U.S. chart, one notes that "imports from the world" began to exceed GDP performance in the mid-sixties when the United States started the Vietnam buildup and when inflation began to be noticeable. The chart makes clear that "imports from Japan" had an exuberance all their own.

Chart 3 shows GNP and trade (both imports and exports) for the United States, Japan, Germany, Canada and the United Kingdom using a different statistical technique. In these charts GNP is plotted on the 45° line. To the extent that

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1/Nomura Securities, Quarterly Economic Review, April 1979, p. 22

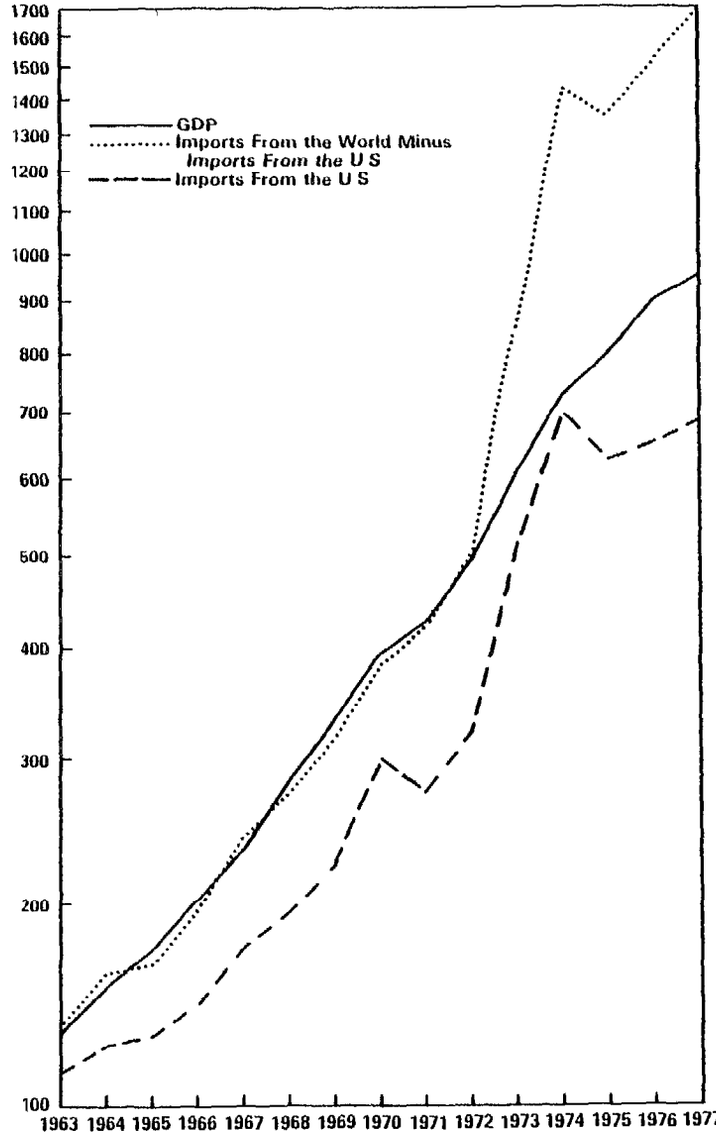
2/OECD, Economic Outlook, Dec. 1978, p. 69.

3/Council of Economic Advisors, Economic Report of the President, 1979, p. 185.

4/GDP is distinguished from GNP in being the gross product originating within the geographic borders of a country rather than the gross product (wherever originating) owing to permanent residents of such a country. The two measures are very close.

CHART 1

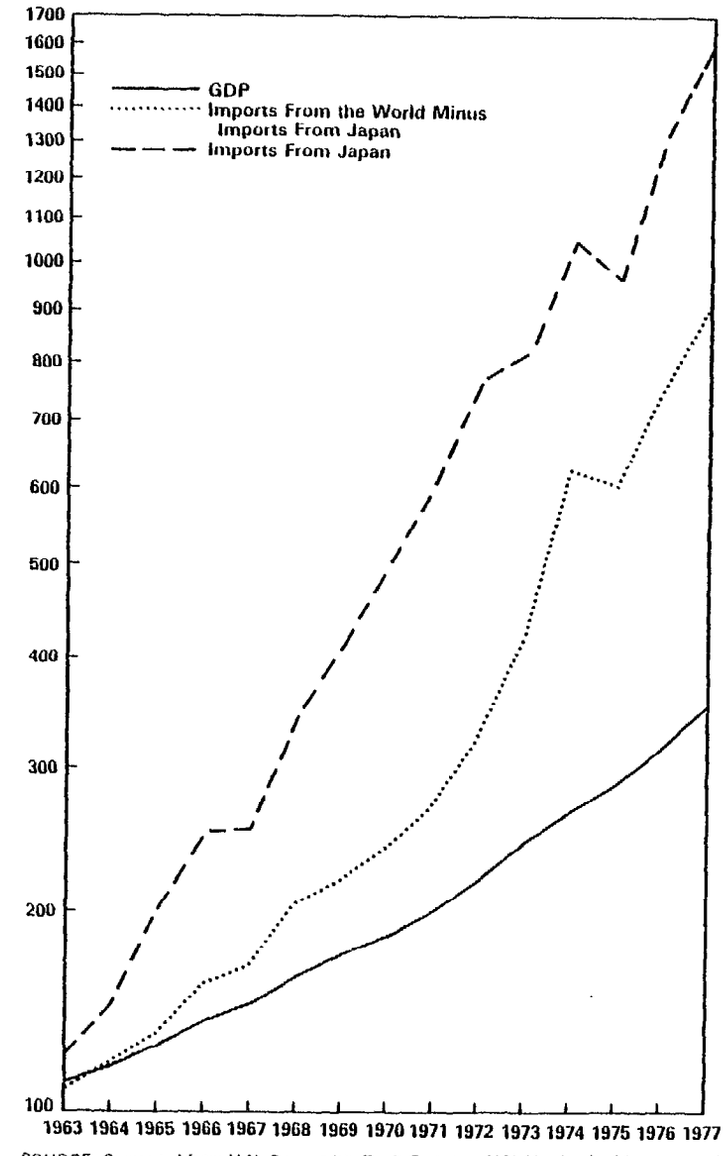
JAPAN: GROWTH RATE OF GDP TOGETHER WITH JAPAN'S IMPORTS FROM THE WORLD (MINUS IMPORTS FROM THE UNITED STATES) AND IMPORTS FROM THE U.S. NOMINAL VALUES. 1960-62 = 100



SOURCE. Computed from U N. Yearbook of International Trade Statistics, National Accounts Of OECD Countries 1962 1977, Vol 1

CHART 2

UNITED STATES: GROWTH RATE OF GDP TOGETHER WITH U.S. IMPORTS FROM THE WORLD (MINUS IMPORTS FROM JAPAN) AND IMPORTS FROM JAPAN. NOMINAL VALUES. 1960-62 = 100



SOURCE Computed from U N Commodity Trade Statistics, U N Yearbook of International Trade Statistics.

imports and exports grow at the same rate as GNP, they fall on the line; to the extent more rapidly, they are above it; less rapidly, below it. The charts make clear the strong relationship between GNP and trade.

In saying there is a "strong" relationship between GNP and trade one is, of course, not asserting that GNP is the sole determinant of trade. When, during the sixties, the United States was complaining of Japan's high tariffs and layered nontariff barriers, U.S. exports to Japan nevertheless were growing at double the rate of U.S. exports to the world, at 16 percent per annum 1964-70 in contrast to 8 percent per annum. Japan's high GNP performance would seem the only explanation. However, the fact that, in the same time period, Japan's exports to the United States were growing at 21 percent per annum demonstrates the presence of factors other than GNP at work.

Measuring domestic demand by GNP

GNP does not make as refined a measure of changes in domestic demand as is often assumed. Foreign trade enters the GNP (GDP) calculation as "net exports of goods and services" so that when there are huge surpluses and deficits, the GNP is increased or diminished thereby.

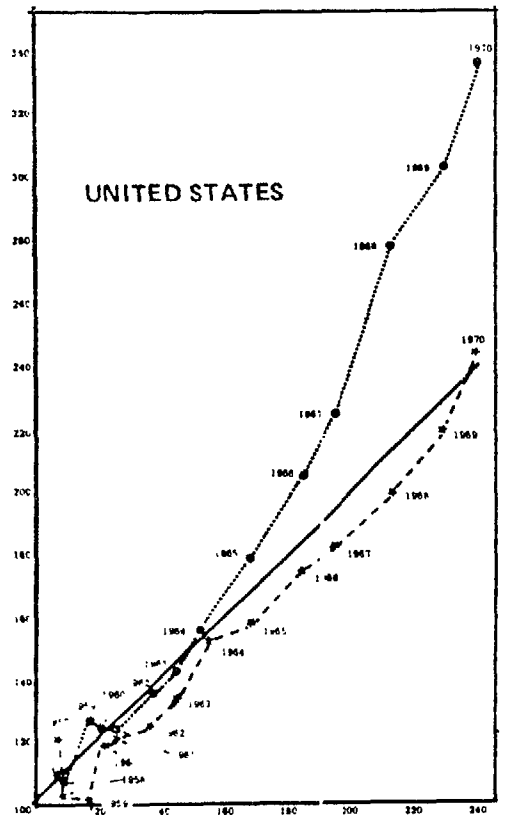
For the years following the 1973 OPEC oil crisis, by the measure of GNP, the Japanese economy has given a stronger performance than the American economy. While GNP in Japan fell more dramatically than in the United States, recovery started sooner and was stronger. Real GNP growth rates for the United States and Japan 1973-78 (1978 figures preliminary) are:

	1973	1974	1975	1976	1977	1978
			(percentage)			
United States	5.4	-1.4	-1.3	5.7	4.9	3.9
Japan	9.8	-1.0	2.4	6.0	5.2	5.8

Source: For 1973, Economic Report of the President, 1978, p. 380; for 1975-78, ibid., 1979, p. 306.

CHART 3

RELATIONSHIP OF GROWTH OF IMPORTS & EXPORTS TO GNP--FIVE COUNTRIES, 1957-70



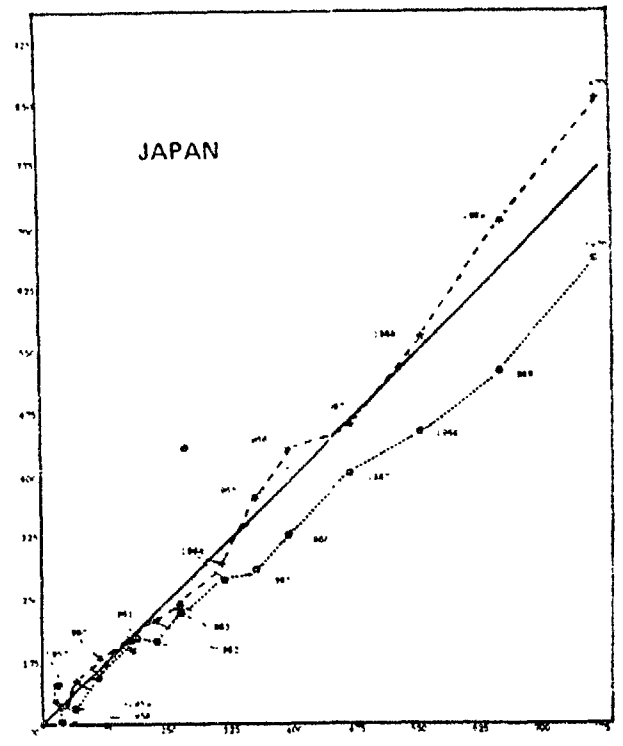
VERTICAL AXIS: INDEX OF IMPORTS & EXPORTS (1955-56 BASE)

HORIZONTAL AXIS: INDEX OF GNP (1955-56 BASE)

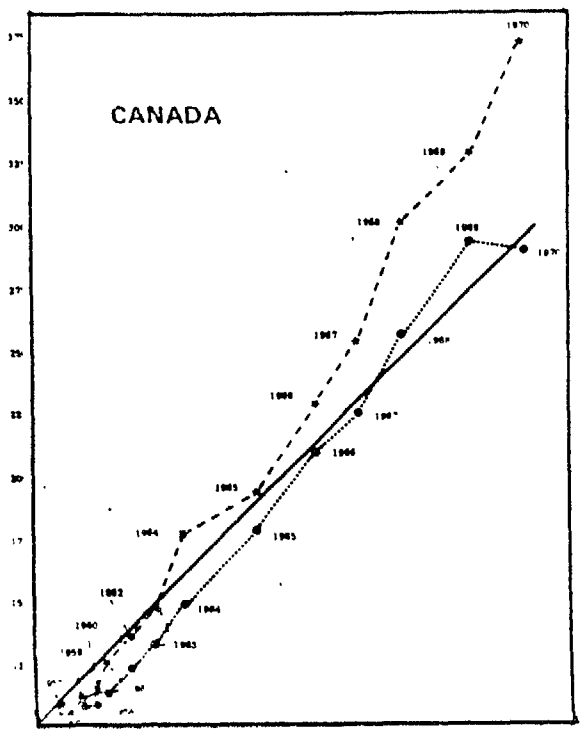
IMPORTS .....

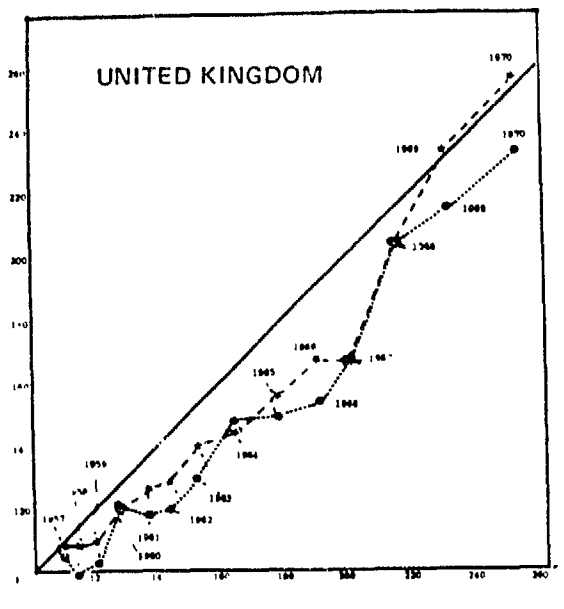
EXPORTS ———————

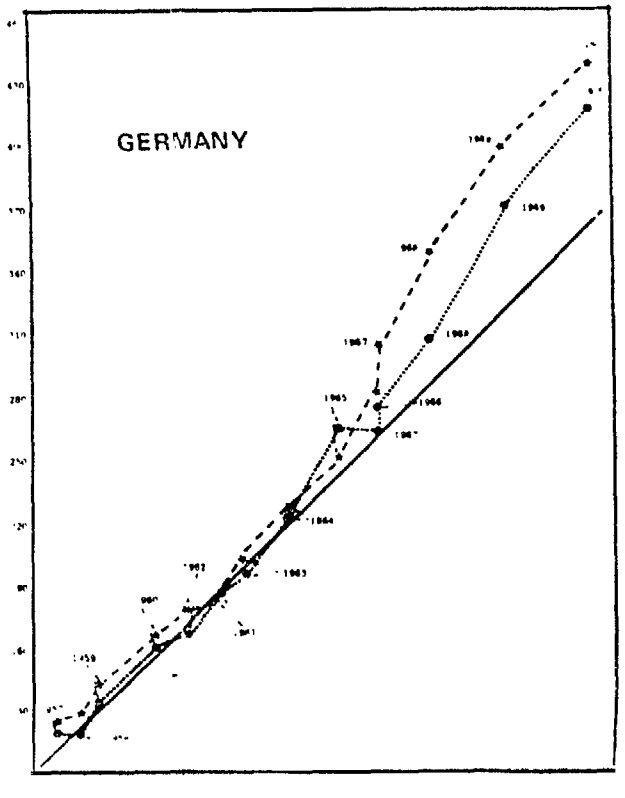
45° LINE ———————



SOURCE: U.S. TARIFF COMMISSION, TRADE BARRIERS, AN OVERVIEW, 1974, VOLUME 1, pp. 60-64.







When, however, net exports are removed from the GNP calculation, the relationships alter in the 1976-78 period. The two economies compare as follows: 1/

	1973	1974	1975	1976	1977	1978
United States	5.5	-0.9	-1.9	6.1	6.4	5.4
Japan	9.8	-0.1	2.4	5.3	3.8	4.0

Thus, it will be seen that Japan's immediate GNP performance after the 1973 hike was stronger than that of the United States. However, the U.S. economy gave a stronger performance than the Japanese economy 1976-78.

While as shown in Charts 1-3, GNP (GDP) exerts a strong effect on trade, it is clear that when countries are running large imbalances, the GNP figures are not an accurate measure of domestic demand which is what in diplomatic exchanges they have been taken to represent. Nowhere in the public debate over Japan's commitment to a 7 percent growth target or in the evaluation of Japan's performance--the American public debate has omitted the U.S. performance--has this point been brought out.

Stimulating domestic demand

Currently, the Government of Japan is embarked on an extraordinary demand-stimulus package through deficit financing. According to the Japanese Government, the deficit for the fiscal year April 1, 1979, to March 31, 1980, amounts in dollar value to the administration-proposed deficits of the United States, United Kingdom, France, and Germany combined. It is a budgetary deficit of 40 percent amounting to 7 percent of GNP. What the Carter Administration sent to the Hill was a budget deficit of 10 percent amounting to 4 percent of GNP. The scale of Japan's deficit financing is a measure of the effort that the country is putting forward to stimulate domestic demand and reverse the mammoth trade imbalance with the world and with the United States in particular.

1/Net balance on goods and services taken from exports and imports in the national accounts section of the country presentations, IMF, International Financial Statistics, July 1979. The net balance taken as a proportion of GNP from the same source, all expressed in current dollars/yen. This percentage is subtracted or added depending on the sign from the above GNP growth rate figures.

FACTORS IN PRICE COMPETITIVENESS

Broadly speaking, goods move in international trade only if they are price competitive. When one describes a good as price competitive, one means that the price compares favorably for comparable quality not only at the time of purchase but, if a durable good, favorably over a period of time. Other factors affecting trade are servicing for those goods requiring it, promptness of delivery, and if consumer goods, styling and product image. In this section we look at factors affecting price competition--monetary alignment, inflation, savings, investment, R&D, competitiveness of national markets, quality standards, labor-management relations, and productivity comparisons. Lastly we look at the U.S. position in world trade.

Monetary alignment

The sharp appreciation of the yen has substantially changed the price relationships of Japanese goods to foreign goods. The Smithsonian realignment of December 18, 1971, and the floating rates on which currencies began to operate in 1973 brought substantial changes in the yen/dollar rate which remained at 360 to one from 1949-71. For the period 1974-77, the annual averages in the yen/dollar relationship were: 1/

1974	291.51	1976	296.55
1975	296.80	1977	268.51

In 1977 the yen began sharply to appreciate vis-a-vis the dollar. The quarterly averages for 1977 and 1978 were: 2/

	1977	1978	1979
1	285.57	237.64	201.47
2	275.24	220.81	
3	266.17	192.83	
4	247.05	190.59	

The quarterly figures make clear the scale of the recent change that has occurred in the currency relationship.

1/IMF, International Financial Statistics, February 1979, Japan table, line af.

2/ibid. First quarter 1979 from July issues, line ae.

Between the first quarter of 1977 and the fourth quarter of 1978, there was 33 percent appreciation of the yen against the dollar. When the comparison is made with 1975, the appreciation is only slightly greater, 35.8 percent.

At the request of STR, BLS has monitored price changes on manufactured imports from Japan. Using the Japanese goods in its general import price index, with 1975 as 100, BLS in unpublished statistics found that the prices of Japanese manufacturers (99.6 percent of Japan's exports to the United States) had appreciated 37.6 percent by December 1978, thus comparing favorably with the monetary appreciation of 35.8 percent.

The Boston Consulting Group has observed that there is a subtle secondary effect to currency realignment which strengthens weak industries (as well as other industries) in the depreciating-currency country but which so challenges industries in the appreciating-currency country, that weak industries are reduced or are dropped altogether. The Group writes: 1/

> Devaluation reinforces . . . [a higher value added] effect by providing support to relatively weaker sectors in the United States, while revaluation exposes weaker sectors to trade competition in Japan. The process is circular for both economies but in opposite directions.

Inflation

Relative rates of inflation--the phenomenon of general upward price level changes--are a significant factor in exchange-rate alignment. However, inflation is but one component in currency alignment and may not be present at all for exchange rates to change. Accordingly, it is appropriate to discuss inflation and exchange rates separately.

1/Boston Consulting Group, "Trade Between Japan and the United States: The Setting, the Current U.S. Position and U.S. Prospects", a report prepared for Anthony Solomon, Undersecretary of the Treasury for Monetary Affairs, April 1978 and reproduced by the Subcommittee on Trade of the Committee on Ways and Means, House of Representatives, Committee Print 95-102, Background Articles on United States-Japan Trade Issues, Sept. 27, 1978, p. 22.

While U.S. exports have had a sharp price advantage in the last 2 years vis-a-vis Japanese goods out of currency realignment, American goods have been handicapped by the greater inflation in the American economy as compared to the Japanese economy. Part of Japan's strong performance in controlling inflation is due, of course, to the fact that imported raw materials and food have been cheaper for Japan in consequence of the appreciated yen. Using 1975 as 100, the Bank of Japan statistics show February 1979 import prices to have been 85.6; in August 1978 they were lower at 76.3. 1/ Table 1 provides the record of wholesale prices in the two economies.

Table 1

Trend of Wholesale Prices in The United States and Japan, 1972-78 with 1967 as 100

	All commodities		Manufactured goods	
Year	United States	Japan	United States	Japan
1972	119.1	106.9	117.9	106.2
1973	134.7	123.8	129.2	122.1
1974	160.1	162.6	154.1	156.6
1975	174.9	167.5	171.1	159.0
1976	183.0	175.9	179.0	166.0
1977	194.2	179.2	190.1	168.8
1978	209.3	174.7	204.2	166.1

Source: Department of Commerce, International Economic Indicators, June 1979, tables 63 and 66.

Usually in discussion of comparative national inflation the statistics chosen to show relative inflation are consumer prices. Our choice of wholesale prices is deliberate. International trade does not move at retail but at wholesale. In most economies, because wholesale and consumer prices move in parallel fashion, it is not so consequential which is chosen. However, in the case of Japan, it is. In Japan

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1/Bank of Japan, Export and Import Price Indexes Monthly, Feb. 1979, p. 4.

the Wholesale Price Index (WPI) and the Consumer Price Index (CPI) do not behave the same way, and it seriously distorts results to use the CPI. Currently, inflation in Japan is again beginning to be as troublesome as it is in the United States. It remains to be seen how the two governments will meet the most recent challenges. If exchange rates were the product of merchandise trade alone, one would expect floating exchange rates quickly to reflect price level changes. Exchange rates in fact, however, are determined by the totality of exchanges between countries, i.e., in addition to merchandise trade--services, transfer, and capital flows. Therefore, one cannot rely on changes in currency alignment in the short-run to compensate for higher inflation.

Savings

Since 1972, the United States has had the lowest rate of personal savings of any industrial economy. Throughout the 1970's, Japan has had the highest rate. As will be seen in Table 2, savings in the American economy are proportionately only one-third of the level of savings in the Japanese economy and only one-half of Germany's. Furthermore, since 1972, the U.S. rate of saving has even been well below that of the United Kingdom where the provisions of government services and extremely high tax rates would conceivably lessen the incentive for saving. The implications of this table are disturbing. A nation is competitive out of new plant and equipment. The means and resources for new plant and equipment come from corporate and personal savings.

Table 2

Ratio of Personal Savings to Disposable Personal Income, 1970-78

Year	U.S.	Japan	Germany	France	U.K.	Italy	Canada
1970	7.4	18.1	14.6	16.7	8.8	18.8	5.3
1971	7.7	17.5	14.3	16.8	8.5	20.6	5.9
1972	6.2	18.0	15.5	16.8	10.4	21.4	7.4
1973	7.8	20.5	14.9	17.3	11.9	20.9	9.1
1974	7.3	23.7	16.1	17.4	14.4	19.2	9.9
1975	7.7	22.5	16.4	18.6	15.0	23.0	10.9
1976	5.7	22.4	14.7	16.0	14.6	21.8	10.8
1977	5.1	21.2	13.7	17.1	14.2	23.1	10.7
1978	5.3		13.7	17.2	14.4		10.9

Source: U.S. Department of Commerce, International Economic Indicators, June 1979, p. 44.

OECD publishes a broader comparison of national savings. The formula employed is:

$$\frac{\text{GNP} - (\text{priv. cons.} + \text{pub. cons.})}{\text{GNP}} \times 100$$

In 1976, by this measure, savings rates for the United States and Japan and the other five countries shown in Table 2 as a percent of GNP are as follows: 1/

United States	17.4%
Japan	32.3
Germany	24.4
France	23.3
United Kingdom	18.9
Italy	20.2
Canada	21.7

Again the United States is the lowest, Japan the highest.

There have been high officials within the Administration calling for Japan to lower its savings rate. The wisdom of attempting to negotiate such a point is doubly questionable. Not only are the personal habits of a large population hardly negotiable but substantively the position is without merit. If Japan generates more savings than the economy needs, such savings can be exported. Most non-OPEC LDCs are grievously short of savings. In a world eager for more capital, it does not make sense to decry Japan's ability to generate funds for investment.

Investment in the American economy

As will be seen in Table 3, the United States in the seventies has had the lowest rate of capital formation of any major industrial economy, while Japan has had the highest rate. In terms of competition in the international arena, this is a difficult combination. Proportional to its GNP, Japan has been putting up new plant and equipment and infrastructure at double the rate of the United States. Given the pace of technological change, this inescapably leads to cost reductions. An automobile plant, a steel plant, a chemical plant laid out in 1975 will embody features not available in a plant laid out in 1960 or 1950 or earlier.

1/OECD, Japan Economic Survey, 1978, "Basic Statistics: International Comparisons."

Table 3

Ratio of Gross Fixed Capital Formation
(Exclusive of Residential) to GDP, 1970-78

Year	U.S.	Japan	Germany	France	U.K.	Italy	Canada
1970	13.7	27.7	20.0	16.7	15.2	14.3	16.8
1971	13.2	27.3	19.1	16.8	15.0	14.4	16.7
1972	13.3	26.9	17.9	16.8	16.0	14.0	16.2
1973	13.6	27.8	16.6	16.6	16.8	14.9	16.4
1974	14.1	27.8	15.4	16.9	16.0	16.1	17.1
1975	13.0	23.0	15.1	16.0	15.4	14.7	18.5
1976	12.3	21.7	15.1	15.9	14.5	14.5	16.7
1977	10.0	23.1					17.0
1978	12.7	23.2					

Source: Organization for Economic Cooperation and Development, National Accounts Statistics, 1976 and Quarterly National Accounts Statistics, Third and Fourth Quarters, 1978 data for first three quarters at annual rates.

If the U.S. Government wants to explore some of the factors behind its lack of trade competitiveness, it might begin with a look at the age of plant and equipment in the United States compared to that of other industrial countries and also to the industrializing LDCs. Participants in the conference on Technology, Trade, and the U.S. Economy conducted at Woods Hole, in August 1976, by the National Academy of Engineering and Assembly of Engineering, National Research Council, representing business, labor and academia, endorsed the desirability of such comparative data for the industrialized countries. 1/

> An inquiry should be undertaken into the comparative age and quality of the stocks of capital goods, arranged by industrial sectors, within the United States and other countries. Such a study should emphasize comparison of U.S. industries with those in other countries of the OECD.

U.S. foreign investment

Not only does the United States have the lowest rate of domestic saving and investment among the industrial

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1/The National Academy of Engineering, National Research Council, Technology, Trade, and the U.S. Economy, 1978, p. 5.

powers, but is also the world's largest exporter of capital. The total of U.S. private direct investment abroad from 1960 was as follows: 1/

1960	$31.9 billion	1975	$124.1 billion
1970	75.5 billion	1976	136.4 billion
1972	89.9 billion	1977	148.8 billion
1974	110.1 billion		

This growth was brought about by large capital outflows. The yearly net capital outflows and inflows from and to the United States, 1970-1978, together with outflows and inflows for Japan and Germany are shown in Table 4.

Table 4

Global Foreign Direct Investment
Net Capital Outflows from and Net Capital Inflows into the United States, Japan, and Germany, 1970-78
(millions)

	Outflows			Inflows		
	U.S.	Japan	Germany	U.S.	Japan	Germany
1970	$ 7,589	$ 355	$ 873	$1,464	$ 94	$ 594
1971	7,617	360	1,047	367	210	1,119
1972	7,747	723	1,564	949	169	1,931
1973	11,353	1,904	1,653	2,800	-42	1,992
1974	9,052	2,012	1,914	4,760	202	2,545
1975	14,244	1,763	2,008	2,603	226	1,256
1976	11,614	1,991	2,454	4,347	113	1,530
1977	12,215	1,643	2,762	3,338	22	1,441
1978	15,361	2,370	3,595	5,611	8	1,642

Source: Department of Commerce, International Economic Indicators, June 1979, pp. 76-77.

While some may question the advisability of U.S. foreign investments which add to the plant and equipment of other economies when U.S. plant and equipment is oftentimes aging, earnings from such investments are large. By the mid-seventies, the size of such earnings began to approximate the scale of capital outflows. This is seen in Table 5 where receipts and payments on direct investments are shown.

1/ Council of Economic Advisors, Annual Report. For 1960, 1974 Report; for 1970-78, the 1979 Report, tables C-94 and B-100, respectively. Note: The United States changed its method of balance of payments statistics in 1973 which is reflected in the 1970-78 figures. The 1960 figure is on a slightly different base.

Table 5 also shows such earnings between the United States and Japan. U.S. receipts will seem to be surprisingly small given the scale of the Japanese economy. This is because of the barriers to foreign equity investment which Japan earlier had in place out of an historical fear of losing sovereignty by this route.

Table 5

Global Receipts of Income on U.S. Direct Investment Abroad; Payments of Income on Foreign Direct Investment in the United States; and U.S.-Japan Bilateral Receipts and Payments, 1970-78
(millions)

	Global		Bilateral	
Year	Receipts	Payments	Receipts	Payments
1970	$ 4,992	$ -441	$ 101	$ -17
1971	5,983	-621	149	-40
1972	6,416	-687	163	-64
1973	8,384	-699	216	-22
1974	11,379	-266	225	-12
1975	8,547	-1,046	191	-31
1976	11,303	-1,451	200	-51
1977	12,795	-1,248	358	-54
1978	13,593	-1,628	499	-82

Source: Global receipts and payments, Survey of Current Business, June 1979, Table 1, "U.S. International Transactions"; bilateral receipts and payments, ibid; Table 10, "U.S. International Transactions," different issues. Data for 1970-72 from June 1973, 1973-75 from June 1976 and 1976-78 from June 1979.

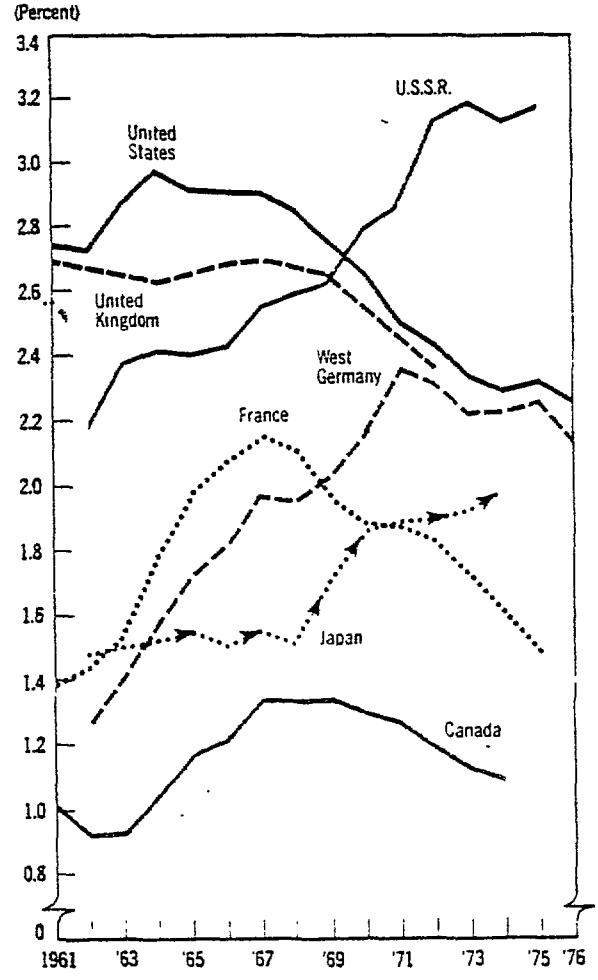
It is because such earnings are quite as ongoing a feature of economic relations between countries as merchandise trade that economists typically choose, as their measure of relations among countries, the balance of current account, which reflects these as well as other service entries rather than merchandise trade alone.

R&D. - In recent years the United States has been spending a smaller proportion of GNP on R&D than was true earlier. Our relative expenditures for R&D have been falling at a time when the relative expenditures of Japan have been rising. Not only is our proportion falling but it is overstated for commercial purposes inasmuch as a large proportion

is for defense as earlier it was for defense and space. Chart 4 shows the relative proportion of GNP devoted to R&D among the United States, Japan and other countries. Study of the chart reveals that between 1971 and 1975 in only two countries, the Soviet Union and Japan, was national expenditure as a proportion of GNP rising.

CHART 4

National Expenditures for performance of R&D[1] as a percent of Gross National Product (GNP) by country, 1961-76



[1] Gross expenditures for performance of R&D including associated capital expenditures (except for the United States and the U.S.S.R. where total capital expenditure data are not available)

NOTE: Estimates are shown for 1974, 1975 and 1976. United Kingdom figures for 1968-69 are shown as 1968, 1969-70 as 1969, and 1972-73 as 1972.

Source: National Science Foundation, Science Indicators, 1976, Report of the National Science Board, 1977, p. 5.

Japan's rising technological capabilities can be seen by a different measure, that of the proportion of U.S. patents awarded to foreign nationals. In Chart 5, it will be seen that it is Japan's performance which lifts the entire curve. In the case of U.S. patents awarded to Germany, the U.K., France, Switzerland, and Canada, the curves are flat or downward.

Competitiveness of national markets

Another factor affecting price competitiveness is business behavior. Do companies compete in price and how vigorously? In many of Japan's industries, the proportion of output accounted for by the top four producers is not very different from the proportion found in comparable American industries. Yet one informed observer after another describes the Japanese market as "fiercely competitive."

How does one reconcile comparable concentration with seemingly greater competitiveness? Apparently, where rivalry has the chance to express itself, sociological factors can produce different market behavior in similar market structures. Japan is a hierarchical society in which rank is of keenest concern. Firms contest and struggle to improve their share of the market. In Japan, attention is as riveted to market share as it is to the price/earnings ratio in the U.S. economy. Across a broad spectrum of industries, Japanese firms display highly competitive behavior, the sort we find in our more competitive industries, such as semiconductors, for example.

Quality standards

The record of quality manufacture is disparate in the two economies. The defect ratio in product after product is lower in Japan than in the United States. In our color television case study, we allude to the dramatic changes that occurred in the record of an American TV plant taken over by Japanese managers. There the defect rate per 100 TV sets packed fell from 150-180 to 3-4. Even the latter rate is well above the rate in Japan. As J. M. Juran, from whom these facts are taken, has pointed out the rates in Japan are about 0.5 per 100 TV sets packed. 1/

A June 2, 1979, Washington Post article is captioned, "Management Techniques--Made in Japan; U.S. Companies are Starting to Copy Their Asian Rival's Methods." Companies

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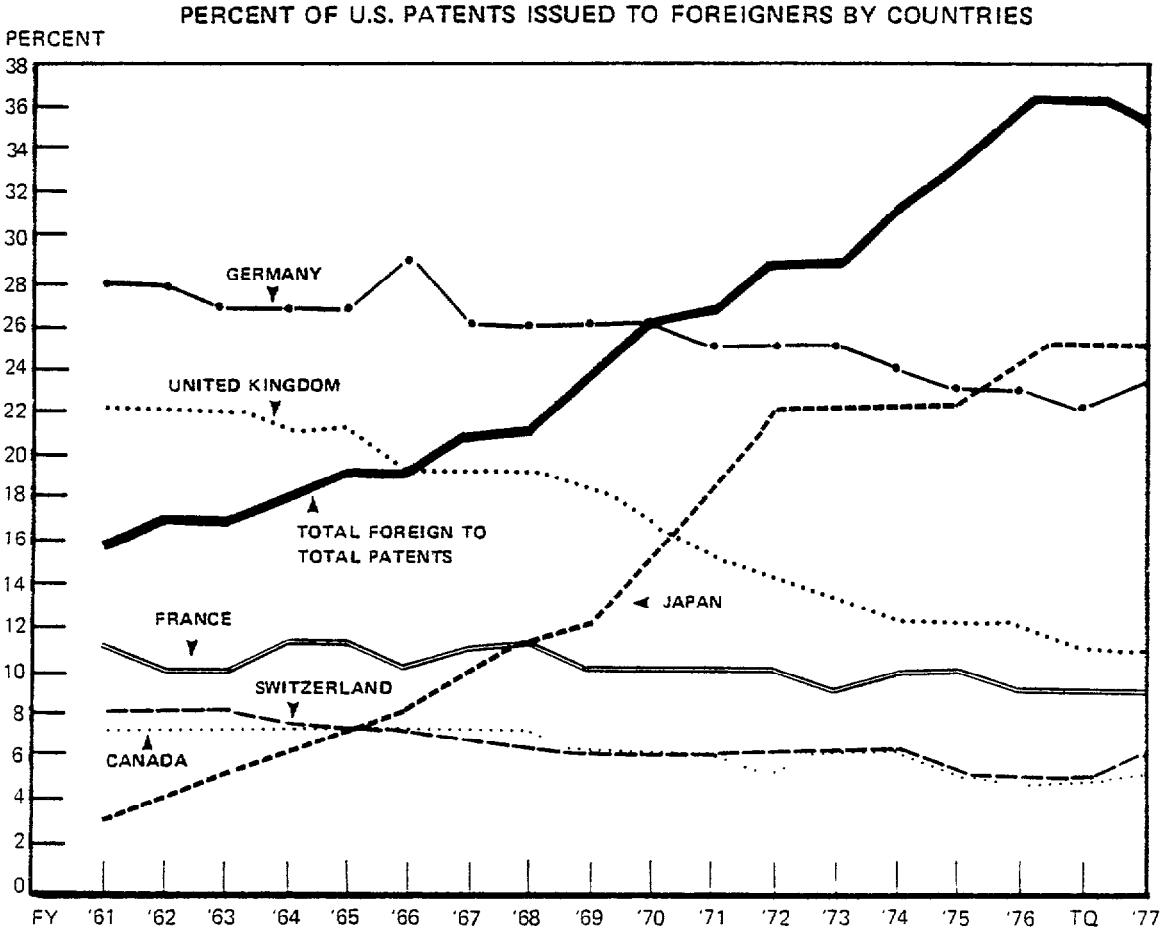
1/J.M. Juran, "Japanese and Western Quality - A Contrast," a paper copyrighted, 1978, p. A3-19.

CHART 5

PERCENT OF TOTAL U.S. PATENTS ISSUED TO FOREIGNERS
PERCENT OF U.S. PATENTS ISSUED TO FOREIGNERS BY COUNTRIES



NOTE. TQ IS TRANSITION QUARTER
SOURCE. ANNUAL REPORT OF COMMISSIONER OF PATENTS 1971, 1974 AND 1977

specifically mentioned as studying or adopting Japanese methods are Ford, GM, Chrysler, Lockheed, and TRW. Ironically, postwar Japanese styles of management owe much to two American management consultants, W. Edward Deming and J.M. Juran. As the Post writer pointed out:

> "Faced with scarce resources and a large population, Japan has as a nation turned to the human factor orientation of these business theorists as a way to gain the competitive edge in world markets."

In its ideology the United States, with much higher levels of capital accumulation than Japan, has placed and continues to place primary emphasis on capital. In Japan, there is the saying "the company is the worker;" in the United States one could paraphrase and say, "the company is the shareholder." And to carry the anomaly one step further, it is in hierarchical Japan that there is greater egalitarianism in the work place than in egalitarian United States.

Labor-Management Relations

There is marked difference in time lost in strikes in the two economies. A number of American observers believe that only if there are adversarial labor relations with the potential for extended strikes, is there real collective bargaining. The majority of Japanese believe differently. Through a merit-based system of life-time employment for about one-third of the labor force, the Japanese have succeeded in tying together the interests of this labor elite with management. Thus, labor and management in Japan have a commonality of interest not characteristic of relations in the United States. Even though the civilian labor force in the United States is 1.7 times the size of Japan's, 1/ working days lost by strikes in the United States are proportionally far higher. 2/ This is seen in the following statistics:

1/OECD, Economic Survey, United States, "Basic Statistics and International Comparisons," where the 1976 statistics for civilian labor force for the United States are given as 87.5 million and the same statistic for Japan, 52.7 million.

2/Ministry of Labor, Yearbook of Labor Statistics, Table 180, 1977.

Year	Working Days Lost by Strikes United States	Japan	United States/Japan ratio of days lost
1970	66,414,000	3,914,805	17.0
1971	47,589,000	6,028,746	7.9
1972	27,066,000	5,146,668	5.3
1973	27,948,000	4,603,821	6.1
1974	47,991,000	9,662,945	5.0
1975	31,237,000	8,015,772	3.9
1976	37,960,000	3,253,715	11.7

Productivity comparisons

The foregoing factors combine to produce quite different levels of productivity in the American and Japanese economies as will be seen in Table 6, which also presents productivity figures for other selected industrial countries for wider comparison. If long-run comparison is noted, it will be seen that for the 18 years, 1960-77, Japan had an average annual increase in productivity 3.4 times that of the United States. If the 8 years of the 1970's are taken, 1970-77, Japan's annual gains were 1.8 those of the United States. Over the 18-year period, the table shows the United States to have had the lowest record of any country. For the 1970-77 period, the 2.3 percent annual average of the United States is not the lowest but the next lowest shown. The annual average for the United Kingdom is 2.2 percent.

Table 6

Output Per Hour in Manufacturing
1960-77 Average Annual Percent Change

Country	1960-77	1970-77	1974	1975	1976	1977
United States	2.6	2.3	-5.4	4.6	4.7	2.6
Japan	8.8	4.2	.3	-3.9	8.1	5.6
Germany	5.5	5.7	6.1	3.8	8.2	4.2
Canada	4.0	3.0	1.7	-2.4	4.6	4.8
France	5.7	5.0	2.8	2.7	9.1	5.2
Italy	6.3	4.9	5.3	-4.3	8.4	0.9
Sweden	6.0	3.3	3.1	-1.1	1.6	2.4
United Kingdom	3.4	2.2	1.0	-2.5	3.5	-1.6

Source: U.S. Department of Labor, Monthly Labor Review, November 1978.

United States and Japan
in world trade

As a result of a combination of all the foregoing factors, since 1960 the United States has lost position in world trade while Japan has substantially gained position. This will be seen in Table 7.

Table 7

Trend in Shares of Total World (non-Communist) Exports
United States, Japan, and Germany 1960-77
(percent)

	United States		Japan	Germany
	(excluding exports to U.S.)			
1960	21.0	18.2	3.6	10.1
1970	18.0	15.4	6.9	12.2
1972	15.6	13.3	7.7	12.5
1974	14.7	12.8	7.2	11.6
1976	14.7	12.8	7.5	11.3
1978	14.2	12.1	8.3	12.0

Source: For 1960 statistics, Department of Commerce, International Economic Indicators, Dec. 1978; for 1970-77, ibid., June 1979.

As is evident by various measures, the U.S. trade problem is broader than the Japanese bilateral problem, just as the problem of Japan's trade surplus is broader than the bilateral American problem. In the Annual Report of the Bank for International Settlements, June 1978, the view is expressed that "the poor performance of U.S. exports over the last three years, when world trade in manufactures expanded by 10 percent, is difficult to explain." 1/ In a report entitled, U.S. Trade Performance Since 1970, the National Association of Manufacturers (NAM) observes that, "Manufactured goods exports of the Common Market . . . and Japan to the world (excluding the United States) have grown more rapidly than U.S. manufactured goods exports since 1975." 2/ The NAM report

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1/Bank for International Settlements, Annual Report, June 1978, p. 9.

2/National Association of Manufacturers, U.S. Trade Performance Since 1970, May 18, 1978, preliminary page, unnumbered, captioned "Highlights."

also observes with respect to the U.S. trade with the world that "from 1970 to 1976, the U.S. has lost market shares in all four groups of manufactures . . . [chemicals, manufactured materials, machinery and transport, and miscellaneous manufactured articles]." 1/

To sum up:

--the United States is losing market shares in manufacturing in the world (when "world" is defined to exclude the American market).

--this loss of shares has been occurring across all sectors of manufacturing.

--the worst bilateral imbalance with Japan has occurred when Japan's tariff and NTBs have been at their lowest, and when the dollar/yen alignment has given the United States its greatest export price advantage in the Japanese market.

The factors discussed above indicate that something more than Japanese NTBs are at the root of the bilateral problem.

1/ibid., p. 31.

CHAPTER 10

TRADE POLICY IN THE UNITED STATES AND JAPAN

INTRODUCTION

In comparing the ways in which the United States and Japan handle foreign trade policy, there are four underlying factors to be noted. The first and foremost, of course, is the relative dependence of the two economies on the outside world. Foreign trade is the vital means of support for Japan's trillion dollar economy; for the American economy, foreign trade has played a far less important role. Only recently with the energy crisis have Americans become aware of a critical dependence on imports.

The second important distinction is that as a mature creditor country, the United States often uses foreign investment as an alternative to trade. Thus, for example, our automobile companies are manufacturing cars in Europe. They are not primarily exporting to that market from the United States. Perhaps the most extreme example of investment is in the computer field where, as we saw in chapter 2, IBM is producing worldwide and with very high market positions in country after country. Production of color television receivers is heavily offshore. As we saw in previous chapters, our case participant in machine tools has overseas manufacturing operations; even our case participant in logs and lumber has overseas logging operations.

Japan, on the other hand, is just beginning to move into an international creditor position. Thus, we are witnessing its first stages of overseas production. In our discussion of color television, we saw that Japanese television companies have several plants in the United States as well as plants in Korea and Taiwan. Notwithstanding this development, exports from Japan are still far more important than overseas production. In the other product lines--computers, automobiles, telecommunications equipment, machine tools--Japan relies overwhelmingly on export. Thus, what strikes one in a comparison of trade policy in Japan and the United States is Japan's far greater reliance on exports of goods. For the United States, private outward economic relations with the world divide between trade and investment; for Japan, these relations are primarily trade.

For both countries inward capital investment has been limited, for the United States because, in the postwar period up to OPEC, it was the United States alone which had large amounts of capital to invest in other countries. Inward

investment in Japan was limited because, out of an historical fear of losing its sovereignty, Japan restricted outside investment through its Foreign Investment Law of 1950. 1/

The relative importance of trade and investment for the two countries is seen in the following figures. It should be noted that capital flows take the opposite sign from trade flows. In goods, exports carry "+" and imports carry "-". In capital, exports carry "-" and imports carry "+". The trade figures are on the BOP basis, fob valuation. 2/

United States	1976	1977	1978
Trade balance	-$9,353	-$31,155	-$34,147
Net position on direct investment	-7,267	-8,878	-9,748
Japan			
Trade balance	9,890	17,812	25,722
Net position on direct investment	-1,878	-1,622	-2,362

The third major difference between Japan and the United States is in the character of exports. Since Japan has neither resource endowments nor land sufficient to feed itself, it naturally is focused virtually entirely to manufactured exports. The United States by contrast exports in the three broad categories--manufactured goods, agricultural products and crude materials--with different administrators thinking about exports for each sector and within sectors. Whereas government administration of trade in Japan is centered in the Ministry of International Trade and Industry, American administration of exports is divided between the Department of Commerce, the Department of Agriculture and in crude materials, between Agriculture (logs), Interior (coal), and Energy (Alaskan oil).

1/Technically the one big exception to this statement concerns technology licensing arrangements. Japan treats imports of technology as foreign investment, and as such they come under the Foreign Investment Law. Licensed imports of technology have been large. There are large outpayments for it.

2/IMF, International Financial Statistics, June 1979.

The United States is confident that it wants export promotion in manufactured goods and in agricultural products (almost always), but it is often unsure that it wants export growth in crude materials. As we noted in the discussion of logs and lumber, there are numerous restrictions on the export of logs--though no consensus on the effect! To date, the United States has refused to swap Alaskan oil for Middle Eastern or Mexican oil with Japan even though the swap would bring significant transportation economies to both parties.

A fourth important difference between Japan and the United States must be noted. As the leader of the free world, U.S. relations with the world are far more than economic. National security takes first place, and oftentimes policy differences develop between administration of national security matters and trade. For security reasons, the United States has attempted to deny high technology items to the Soviets and their allies, and to other centrally planned economies. Although we have internationalized this effort through COCOM (NATO members minus Iceland plus Japan), oftentimes American exporters have been denied sales only to have them made by another COCOM member.

In addition to national security, the United States uses trade as a lever for other objectives. Under the Jackson-Vanik amendment, trade with the Soviet Union and its European allies has been subordinated to emigration. (The amendment did not contemplate Vietnam-style emigration.) Trade policy in other instances has been used to promote other human rights considerations such as, for example, denial of export permits for aircraft to Libya, given that country's record of accepting hijackers.

Japan, on the other hand, out of its crushing defeat in World War II, has yet to assume a political role in the world. It has focused virtually entirely on economic relations and with the talent and ability of the Japanese people, this has meant a powerful focus indeed.

BACKGROUND - JAPAN

International trade has necessarily been in the forefront of consciousness of Japan's leaders throughout Japan's "modern century." For essentially 100 years, 1868-1965, the question before Japan's leaders was how to export enough to pay for needed imports. On the other hand, from 1893 until 1971, the U.S. trade account was in surplus. The United States did not

have to "work at" achieving a surplus. Obviously, the situation is dramatically different for both countries at the close of the decade of the 1970s.

The relationship between trade and GNP is often taken as an index of the importance of trade to the economy, and frequently, it is roughly indicative. This is not so in the case of Japan. By this measure, Japan falls between the low proportion of the United States and the much higher proportion of most of the European countries. For Japan, imports are literally vital. It is not surprising, therefore, that Japanese "think" foreign trade. One scholar has likened the ministry handling trade administration in Japan to the position of the defense ministry in other nations. 1/

Foreign trade is so important for Japan that fifth grade children are introduced to the meaning of imports and exports to their economy. We quote from a translation of such a textbook:

> "As we have learned, a characteristic of Japan's foreign trade is to import raw materials and to process them domestically and export industrial products in turn. We call this pattern of trade a 'processing trade.'
>
> "Why is Japan engaged in a 'processing trade'? Some answers to this question are: shortage on industrial raw materials which came about as industry grew; availability of a high level of technology and high quality labor making production of high quality products possible.
>
> . . . . .
>
> "We have seen that our industry is closely related with foreign trade . . . Thanks to our efforts, exports have grown markedly in recent years. Lately, we have more exports than imports . . . It is important that our future foreign trade be conducted with exports and imports kept in balance."

1/Chalmers Johnson, "MITI and Japanese International Economic Policy" in Robert Scalapino, ed. The Foreign Policy of Modern Japan, University of California Press, 1977, p. 260.

Trade policy necessarily involves the interaction of government and the private sector. In Japan, the interaction is made easier by the fact that, to a substantial degree, the private sector has respect for government officials. If a government career is no longer the preeminent choice for college graduates, it is still considered equal to if not somewhat more desirable than the private sector. Respect naturally makes a more propitious climate for working relationships than lack of respect. In our American ideology, bureaucrats are not the equal of businessmen. Americans typically take a very low view of the bureaucracy. We believe that the market gives better answers than government, though probably government actions in such areas as defense and agriculture (and earlier space), do shape the American economy to a greater extent than many of us realize.

When we Americans consider export policy, we are not thinking of government policy affecting the mix of exports. Instead we are thinking of government enhancing awareness of the national need to export, of government providing market-opportunity data for products the private sector chooses to produce, of government showing American wares through trade fairs and of government providing preferential credit. If we are considering the industrial sector, we anticipate that government, through commercial officers attached to missions worldwide, will assist businessmen with their trading problems; if we are thinking of agricultural export, we anticipate more of a partnership between government and farm groups, with the agricultural attaches abroad participating in selling efforts.

JAPAN "GROWS" KEY INDUSTRIES

Japan approaches foreign trade quite differently. At the heart of Japan's foreign trade policy work is the overlap between industrial policy and trade policy. The question constantly being addressed in Japan is what industries will give the economy the best development and export performance. In a much-quoted passage of a MITI vice-minister before the OECD Industry Committee in 1970, the then vice-minister observed:

> "After the war . . . Japan's first exports consisted of such things as toys and other miscellaneous merchandise and low-quality textile products. Should Japan have entrusted its future in the theory of comparative advantage in these industries characterized by intensive use of labor? . . . If the Japanese economy had adopted the simple doctrine of free trade and had chosen

> to specialize in this kind of industry, it would have almost permanently been unable to break away from the Asian pattern of stagnation and poverty . . .
>
> "The Ministry of International Trade and Industry decided to establish in Japan industries which require intensive employment of capital and technology, industries that in consideration of comparative cost of production should not be the most inappropriate for Japan, industries such as steel, oil refining, petrochemicals, automobiles, aircraft, all sorts of industrial machinery, and electronics, including electronic computers. From a short-run viewpoint, encouragement of such industries would seem to conflict with economic rationalism. But from a longrange viewpoint, these are precisely the industries of which income elasticity of demand is high, technological progress rapid, and labor productivity rises fast."

Some may regard this as little more than the boast of a MITI official, but the record shows that in the postwar period the composition of Japan's manufactures has undergone transformation and at extraordinary speed. In the 1950's it was decided that key industries would be "heavy industries and chemicals" by which was meant steel, shipbuilding, automobiles and chemicals, including petrochemicals. Fifteen years later, due to an assortment of problems arising from the enormous growth of these industries, including unbelievable pollution, the industries designated "key" were "clean," "knowledge-intensive" industries such as computers and related electronic products, aircraft, and the like.

In a market economy where the private sector makes the decisions on how to invest--the amount and the product line--as well as the decision to focus on the domestic or foreign market, how does the Japanese Government persuade the private sector to invest in areas which it believes most advantageous for the national interest. As seen in several of our case studies, it does so by offering inducements, such as tax concessions, and easier access to capital (for most of the period under discussion, bank loans). In an earlier period, government incentives included easier access to foreign exchange, protection from foreign production within Japan through controls over foreign investment as well as protection against "cheap" foreign goods through formidable tariffs and layers of nontariff barriers. Further, there was additional assistance to exports through export financing.

We will discuss in greater detail how these arrangements worked in practice.

Tax features

Like the United States, Japan relies on an income tax as its chief source of corporate revenue. The corporate rates are 46 percent in the United States and 40 percent in Japan, on undistributed profit (30 percent on distributed). There has been and in some cases still is considerably greater difference in the handling of depreciation. In a broad spectrum of industries which Japan has sought to develop, tax writeoffs have been high. In addition to ordinary depreciation, Japan had a 25 percent first-year rationalization allowance and extra percentage deductions for strong export performance. In the face of embarrassingly large surpluses, these measures for the most part have been abandoned. In the computer industry, however, as we earlier noted, similar provisions are still very much alive. In our machine tool discussion, we noted the stimulus being provided to modular NC production. Additionally, Japan in 1964 began a program to assist overseas market development through the deferral of taxes. Initially for all companies, it has since 1972 been for medium and small companies only.

Ordinary depreciation and the rationalization allowance. If one uses the double-declining-balance method of depreciation and assumes an 11-year life to equipment, first year depreciation turns out to be 18.2 percent. 1/ However, the Enterprise Rationalization Law of 1952 provided that in industries deemed basic to the economy an additional 25 percent first-year depreciation charge might be employed on approved kinds of equipment. The Diet left to the ministries the designation of "basic" industries and the list changed over time. As of March 1976 use of this provision was suspended, but in 1971 the list of such industries was: 2/

1/Double-declining balance is a method of accelerated depreciation. In contrast to straight-line depreciation, which divides deductions evenly over the life of plant and equipment, double-declining balance gives larger deductions in the beginning years. In essence, in the first year, double-declining balance method provides double the deduction of straight line.

2/Source: Ministry of Finance data.

1. Spinning
2. Weaving
3. Dyeing and finishing
4. Fertilizer
5. Petrochemicals
6. Industrial sharpening equipment
7. Pulp
8. Fiber board
9. Nonferrous metal refining
10. Nonferrous metal rolling
11. Electric wire and cable
12. Wholesale, retail trade
13. Steel
14. Forging
15. Casting
16. Nonferrous metal casting
17. Power metallurgy
18. Atomic furnace
19. Construction machinery
20. Industrial machinery
21. Hydraulic machinery
22. Bearings
23. Electronics
24. Automobiles and parts
25. Aircraft
26. Agriculture and forestry

It is thus evident that this provision was broadly based, advantaging key industries and others as well.

Accelerated depreciation for strong export performance. Prior to April 1, 1972, additional depreciation deductions could be taken, first as tax writeoffs and later as deferral of income. In 1964, owing to criticism from GATT, Japan changed the program from indefinite deferral which is equivalent to writeoffs (as in the case of the U.S. DISC--Domestic International Sales Companies) to a 5-year deferral scheme. Between 1964 and 1972, companies enjoying special depreciation for strong export performance were obliged to restore to taxable income in five annual installments what had been deferred. In the face of the large trade surplus, the program was dropped in 1972.

Because the details of Japan's accelerated depreciation schemes for strong export performance varied irregularly year-to-year or every few years, specific dates are important. Between 1964 and 1970, there were two schemes to strengthen export performance: a "basic" accelerated depreciation and a "supplemental" accelerated depreciation. The "supplemental" provisions were dropped in 1971 and the "basic" in 1972.

Computation of the "basic" accelerated rate for export performance. The basic accelerated rate for export performance was computed from a company's export ratio, that is the proportion of exports to total sales multiplied by a stipulated percentage figure, 80 percent in 1971. 1/ If, for example,

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1/This figure varied. In 1964-65 it was 80 percent, in 1966-70 it was 100 percent, and in 1971 it was again 80 percent.

a company's foreign sales accounted for 30 percent of its total sales, then it could increase its rate of depreciation over the standard by 80 percent of 30 percent or 24 percent. If, under an assumed 11-year life of the asset and double-declining-balance method, 18.2 percent is taken as the first-year rate of depreciation, then under the provision for "basic" accelerated depreciation, the company could take 24 percent of the standard amount (18.2 x (1 + .24)), or a total of 22.6 percent. When the rationalization provision of 25 percent (outside the foregoing computation) is added to this, then first-year depreciation could become 47.6 percent.

Computation of "supplemental" accelerated rate. In addition to the basic rate governing accelerated depreciation, the Japanese Government permitted further tax benefits based on export performance, under which incremental improvement carried extra rewards. The companies qualifying were called "export contributing companies" (ECC). Export contributing companies were divided into "category A" and "category B;" if the company met both of the following conditions--it was in "category A," but if it met only the first condition, it was in "category B."

The two conditions were:

(1) export sales in the latest accounting period 1/ absolutely exceed by 1 percent export sales in the immediately preceding accounting period.

(2) the export ratio in the present accounting period exceeds the ratio for the previous accounting period; or, the increase in the export ratio is

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1/For tax purposes Japan typically employs semiannual accounting periods April 1 to September 30 and October 1 to March 31, but annual accounting periods are also permissible. Because neither national export figures nor company data are immediately available, the tax computation under these provisions typically rested on three time periods. If, for example, the company were filing for the tax period October 1, 1970 to March 31, 1971, the company's export ratio would likely be determined on the record 12 months earlier, October 1, 1969 to March 31, 1970. In addition, the company's ECC status--category A or B--would likely be determined from 24 months earlier, October 1, 1968 to March 31, 1969.

at least two-thirds of the percentage increase in the nation's total exports. 1/

Category A companies could increase their accelerated depreciation by 60 percent of the basic accelerated rate, category B companies by 30 percent. Continuing with the example of a 30 percent export ratio and adding the rationalization provision of 25 percent, it will be found that category B companies could depreciate 48 percent of their equipment during the first year, and category A companies 49.6 percent during the first year. 2/ Thus, the first-year rates of the three varieties of accelerated depreciation compared as follows to the standard depreciation (the rationalization provision is included in all entries) on the assumption of export rates of 20, 30, and 40 percent:

	20 percent export ratio	30 percent export ratio	40 percent export ratio
Standard depreciation plus rationalization allowance	43.2	43.2	43.2
Basic accelerated depreciation	46.1	47.6	49.0
Supplemental accelerated depreciation, ECC "B"	47.4	49.1	50.7
Supplemental accelerated depreciation, ECC "A"	48.7	49.6	52.5

The net effect of these tax arrangements was to give Japanese companies, many of which were operating with "young" plant and equipment because the industries were new to Japan, a tremendous cash flow advantage. Companies had the opportunity

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1/In the 4-year period 1966-69, increases in Japan's annual exports (calendar years were as follows):

1966-----16 percent	1968-----24 percent
1967----- 7 percent	1969-----23 percent

Source: OECD Economic Surveys, Japan, July 1970, page 84.

2/The computation for these two is as follows:

A = 18.2 x (1 + 0.24 + (0.24 x 0.60)) + 25 percent (rationalization) = 49.6

B = 18.2 x (1 + 0.24 + (0.24 x 0.30)) + 25 percent (rationalization) = 48.0

of acquiring further new equipment making them even more competitive than they had been before or otherwise using their funds before the monies needed to be restored to taxable income.

Reserve for overseas market development

Beginning in fiscal 1964 and continuing in effect for medium and small enterprise (eliminated for large enterprise in November 1972), Japan assisted exports of its newly developed industries by permitting a reserve for market development. Like the tax provision governing strong export performance, the reserve was in two parts: a basic rate and an increase in this rate by 60 percent if the company were an "exporting contributing company," category A, and by 30 percent if the company were category B thus again making rewards conditional on performance. A distinction is made in the basic rate between manufacturing companies and trading companies with a higher rate to the former. The details of these provisions will be found in Table 1. The reserve was created as a tax deferral arrangement and the deductible amounts had to be restored to income in equal installments over 5 years following the year in which the deduction was taken. Although the rates appear small, inasmuch as they apply to gross sales, not net income, it is evident that large deductions from income and hence large tax deferrals have been involved.

In a study of data showing amount claimed by industries under the reserve for overseas market development prior to 1973, two industries stood out: steel and automobiles. In the period, October 1970 to April 1971, steel accounted for 26 percent of total reserves claimed, automobiles, 16.7 percent, followed by electrical equipment at 9.9 percent. Trading companies accounted for 23.2 percent. Proceeding by very approximate calculation 1/ this would appear to mean that Japanese steel companies had roughly $10 million for market development

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1/Amounts claimed in reserve for all steel exports for the Japanese fiscal year 1969 were 4,486 million yen in April-September 1969 and 4,256 million yen in October-April 1970. Converting to dollars at 360 to 1, one finds this amounts to $29.86 million. Inasmuch as the U.S. market in calendar year 1969 took approximately one-third of Japanese steel exports (34.7 percent according to Commodity Trade Statistics, 1969) this would mean $9 million to $10 million for the U.S. market.

Table 1

Tax Deferral Rates a/ for Overseas Market Development, b/ 1965-74

Three Time Periods

Type of company by capitalization (millions of yen)	Basic rates			Supplemental Rates 1968-74	
	1965-70	1971-74	Current	Category A	Category B
				(percent)	
Manufacturing					
over 1,000	1.50	1.50		2.40	1.95
1 - 1,000	1.50	1.50	1.15	2.40	1.95
under 1	1.50	2.30	2.30	2.40	1.95
Trading					
over 1,000	0.50	0.50		0.80	0.65
1 - 1,000	0.50	1.00	0.85	0.80	0.65
under 1	1.10	1.70	1.70	1.76	1.43

a/Rates apply to gross foreign sales.

b/Program currently in effect for medium and small firms; dropped for firms capitalized at Y1 billion and above, November 1972

Source: Ministry of Finance.

in the American market in the 12-month period, April 1969 - April 1970. Japan's automobile companies in 1969 would appear to have had roughly $9 million for similar maneuverability in the American market. 1/ The large amount taken by trading companies would, of course, be spread over different industries, but in the case of steel, which is largely sold through trading companies, this would mean a sum even larger than noted above.

Tax Revenues Foregone out of Export Promotion. Japan began these accelerated depreciation and overseas market development schemes in 1964 in response to GATT criticism of exemptions of income from "specified overseas transactions" which

1/Amounts claimed in reserve for all automobile exports for the Japanese fiscal year 1969 were 4,131 billion yen in April-September 1969 and 4,039 billion yen in October-April 1970. Converting to dollars at 360 to 1, this amounts to $22.69 million. In calendar year 1969 the United States accounted for roughly 40 percent of Japan's automobile exports, thus accounting for roughly $9 million of the market development reserve.

GATT held to be in violation of Article XVI:4 forbidding subsidization of exports. Japan ceased such programs but argued that the Article did not forbid deferrals of taxes. The scale of the revamping of programs in which Japan engaged can be seen in Table 2 showing Japanese tax revenues foregone in consequence of provisions for export promotion, FY 1960-71. Tax revenue foregone attributable to "exemption of income from specified overseas transactions" dropped abruptly from $62.5 million in 1963 to $1.9 million in 1964. However, inasmuch as the provisions affecting accelerated depreciation were basically revamped in 1964 and tax deferrals were instituted for overseas market development in that year, the total amount of taxes foregone was little affected.

Table 2

Japanese Tax Revenues Foregone in Consequence of Provisions for Export Promotion, Fiscal Years 1960-71
($ - millions 1/)

Item	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Exemption of income from specified overseas transactions	31.9	30.6	54.2	62.5	1.9	3.1	7.2	7.8	11.9	11.1	16.9	15.8
Accelerated depreciation	-	-	5.6	2.8	32.5	32.5	43.3	45.8	70.0	100.6	152.2	143.0
Reserves for overseas market development	-	-	-	-	31.7	33.3	21.9	18.1	22.2	28.1	41.7	38.4
Total	31.9	30.6	59.8	65.3	66.1	68.9	62.4	61.7	104.1	139.8	210.8	199.2

1/Converted to dollars at 360 to 1.

Source: Ministry of Finance.

Access to capital

Since the capital market in Japan is underdeveloped, outside capital for corporate expansion until the last few years has come from the banking system, in which Japanese individuals overwhelmingly invest their savings. In a decision taken in the early postwar years, the Japanese Government, as a stimulant to the economy, has chosen to keep interest rates below what for most of the period constituted market-clearing levels. This has meant that in most years more funds have been sought than are available to loan. Accordingly, capital investment funds have had in effect to be allocated with priority given to firms in "key" industries.

How has the Japanese Government been able to direct lending practices of private banks? It has been able to do so quite easily because during most of the period of high growth, there were such pressures on the commercial banks for funds that they loaned in excess of their stipulated ratio and had to borrow from the Bank of Japan to cover commitments. Japan's central bank is not an independent central bank, but one which follows Ministry of Finance policy. Therefore, the condition imposed for provision of the extra funds which the commercial banks were frequently seeking, was that the loan policy of the commercial banks be in accordance with government priorities.

Commercial banks were able to get an explicit "reading" of the industries and companies which the government wished to favor from noting the companies to which the Japan Development Bank (JDB) made loans. The government made no attempt to supply all of the needs of companies in strategic industries through the JDB. In fact, the Bank's loans were typically but a fraction of the firms' credit needs, but the JDB loan meant that the large commercial banks would then give these firms priority for funds.

Export credit

The Japanese Government assists in foreign trade financing through its Ex-Im Bank. Recently there has been widespread confusion in consequence of a U.S. report in which the proportion of Japan's exports covered by Ex-Im loans and MITI export insurance is given as a single statistic. In a 1977 U.S. Ex-Im Bank Report to the Congress, it is stated that "about 49 percent of total Japanese exports were officially

supported in 1976." 1/ A frequently quoted version of this statistic is that Japan's Ex-Im Bank offers financing on "49 percent of Japan's exports." This is incorrect because the 49 percent figure includes insurance and other services.

The proportion of Japan's global exports receiving Ex-Im loans for the fiscal year, April 1, 1977, to March 31, 1978, was 3.4 percent; the proportion for the 9 months, April 1, 1978, through December 31, 1978 was 1.9 percent. 2/ The foregoing statistics relate to the portion of the transaction covered by the loan, not the total size of the transaction. This proportion varies and might be 30 percent, 40 percent, but typically is 50 percent. To get at the proportion of the trade assisted where any part of the transaction received Ex-Im financing, one would have for FY 1977 probably 6.8 percent (on the assumption that 50 percent of the transaction were covered). For the 9-month period it would be 3.8 percent (on the assumption of 50 percent).

In the bilateral trade with the United States, April 1, 1977 through December 1978, there was zero Japanese Ex-Im Bank financing of exports. Ex-Im Bank financing was used on some imports such as aircraft and enriched fuel.

EXPORT POLICY--UNITED STATES AND JAPAN CONTRASTED

Export policy in manufactures

Manufactured goods are overwhelmingly the most important exports for the United States, accounting in the last 4 years, 1975 through 1978, for two-thirds and over of U.S. total exports. The approach of the Department of Commerce, which has jurisdiction for these exports and that of MITI, is contrasting. Commerce begins with marketing; MITI begins, as we have noted, with the question of which industries provide the best exports. Commerce treats industries neutrally; MITI has a priority list. Commerce has no reservations about what it will promote as exports; for example, as part of adjustment assistance program to shoes, it even has undertaken to promote sales through exports. To avoid competition with industrializing countries on products where labor costs

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1/Export-Import Bank of the United States, Report to the U.S. Congress on Export Credit Competition and the Export-Import Bank of the United States, July 1977, p. 16.

2/Interview with representatives from the Washington office of Japan's Export-Import Bank.

are significant and where Japan believes it cannot compete, Japan constantly seeks higher value-added products and ones that are income elastic, i.e., ones where demand will grow with rising income. Not only are shoes a low value-added product, but at least in the case of the United States, they turn out to be negatively income elastic. On a per capita basis, the United States is consuming fewer shoes today than 10 years ago.

For Commerce, marketing assistance is importantly seen in terms of "showing one's wares" on the apparent assumption that if foreigners see what the United States has to offer they will buy. In the Commerce program, trade fairs accordingly have a large role. Japan also uses trade fairs but they are a minor supplemental activity. Japan did not develop its enormous automobile market in the United States out of trade fairs. It developed this market out of:

--a consensus between industry and government that Japan could become competitive in automobiles;

--major tax advantages to this industry through depreciation as a means of helping it grow;

--further tax advantages to this industry through the "overseas market development program;"

--high tariffs until 1970 to protect against imports;

--restrictions on foreign capital investment; and

--its top flight entrepreneurs, engineers and workers.

Both governments assist exporters with preferential financing through ExIm Banks; but because of the much more limited assistance programs for exports which the United States operates, export financing assumes a more important role than in the case of Japan.

A further difference between Commerce and MITI is to be seen in the size of firms on which major export reliance is placed. Commerce has been told by the House Government Operations Committee that it should focus its export promotion effort on medium-small firms and the President emphasized this in his export expansion program.

MITI gives lip service in this direction and Jetro (Japan External Trade Organization) primarily serves this group, but in Japan major reliance for exports is placed on large firms.

U.S. export policy in agriculture

Although manufactures constitute two-thirds of total U.S. exports and agricultural exports one-fifth, the latter enjoy more careful government attention and generous funding. In fact, the closest parallel between Japanese export promotion and U.S. export promotion is to be found in this sector. The Department of Agriculture precedes much of its marketing efforts with economic analysis, and in fact, some of the most outstanding market analysis in the American Government is done in this Department. Like MITI, the Department of Agriculture is intensely interested in income elastic products. Further, the Department is engaged in market development, working with farm groups to "promote and extend" the uses of American crops. While it is often said that American society is adversarial, the Department of Agriculture works with producer groups much in the manner that MITI works with Japan's manufacturers. The adversarial relationship is conspicuously lacking.

U.S. export policy in crude materials

As stated previously, the United States has not been able to make up its mind on export promotion with respect to the third category of its exports, crude materials. At times it favors their export and at other times for reasons of domestic pressure on prices, it does not. Even though energy is currently our major national economic problem, STR has requested Japan to resume its former large imports of coal from the United States. (See Appendix III.)

Because of the scale of tax dollars employed in developing North Slope oil transmission to the other states, Congress wrote in a provision in the statute that North Slope oil would only go to American producers. The problem currently plaguing the nation, however, is a lack of refining capacity on the West Coast, a lack of storage capacity on the West Coast, Sohio's decision not to transform a gas pipeline into an oil pipeline, and the costs of shipping oil through the Panama Canal to the Gulf Ports. Under the swap arrangement proposed by Japan, Japan would offer to the United States barrel for barrel the equivalent of its import of Alaskan crude from its rights to Middle Eastern and Mexican oil. The matter is still pending.

IMPORT POLICY - UNITED STATES AND JAPAN CONTRASTED

When we turn to the other side of trade policy, imports, we note a significant difference in approach. Although vitally dependent on a free-trading world, Japan has used import barriers widely and freely. It justified this approach by arguing that free trade was a condition for equals and it was not yet equal. While all free trading economists admit an exception for infant industries, Japan obviously carried this rationalization absurdly far. Today, barriers are down but it still wrestles with the image of a closed Japan. 1/

As a number of observers have pointed out, there is a marked contrast in the way Japan and the United States use tariffs and other protections. Japan has aimed to protect its strong industries, the United States has used tariff and other restraint arrangements to protect its weak industries. Japan is prepared to abandon its weak industries (let it be noted that agriculture the world over is an exception) whereas the United States operates elaborate programs to try to extend the life of its weak industries. When Japan extends relief to an affected industry, it is apt to be reimbursement for scrapping plant and equipment. It is to be borne in mind, however, that as a "mature" industrial economy, the United States is under more vigorous "attack" than Japan. There is, however, a striking difference between the two countries, notwithstanding the foregoing observation. Japan is anticipatory in its import strategy, the United States is largely reactive. One of the strong factors motivating Japan to move into higher technology items is the "attack" it sees coming down the road from the "new Japans."

A great deal of the international trade "budget" of the United States goes into operating this country's several relief programs: "escape clause" actions under which tariff increases may be obtained; adjustment assistance programs for workers, firms and communities injured by increased imports; antidumping prosecutions; prosecutions in situations where it is believed government subsidies aided imports (and under the MTN code when such imports cause injury); prosecutions under Section 337 of the Tariff Act of 1930 against "unfair

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1/See Arthur D. Little, Inc., The Japanese Non-Tariff Trade Barrier Issue: American Views and the Implications for Japan-U.S. Trade Relations, a report prepared for the National Institute for Research Advancement, Economic Planning Agency, May 1979.

practices," which for most of the period have been patent infringement cases. The Trade Act of 1974 added a new import relief provision, Section 301, under which the President may take remedial action such as suspension of trade benefits or agreements or imposition of fees or restrictions when he determines that foreign governments maintain "unjustifiable or unreasonable tariff or other import restrictions which impair the value of trade commitments made to the United States or which burden, restrict or discriminate against United States commerce." In fact, our trade Committees of the Congress, Ways and Means and Finance, have jurisdiction out of tariffs, i.e., the import side. Thus, committee jurisdiction orients thinking to imports rather that to exports.

Like other countries, Japan has an antidumping act on its statute books, but unlike the United States has made only the barest use of it. Likewise it prohibits imports aided by subsidy, but again scarcely any use has been made of this provision. Overwhelmingly, Japan's international trade budget is employed in export expansion.

In addition to the import relief measures which the United States uses in its trade policy there are also rquests for foreign restraint on exports to the United States. This may take the form of bilaterally negotiated Crderly Marketing Agreements (OMAs), generalized restraint arrangements such as the multifiber agreement, and other formal and informal actions.

CONCLUSION

As the foregoing pages make evident, the trade imbalance between Japan and the United States is a mix of several elements: an underlying U.S. weakness in international competitiveness, a lack of American export consciousness, a trade policy that is import-oriented rather than export-oriented, currency misalignment, and an assortment of Japanese barriers--tariffs and NTB's which earlier included that most powerful of all controls, foreign exchange. Most of these Japanese barriers are now dismantled, but mental attitudes change more slowly.

Each country has seen the other through distorted lenses, as well as misperceiving itself. Japan has regarded itself as small and weak, and therefore, not under obligation to extend to trading partners opportunities it was enjoying in their markets. American confidence in its economic superiority has

been such that until very recently the United States has not demanded of others the trading opportunities in their markets that the United States has provied in its markets.

High technology is the area in which both economies will have growing activity. Two-way trade in this area can be enormous. The new phenomenon in international trade is two-way trade in the same product-line of manufactured goods. Although resources endowments of primary goods give some countries absolute or compelling comparative advantage in such products, trade in manufactured goods is virtually independent of a country's natural resource base.

Our study concludes that:

--Japan, as an advanced industrial power, tends to think of trade in manufactures as exports rather than exports and imports.

--the United States has an essentially reactive trade policy rather than an anticipatory one based on economic projections 5 to 10 years ahead.

Joint Statement

by

Minister Ushiba and Ambassador Strauss

January 13, 1978

1. On January 12 and 13, 1978 the Governments of Japan and the United States of America, through their representatives, Minister of State for External Economic Affairs, Mr. Nobuhiko Ushiba, and the President's Special Representative for Trade Negotiations, Ambassador Robert S. Strauss, consulted upon a series of policies and measures designed to contribute to global economic expansion and to strengthen their economic relations. The objective of the consultations was to develop common policies which would facilitate constructive adjustment to changing world economic conditions and the economic relationship between Japan and the United States.

2. In particular, Minister Ushiba and Ambassador Strauss agreed that a new course of action, building on the steps outlined below, was necessary to avert increasing unemployment and a worldwide reversion to protectionism.

Increased Economic Growth

3. Both sides agreed to take major steps to achieve high levels of non-inflationary, economic growth. The Government of Japan reiterated its recently adopted real growth target of seven percent for Japan Fiscal Year (JFY) 1978, and stated its intention to take all reasonable and appropriate measures, including those previously announced with respect to public expenditures, in order to achieve this target.

The Government of the United States confirmed its intention to pursue policies aimed at the maintenance of substantial, non-inflationary economic growth, as will soon be detailed by President Carter.

4. Both sides agreed that in the present international economic situation, the accumulation of a large current account surplus was not appropriate.

Accordingly, Japan has undertaken steps aimed at achieving a marked diminution of its current account surplus. The Minister added that in JFY 1978 Japan's current account surplus would be considerably reduced through the expansion of domestic demand, the effect of yen appreciation in recent months, and a series of new measures for improving the access of foreign goods to the Japanese market. In JFY 1979, and thereafter, under present international economic conditions, all reasonable efforts would be continued with a view to further reducing Japan's current account surplus, aiming at equilibrium, with deficit accepted if it should occur.

The United States stated its intention to improve its balance of payments position by such measures as reducing its dependence on imported oil and increasing its exports, thereby improving the underlying conditions upon which the value of the dollar fundamentally depends. The Ambassador expressed confidence that in the next ninety days an effective energy program would be enacted by the Congress.

Trade Objectives

5. To preserve and strengthen the open world trading system, both sides fully support the acceleration and early conclusion of the Tokyo Round of the Multilateral Trade Negotiations (MTN), each making substantial contributions in full cooperation with other participants to reduce or eliminate tariff and non-tariff barriers to trade.

6. Both governments agreed that their joint objective in these negotiations is to achieve basic equity in their trading relations by affording to major trading countries substantially equivalent competitive opportunities on a reciprocal basis.

To achieve parity in their trading relations and equivalent openness of their markets, deeper than formula tariff reductions would be utilized.

In this connection, both sides expressed their intent in the course of the MTN to consider favorably taking deeper than formula tariff reductions on items of interest to each other with the aim of seeking to achieve comparable average

levels of bound tariffs, taking into account non-tariff measures at the end of the MTN, taking fully into account the interests of third countries.

7. The Government of Japan intends to take all appropriate steps to increase imports of manufactures. The Government anticipated that the total volume of imports of manufactures, as well as the share of these imports in total Japanese imports, would continue to increase steadily. Both sides agreed to review progress in these matters in the Joint Trade Facilitation Committee or other appropriate forums and to take whatever corrective actions might be necessary.

Trade Measures

8. The Minister stated that Japan is taking the following significant actions to increase imports:

-- Advance tariff reductions on $2 billion of imports effective April 1.

-- Removal of quota controls on twelve products.

-- As regards high quality beef, we shall make mutual efforts to exploit demand so that within the hotel and general quotas there will be an increase in importation by 10,000 tons on a global basis beginning in JFY 1978.

-- A three-fold increase in orange imports to 45,000 tons.

-- A four-fold increase to 4,000 tons in the quota for citrus juice.

-- Conducting a sweeping review of its foreign exchange control system and planning a new system based on the principle that all transactions should be free unless specifically prohibited. As a forerunner of the new system, certain immediate measures of liberalization are to be announced soon.

-- Formation of an inter-industry citrus group to study the present state and future developments in the citrus situation including juice blending and seasonal quota, and to report to their Governments by November 1, 1978.

-- Dispatch of a forest products study group to the U.S. Northwest with the objective of expanding and upgrading this trade.

-- Dispatch to the United States of a mission to explore the possibility of purchasing electric power plant machinery and equipment, including nuclear plant components and equipment.

-- Dispatch to the United States of a government-industry buying mission sponsored by the Joint Trade Facilitation Committee.

-- A Japanese Cabinet decision to secure for foreign suppliers substantially increased opportunities under government procurement systems.

-- Simplification of inspection requirements on imports.

-- Expansion of credit for imports into Japan.

-- Relaxation of rules for the standard method of settlement.

-- Cooperation in international efforts to curb excessive competition in export credits.

Economic Cooperation

9. Referring to official development assistance (ODA), the Minister reaffirmed the intention of the Government of Japan to more than double its aid in five years and noted that, as part of such efforts, proposed ODA for JFY 1978 had substantially increased, and that the quality of ODA had improved through an increase of grant aid. He added that the Government of Japan would pursue its basic policy of general untying of its financial assistance.

Ambassador Strauss welcomed these developments and noted that the President would seek legislation to increase substantially U.S. bilateral and multilateral aid to developing countries.

Review Procedures

10. In addition, both sides agreed:

-- to coordinate closely with each other and their trading partners including the European Communities in multilateral and bilateral forums.

-- to improve access to Japanese markets, by making every effort to assure the success of the Joint Trade Facilitation Committee in its work to increase imports of manufactures, and resolve concrete problems encountered in trade with Japan including the aim of overcoming non-tariff barriers by applying a liberal approach.

-- to continue regular technical exchanges on growth problems and prospects through the Joint Economic Projections Study Group.

-- to review global and bilateral economic policy this spring in Washington at the next meeting of the Sub-Cabinet Group.

-- to review progress made in all these areas at a meeting between Minister Ushiba and Ambassador Strauss next October.

APPENDIX II

JOINT COMMUNIQUE
BETWEEN PRESIDENT JIMMY CARTER
AND PRIME MINISTER MASAYOSHI OHIRA

PRODUCTIVE PARTNERSHIP FOR THE 1980'S

MAY 2, 1979

1. At the invitation of the Government of the United States, Prime Minister Ohira paid an official visit to the United States between April 30 and May 6, 1979. President Carter and Prime Minister Ohira met on May 2 in Washington to review the current state of U.S.-Japan relations and discuss regional and global cooperation, with a view to laying a foundation for productive partnership between the two countries for the 1980's based on their shared political and economic ideals and reflecting their responsibilities in world affairs. The discussions were held in an informal and cordial atmosphere consistent with the close friendship between the two countries. The President and the Prime Minister deepened their relationship of mutual trust and agreed to maintain close contact. The Prime Minister reconfirmed the standing invitation by the Government of Japan to President and Mrs. Carter to pay a state visit to Japan and invited them to visit in late June just before the Tokyo Summit. President and Mrs. Carter accepted with pleasure.

Security Relations

2. The President and the Prime Minister reaffirmed that the friendly and cooperative relationship between the United States and Japan, including the Treaty of Mutual Cooperation and Security between Japan and the United States of America, has been and will remain the cornerstone of peace and stability in Asia. The security relationship between the two countries has never been so strong and mutually advantageous as at present. This is exemplified by such significant recent developments as the adoption last year of the Guidelines for Japan-U.S. Defense Cooperation under the Security Treaty, increased procurement by Japan of defense equipment from the United States which will contribute to the increase of Japan's self-defense capability, and Japanese initiatives to increase financial support for the stationing of United States forces in Japan. The President stated that in coming years the United States will maintain and improve the quality of its present military capabilities in East Asia. The Prime Minister stated that Japan will continue its efforts to improve the quality of its self-defense capabilities, while maintaining effective working security arrangements with the United States as the foundation of its defense policy.

International Relations

3. The President and the Prime Minister agreed that the United States and Japan share many political, economic and other interests in Asia and other parts of the world. Cooperation and consultation between the two countries concerning issues in these areas have grown over the years, become closer than ever in recent months, and will deepen further in the 1980's.

4. The President and the Prime Minister agreed that the recent developments in relations between Japan and the People's Republic of China and the establishment of U.S.-PRC diplomatic relations are major contributions to long-term stability in Asia. Both the United States and Japan seek a constructive relationship with China and will pursue this course in harmony with one another. The growth of such relations with China will hamper neither the United States nor Japan from continuing to develop good relations with other countries.

5. The President and the Prime Minister noted that the maintenance of balanced, cooperative relations with the Soviet Union will continue to be important to both the United States and Japan. The President stated that the United States is working to complete a SALT II agreement with a view to increasing strategic stability and security, and the Prime Minister stated that Japan supports this effort. Each side stated that it will continue to seek development of friendly and mutually beneficial relations with the Soviet Union.

6. The President and the Prime Minister reaffirmed that the maintenance of peace and stability on the Korean Peninsula is important for peace and security in East Asia, including Japan. The United States if firmly committed to the security of the Republic of Korea. Its policy toward future ground force withdrawals from Korea will be developed in a manner consistent with the maintenance of peace and stability on the Peninsula. The United States and Japan will cooperate to reduce tension on the Peninsula and will continue efforts to foster an international environment conducive to this purpose. Progress in the dialogue between the South and the North is indispensable to this process. The United States and Japan welcome the recent efforts to resume the dialogue and hope that these efforts will be fruitful.

7. The President and the Prime Minister noted that the United States and Japan have a profound interest in the peace and stability of Southeast Asia and are impressed by the vitality of ASEAN and its commitment to economic and social development.

Both governments will continue cooperation and assistance in support of the efforts of the ASEAN countries toward regional solidarity and development.

8. The President and the Prime Minister expressed their concern about the recent increased tension in Indochina brought about in particular by the continued armed conflicts in Cambodia involving foreign troops and the recent fighting between China and Vietnam. The United States and Japan will make utmost efforts to reduce tension in this area and seek establishment of a durable peace based on the principles of respect for the sovereignty, territorial integrity and independence of all nations. The President and the Prime Minister expressed their concern over use of facilities in Vietnam by foreign forces.

9. The President and the Prime Minister noted that the outflow of Indochinese refugees is a cause of instability and a source of great humanitarian concern in the Asian-Pacific region that must be dealt with urgently. The President stated that the United States is accepting 7,000 refugees per month from Indochina for permament resettlement in the United States and will continue its other major efforts to deal with this tragic problem. The Prime Minister stated that Japan has set a target number for the resettlement of displaced persons and eased conditions for permanent resettlement. The Prime Minister further stated that Japan will continue to expand its cooperation and financial support for the United Nations High Commissioner for Refugees (UNHCR). The United States and Japan welcome the ASEAN initiative to create a refugee processing center, and both governments will make substantial contributions to that project, together with other countries, as it materializes.

10. The President and the Prime Minister agreed that peace and stability in the Middle East and the Gulf area are very important to the well-being of the peoples of the region as well as the world as a whole. The Prime Minister stated that Japan will actively continue and expand its cooperation with the peoples of the area in their endeavors toward a better future. The President and the Prime Minister agreed that a comprehensive Middle East peace should be brought about in full accordance with all the principles of United Nations Security Council Resolution 242 and through the recognition of and respect for the legitimate rights of the Palestinian people. To this end, utmost efforts should be made to promote the peace process subsequent to the signature of the Peace Treaty between Egypt and Israel.

Economic Relations

11. The President and the Prime Minister agreed that the time has come for a more constructive approach to U.S.-Japan economic relations. They reached a clear understanding about the basic

policies that each will follow over the next several years to produce a more harmonious pattern of international trade and payments. They agreed on a framework and procedure for continuing bilateral discussions. They recognized that such discussions will focus more on overall trade and current account trends than on specific actions to shape these trends; these actions are the national responsibility of each government.

12. The President and the Prime Minister stressed the very strong economic interests which link the United States and Japan. More than ever before, the two countries' welfare and futures are intertwined. Joint action to establish a new and stronger basis for economic cooperation will enhance the well-being of their peoples and promote widening trade. It will make it possible to remove contentious bilateral economic issues from the forefront of their relations and to mount cooperative efforts to resolve problems common to their societies, while ensuring a sustained, mutually productive relationship among their peoples.

13. For these reasons, the President and the Prime Minister agreed on a common approach, which will contribute to a stable pattern of international payments. They recognized that the current account surplus of Japan and the 1978 current account deficit of the United States were not appropriate in existing international circumstances. Recent actions by both governments, together with earlier changes in exchange rates, have led to a significant reduction in their payments imbalances during the last few months. They agreed that appropriate action should be taken to ensure progress, and to sustain it.

14. To this end, the Prime Minister affirmed that it is the policy of Japan to continue:

--to encourage a shift to greater reliance on rising domestic demand to sustain Japan's economic growth, and

--to open Japan's markets to foreign goods, particularly manufactured goods.

15. In following these policies, it is the objective of Japan to promote a continued reduction in its current account surplus, until a position consistent with a balanced and sustainable pattern of international trade and payments has been achieved.

APPENDIX II

16. The United States will pursue a broad range of policies to reduce the U.S. rate of inflation, to restrain oil imports, and to promote U.S. exports. In following these policies, it is the objective of the United States to promote a continued reduction in its current account deficit, until a position consistent with a balanced and sustainable pattern of international trade and payments has been achieved.

17. Accomplishments of these goals will require several years. The present U.S.-Japan subcabinet group, composed of officials from both governments, will examine developments and results at periodic intervals.

18. A small group of distinguished persons drawn from private life will also be established, and will submit to the President and the Prime Minister recommendations concerning actions that the group considers would help to maintain a healthy bilateral economic relationship between the United States and Japan.

19. In reaching this understanding about economic relations between the United Stats and Japan, the President and the Prime Minister further noted that:

--Free and expanding trade is necessary for the development of the world economy; successful conclusion of the Tokyo Round of Multilateral Trade Negotiations is a significant step forward. It is essential to continue to reject protectionism, and to proceed with domestic measures to implement the results of the Tokyo Round negotiations as quickly as possible.

--The two countries will work with others at the Summit meeting scheduled for Tokyo in June to ensure that this meeting makes a substantial contribution to a healthier world economy.

--Bilateral and multilateral cooperation among industrial nations to improve the world energy outlook has become even more important in recent years. It is imperative that the industrial nations, including the United States and Japan, increase energy production, enhance the developemnt of alternative energy sources, and implement fully the agreement on energy conservation reached by the International Energy Agency on March 2. The signing of the bilateral U.S.-Japan Agreement on Cooperation in Research and Development in Energy and Related Fields represents a major contribution to these objectives. The two governments will study seriously the prospects for cooperative efforts in other areas of basic and applied research.

APPENDIX II

--To meet the increasing demand for energy, there is an urgent need to promote further peaceful use of nuclear energy, consistent with non-proliferation and the requirements of safety and environmental protection. They agreed to expand joint research to enhance nuclear reactor safety and reliability. The Prime Minister stressed that, while sharing fully with the President a common concern over the danger of nuclear proliferation, for Japan nuclear energy is the most reliable alternative to oil in the short and medium term. The President and the Prime Minister agreed that the United States and Japan, in full cooperation, should continue to pursue the policies of nuclear non-proliferation, while avoiding undue restrictions on necessary and economically justified nuclear development programs. The President and the Prime Minister took special notice of the technical studies in progress in the International Nuclear Fuel Cycle Evaluation (INFCE) and expressed their strong hope that these technical studies will lead to satisfactory results.

--The United States and Japan should improve their official development assistance to developing countries. It is particularly important for them to strengthen aid in the field of human resources development and to strengthen support of research and development in such areas as health, food, and energy. The two countries will explore, through bilateral discussions and consultation with developing countries, how to promote cooperation in technical assistance and in research and development in these areas.

--Japan, which has been the most important single customer for American agricultural exports, and the United States, which has been Japan's most important single supplier, will cooperate closely to ensure that their mutually beneficial agricultural trade meets Japan's import needs. Relevant authorities of the Governments of the United States and Japan will periodically exchange information and meet to consult, as appropriate, on the supply and demand situation of agricultural products that figure in trade between the United States and Japan.

Cultural and Educational Exchange

20. The President and the Prime Minister noted with satisfaction that cooperation and exchanges in the fields of culture and education are flourishing and are of major importance in deepening mutual understanding and friendship between the peoples of the United States and Japan. Both governments will seek to enhance these activities and will jointly fund an expanded Fulbright Program of educational exchange. The Prime

Minister stated that the Government of Japan will make a donation to help pay the cost of construction of new headquarters for the Asia Society in New York, and that it intends to make financial contributions for the construction of a new Oriental art gallery of the Smithsonian Institution and a Japanese gallery of the New York Metropolitan Museum of Art and for the establishment of a fund for international energy policy research at the Massachusetts Institute of Technology. The President expressed his appreciation.

Joint Statement

by

Ambassador Strauss and Minister Ushiba

June 2, 1979

1. Government Procurement and Related Markets

(A) The Goverments of Japan and the United States agree that mutual reciprocity should be provided among Japan, the United States and other major countries in access opportunities to each other's markets, including the market for telecommunications.

(1) As part of the program for realizing this objective, the Governments of Japan and the United States will endeavor to reach agreement on entity coverage in the field of telecommunications under the MTN Government Procurement Code, following a work schedule beginning in July 1979, with a view to reaching agreement not later than December 31, 1980, the effective date of the Code.

(2) The Government of the United States considers the offer coverage of Japan as of this date as a concrete step made by Japan within the framework of this program for mutual reciprocity. The Government of Japan considers the access opportunities offered by U.S. telecommunications enterprises as relevant for the implementation of the program. In the event no agreement is reached, it is understood that this offer will no longer be binding.

(B) During the course of this work program, and in the positive spirit of this agreement, the Governments of Japan and the United States agree to use their best efforts to:

(1) facilitate sales by foreign manufacturers to the private telecommunications equipment market in Japan and its equivalent in the United States;

(2) allow foreign firms possessing the latest in sophisticated technology and know-how to participate in R&D programs leading to procurement;

(3) orient foreign firms on how to meet the respective market requirements to enable these firms to submit proper and timely bids.

(C) The two Governments agree that they will work for a full implementation of the program for mutual reciprocity, by the time of the scheduled three-year review on the implementation and operation of the Government Procurement Code (Part IX 6(b)), including a U.S.-Japan assessment of bilateral telecommunications trade to determine if reciprocal access opportunities between these two markets are fair and equitable.

2. Staging

(A) The Government of Japan has announced its intention to implement its tariff reductions by cutting tariff from applied rates as of April 1, 1979 (except where a specific different schedule was agreed during product negotiations.)

(B) The Government of Japan has also decided that it will accelerate implementation by making both first and second year reductions simultaneously in 1980, to the maximum extent possible, taking into account its final balance achieved with other negotiating partners.

3. Other Issues

(A) Cigars and Cigarettes:

The Government of the United States and the Goverment of Japan agree to open promptly discussions on the problems of imported cigars and cigarettes including their pricing, distribution and marketing in Japan.

(B) Standards:

The Government of the United States and the Government of Japan agree to negotiate a mutually acceptable and reciprocal approach to testing procedures and certification by January 1, 1980, under the terms of the Standards Code.

(C) Coal:

Recognizing the importance of trade in coal to both countries, the Government of the United States and the Government of Japan agree to seek to encourage U.S. coal imports into Japan.

(40304)

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