PROBABLE ECONOMIC EFFECT
OF PROVIDING DUTY-FREE
TREATMENT FOR U.S.
IMPORTS OF CERTAIN
HIGH-TECHNOLOGY
PRODUCTS

Report to the President on Investigation No. TA-131(b)-9 Under Section 131(b) of the Trade Act of 1974

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# UNITED STATES INTERNATIONAL TRADE COMMISSION

# COMMISSIONERS

Paula Stern, Chairwoman

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Alfred E. Eckes

Seeley G. Lodwick

David B. Rohr

This report was prepared by

Harold M. Graves, William B. Fletcher, and Nelson J. Hogge Electrical Machinery and Equipment Branch

> under the direction of Aaron H. Chesser Machinery and Equipment Division

Office of Industries Vern Simpson, Acting Director

Address all communications to

Kenneth R. Mason, Secretary to the Commission
United States International Trade Commission

Washington, DC 20436

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<u>Note.</u>—The whole of the Commission's report to the President in December 1984 may not be made public since it contains certain information that has been classified by the United States Trade Representative or would result in the disclosure of the operations of individual concerns. This published report is the same as the report to the President, except that the above—mentioned information has been omitted. Such omissions are indicated by asterisks.

#### INTRODUCTION

On October 19, 1984, at the direction of the President, the U.S. Trade Representative (USTR) requested that the U.S. International Trade Commission prepare advice concerning the probable economic effects of providing duty-free treatment for U.S. imports of certain high-technology products. The USTR requested that the Commission conduct the investigation under section 332(g) of the Tariff Act of 1930, but alter its investigation authority to section 131(b) of the Trade Act of 1974, after the Trade and Tariff Act of 1984 (TTA 1984) was enacted into law. 1/ On October 26, 1984, in response to the request from the USTR, the Commission instituted investigation No. 332-199 and, subsequently, upon enactment of the TTA 1984 into law, the Commission changed its investigation authority and instituted investigation No. TA-131(b)-9, effective October 30, 1984. 2/

A public hearing was held in connection with investigation No. TA-131(b)-9 in the Commission Hearing Room, 701 E Street NW., Washington, DC 20436, on November 15, 1984. A list of the witnesses appearing at the hearing is provided in appendix A of the report.

<sup>1</sup>/ The USTR request, including the list of concerned articles, is contained in appendix B.

 $<sup>\</sup>underline{2}$ / The Commission notices of investigations and hearing are contained in appendix C.

#### OVERVIEW

On October 30, 1984, the Trade and Tariff Act of 1984 was enacted into law, and pursuant to section 308 of the act, the President was authorized to continue, modify, or eliminate duties on certain high-technology products in order to carry out agreements concluded pursuant to section 104A(c) of the Trade Act of 1974, as amended. At the request of the USTR, the U.S. International Trade Commission has studied the probable economic effect of providing duty-free treatment for U.S. imports of these high-technology products. 1/

In response to increased demand for commercial, industrial, consumer, and military electronic products, apparent U.S. consumption of the high-technology products covered by this investigation more than doubled during 1979-83, increasing from \$16.5 billion to \$34.2 billion (table 1). U.S. producers' shipments nearly kept pace with apparent U.S. consumption, increasing by 97 percent, from \$18.3 billion in 1979 to \$36.1 billion in 1983. Reflecting increased foreign demand, U.S. exports rose by 94 percent during the period, increasing from \$4.7 billion in 1979 to \$9.2 billion in 1983 (table 2). The largest U.S. export markets in 1983 for these high-technology products were Malaysia, Canada, and the United Kingdom. U.S. imports, largely transactions between U.S. firms and their foreign subsidiaries, increased 2-1/2 times during 1979-83, from \$2.8 billion to \$7.3 billion (table 3). The trend in U.S. imports was also influenced by the increasing technological capability of foreign firms, mainly those in Japan. The largest sources of U.S. imports in 1983 were Japan, Malaysia, and Singapore. The import share of apparent U.S. consumption increased from 17.0 percent in 1979 to 21.3 percent in 1983. As a result of the rapid growth of imports, the U.S. trade surplus decreased from \$1.9 billion to \$1.8 billion during the period. On the basis of a sharp increase in the value of U.S. imports during January-August 1984, a U.S. trade deficit of \$5.7 million is expected for 1984.

Enactment of the proposed duty-free treatment for U.S. imports of certain high-technology products would most likely provide an incentive to U.S. multinational firms to increase their offshore production. Effective January 1985, import costs would be reduced by a maximum of 4.3 percent ad valorem in the case of certain parts of computers and 4.2 2/ percent ad valorem in the

<sup>1/</sup> The high-technology products covered by this investigation consist of certain parts of automatic data-processing machines and certain semiconductors and parts. These products have been the subject of bilateral negotiations between the United States and Japan. This product sector is a large and growing segment of international trade. For example, in 1983, the value of U.S. imports of such articles was equivalent to 67 percent of the value of total U.S. imports of all products under the Generalized System of Preferences (GSP) (\$10.8 billion); during January-August 1984, the value exceeded the growing value of GSP imports (\$6.5 billion) by 18 percent.

<sup>2/</sup> Through the use of the provisions of Tariff Schedules of the United States (TSUS) items 806.30 and 807.00 and the GSP, the effective rate of duty applied to U.S. imports of semiconductors was 2.4 percent ad valorem during January-August 1984. For parts of computers, the use of items 806.30 and 807.00 and the GSP was not as extensive; the effective duty rate for U.S. imports of these articles during January-August 1984 was 4.2 percent ad valorem.

case of certain semiconductors. The duty-free treatment would also provide foreign firms with the same incentives. Domestic producers which do not own or operate foreign manufacturing subsidiaries would not benefit from the duty reduction other than by purchasing foreign-made components.

If duty-free treatment for certain high-technology products had been in effect on January 1, 1983, duty savings by U.S. importers in 1983 would have amounted to \$215 million. On the basis of annualized U.S. import data for 1984, duty savings from duty-free treatment in 1984 would have been \$331 million. In addition, the costs of administering TSUS items 806.30 and 807.00 and the GSP program with respect to the articles covered by this investigation would no longer be borne by U.S. importers upon adoption of duty-free treatment.

### Position of interested parties

This study is somewhat unusual because domestic producers that represent the majority of domestic production support the elimination of tariffs on the items which are the subject of this study. 1/ The Semiconductor Industry Association (SIA) testified at the Commission's public hearing that elimination of the tariff would be beneficial to the industry because: (1) domestic producers, which account for approximately 75 percent or more of the imports, could save the cost of the duty (approximately \$100 million) as well as the administrative costs associated with paying the duty and qualifying for section 807 treatment; (2) this savings could be used to supplement existing research and development, which, they submit, is the key to remaining competitive in this industry. (3) If U.S. producers were able to gain greater access to the Japanese market, the expected elimination of Japan's duties would enable them to generate greater export earnings and to increase market share in Japan, the world's second largest market. 2/ In addition, they argue that any increase in market share would enable U.S. producers to increase production, thereby lowering overall costs as they more quickly descent the learning curve.

Those in favor of elimination of the tariffs maintain foreign assembly operations are necessary in order to compete with the cost structure of foreign competitors, that offshore employment has grown in line with the growth of domestic shipments, and that the proportion of domestic employment compared to foreign employment has remained steady. 3/ Second, they point out that since currently the vast majority of imports are from U.S. producers' offshore operations, the cost savings to U.S. companies would be greater than the cost savings of Japanese producers. 4/ Third, they argue that the pricing

<sup>1/</sup> Some industry members oppose such tariff elimination because they believe that it will increase the competitiveness of foreign producers on the U.S. market, but will not ensure U.S. companies greater access to certain foreign markets.

<sup>2</sup>/ U.S. companies estimated that for every one percent of Japanese market share they obtain, they will earn approximately \$120 million.

<sup>3/</sup> See, e.g., Tr. at 98, 111, 113, 128.

<sup>4/</sup> For semiconductors, domestic producers estimate a savings to domestic producers of \$100 million compared to a savings of \$80 million to Japanese firms.

in this market is not cost-driven but market-driven, i.e., that supply and demand are far more important determinants of pricing than costs per se, including the saved costs of the subject duties. 1/ Although they acknowledge that Japanese pricing of certain high volume products has been extremely aggressive — going way beyond the "normal" learning curve of U.S. producers — they argue that any duty savings will be largely irrelevant from a practical standpoint because Japanese producers have demonstrated that they will price at whatever level is necessary to obtain market share. Thus, they maintain, since U.S. producers cannot match such targetting practices, maintaining the current four percent duty will not provide much protection for domestic producers' market share. While elimination of the U.S. duty would be of some marginal benefit to Japanese competitors, the tariff elimination, in their view, is a reasonable quid pro quo for being able to apply the cost savings to R&D — an effort that could realistically enhance competitiveness — and from enhancing their ability to compete in the Japanese market.

Labor groups testified in opposition to the tariff elimination, arguing that it would only intensify the current trend of producers' moving assembly work offshore. One small producer has also opposed the elimination of duties, arguing that it will not increase the ability of U.S. firms to sell in Japan or Korea, but will enable producers from these countries to increase their competitiveness with U.S. producers — either by decreasing prices or by applying the cost savings to research and development.

Table 1.—Certain high-technology products: U.S. producers' shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, 1979-83, January-August 1983, and January-August 1984

- •	: Producers'	:		:		:	Apparent	:	Ratio of
Period	shipments 1/	:	Exports	:	Imports 1/	:	consump-	:	imports to
		:		:		:	tion 1/ 2/	:	consumption
;			<u>Billi</u>	OI	dollars	_		:	<u>Percent</u>
		:		:		:		:	
1979:	18.3	:	4.7	:	2.8	:	16.5	:	17.0
1980:	23.8	:	6.4	:	3.9	:	21.3	:	18.3
1981:	27.3	:	7.2	:	4.5	:	24.6	•	18.3
1982:	30.6	:	7.6	:	5.3	:	28.3		18.7
1983:	36.1	:	9.2	:	7.3	:	34.2		21.3
JanAug		:		:		•			21.5
1983:	25.1	:	5.9	:	4.4	•	23.5	•	19.1
1984	31.9	:	7.7	:	7.7	•	31.9	•	24.1
	<u>.</u>	:		:		:		•	27.1

<sup>1/</sup> Estimated by the staff of the U.S. International Trade Commission using official statistics of the Department of Commerce, where available, with adjustments indicated by data published in trade journals.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

<sup>2/</sup> Because of rounding, figures may not add to the totals shown.

<sup>1</sup>/ For example, they argue that prices typically fall thirty percent for every doubling of production (approximately every year).

Table 2.--Certain high technology products: U.S. exports of domestic merchandise, by principal markets, 1979-83, January-August 1985, and January-August 1984

••			••	••	•• ••		
Market :	1979 :	1980 :	1981 :	1982 :	1983	1983	1984
ayaalaW	467,305	622,512 :	730.036	876.302		1.87	764.806
Canada:	355,794 :		6 14, 141 :	646.047		,,	2
King:	360,571 :		•	605,612 :		7.55	2
Fr Gorm	461,800 :	645,882 :	659,965	627.022 :	701.185	,,,	3000
:unde	338,583		Ē	572.884 :			) <b>~</b>
Singaprients	420,537 :		Ŕ	478,387		, -	0
hi I R:	179,684 :		392,349 :	451,059		6	603°679
Kor Rep:	211,487 :	•	66	_	470,050 :		9
All other:	1,864,694 :	-4	-	3,022,699 :	3,538,578 :		3,023,155
Total:	4,660,455 :	6,409,431 :	7,153,800 :	7,597,142 :	9, 191,854 1	5,897,925 :	7,661,387
••	••	••		••		•	

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Certain high technology products: U.S. imports for consumption, by principal sources, 1979-83, January-August 1983, and January-August 1984

	)	(In thousands o	of dollars)				
		** **				January-August	tugust
Source	6/61			1982	1983	1983 :	1984
:under		: 482,047 :	. 2	-		9	
Malaysa:	591,234 :	Ň	6	•		57	1.002.884
Singapr	415,156	: 567,398 :	602,720 :	66	993,739 :	572,014	961,587
Phil R:	-	กั	_	78.2		N	
(or Rep:		Ň	•	58,3		-	0
4g Kong:	163,721	: 215,208 :	263,583	ě		8	436.043
::epeue2	116,976 :	: 195,686 :	ò	37,88		59	
China t:	99,216	: 147,376 :	N	220,653 :	311,243 :	8	
All other:		: 782,639 :	900,818 :	960,527	1,236,320 :	748,635 :	1.290.263
Total:	2,845,264	3,837,079	4,421,561	5,321,445 :	7,257,290 :	4,435,461 :	7,667,042
			•	••	•	••	

Source: Compiled from official statistics of the U.S. Department of Commerce.

# PRESENTATION OF PROBABLE EFFECT ADVICE

PARTS OF AUTOMATIC DATA-PROCESSING MACHINES AND UNITS (SUBASSEMBLIES) THEREOF (OTHER THAN PARTS INCORPORATING A CATHODE-RAY TUBE)

TITLE: Parts of automatic data-processing machines and units (subassemblies) thereof (other than parts incorporating a cathode-ray tube)

	1983.
	-
	imports
	'n
•	tariff rate information: U.
	rate
	tariff
	description:
	TSUS item number:
	TSIIS
	,-

TSUS item		Pre-MIN	: Staged	col. 1 artic	rate of d les enter	Staged col. 1 rate of duty effective with respect to articles entered on or after Jan. 1	tive wi	th respe	ct to		Col. 2	U.S.
No. 1/	Description	of duty 2/	1980	1961	1982 1983	1983	1984	1985	9861	1987	duty	
												: (1,000 : dollars)
676.52A*(pt.) :	: 676.52A*(pt.) : Parts of automatic data-	: 5.5% ad val.	: 5.3% ad : 5.1% : 4.9%	5.1%	4.9%	: : : : : : : : : : : : : : : : : : :	4.5%	4.3%	4.1%	3.9%	35% ad	: 3/ 2,301.731
•	processing machines and		. val.	pe :	pe :	: pe :	pa	. pa .	<b>D</b>	pa	val.	••
	units (subassemblies)	•		: val.	val.	•••	val.	val.	val:	val.		•••
	thereof (other than	••		••			-		:	••		
	parts incorporating a	••	٠.	•••				••	•	••		••
	cathode-ray tube).	••		••		••			•	••		••
•		••		••		••	. 3			••		••
1/ The design	1/ The designation "A*" indicates that the item is currently designated as an eligible article for duty-free treatment under the U.S. Generalized	e item is current	ly designa	ted as an	eligibl	e article	for du	.y-free	reatmen	under t	he U.S.	Generalized

System of Preferences, except for imports from Hong Kong, Maxico, the Republic of Korea, Singapore, and Taiwan. 2/ Rate effective prior to Jan. 1, 1980. 3/ Estimated by the staff of the U.S. International Trade Commission.

#### II. Comment

### Description and uses

The parts and subassemblies covered by this digest are those electrical, electronic, and mechanical pieces and subassemblies which are used specifically in the manufacture or final assembly of automatic data-processing machines and which are not provided for elsewhere. 1/ Included are parts and subassemblies such as printed circuit boards containing electronic parts and components, subassemblies containing more than one circuit board, and mechanical subassemblies, such as those used in magnetic, mass-storage apparatus. Specifically excluded from coverage in this digest are those components or units containing cathode-ray tubes.

The end products into which the subject parts and subassemblies are assembled include all types of data-processing machines such as computers, word-processing apparatus, point-of-sale terminals, and the various components which are peripheral to the data processors (e.g., magnetic tape units, printers, magnetic disc storage, or terminals). The machines may be self-contained with input, logical and arithmetic processor, and output, all contained in a single cabinet. Conversely, the apparatus may be large and contained in several cabinets connected by wires or other types of interconnecting links.

The production of the parts and subassemblies of automatic data-processing machines is done most often by the manual assembly (or buildup) from smaller components to intermediate-sized subassemblies. The labor skills required are dexterity and the ability to perform soldering, wiring, or wire wrapping. The subassemblies and units are often labor intensive to produce, although there is movement toward partial manufacture by automated machinery which can insert small components into printed wiring boards or machines which can perform automatic soldering. However, short production runs often make manual assembly more attractive, especially when performed in low-wage-rate countries.

The most important components used in the manufacture of automatic data-processing machines and subassemblies are usually digital integrated circuits. These microminiature electronic components (described in more detail in Digest No. 2 of this report) are, in large part, finished overseas by a labor-intensive process. When used in automatic data-processing machines, these small, integrated circuits are mounted on printed wiring boards that provide electrical interconnects as well as the mechanical fixture of many integrated circuits into larger functional circuits. The mounting operation is often conducted offshore and the printed circuit board returned to the United States as parts of automatic data-processing machines. The electromechanical components of magnetic disc storage devices, printers or plotters, and the like do not lend themselves to automatic assembly and usually are manually subassembled offshore for final assembly in the United States.

 $<sup>\</sup>underline{1}$ / See U.S. customs treatment section for further discussion of classifications of products.

### U.S. customs treatment

Parts of automatic data-processing machines and units (subassemblies) thereof are classified in item 676.5230 of the <u>Tariff Schedules of the United States Annotated (1984)</u> (TSUSA). 1/ The parts, components, and subassemblies covered by this digest must be those designed for use in automatic data-processing machines but not so advanced in completion as to be classifiable as an unfinished end product, such as a computer or peripheral device therefor. 2/ Furthermore, parts for which there are specific <u>eo nomine provisions</u> in the TSUSA must be classified under such provisions. 3/ Thus, wiring sets, transistors, integrated circuits, bare printed wiring boards, capacitors, resistors, indicators, transformers, and the like, if imported separately, are not classifiable as parts of automatic data-processing machines.

Tariff rate information applicable to parts and subassemblies of automatic data-processing machines is shown in table 1. The rates of duty in rate of duty column numbered 1 are MFN rates, 4/ and are applicable to products imported from all countries except those Communist countries and areas enumerated in general headnote 3(f) of the TSUSA. However, such rates do not apply to products of developing countries which are granted preferential tariff treatment under the Generalized System of Preferences (GSP).

The GSP, under title V of the Trade Act of 1974, provides duty-free treatment of specified eligible articles imported directly from designated beneficiary developing countries. GSP, implemented by Executive Order No. 11888 of November 24, 1975, applies to merchandise imported on or after January 1, 1976, and, pursuant to the provisions of the Trade and Tariff Act of 1984, is expected to remain in effect through July 4, 1993, unless modified by the President.

The rates of duty in the rate of duty column numbered 2 apply to imported products from those Communist countries and areas enumerated in general headnote 3(f) of the TSUSA.

In addition to receiving duty-free treatment under the GSP, parts of automatic data-processing machines may be entered under the provisions of item 807.00 of the TSUSA. Under these provisions, imported articles assembled in foreign countries with fabricated components that have been manufactured in the United States are subject to duty upon the full value of the imported product less the value of the U.S.-fabricated components contained therein.

<sup>1/</sup> Although TSUS item 676.52 includes parts of all office machines classified in TSUS items 676.10-.31, the parts of automatic data-processing machines refers to the machines covered by TSUS items 676.15 and 676.30 (pt.).

<sup>2/</sup> Tariff Schedules of the United States Annotated (1984), General Interpretive Rule 10(h), p. 8.

<sup>3/</sup> Ibid., Rule 10(ij), p. 8.

<sup>4/</sup> The concessions made during the Tokyo round on the rates of duty applicable to computers, calculators, data-processing machines, and parts thereof for the period 1980-87 are included in the table.

### U.S. producers and employment

The industry which produces or provides parts and subassemblies of automatic data-processing apparatus is not well defined, consisting of at least four major groups. First, most of the original-equipment manufacturers (OEM's) are large, vertically integrated companies which produce vast amounts of parts and subassemblies for their own (captive) consumption. These end product manufacturers constitute a large portion of the office machines industry which is identified by Standard Industrial Code (SIC) number 3573. As noted later, these large firms import the vast majority of the parts of automatic data-processing apparatus.

Second, there are estimated to be thousands 1/ of small firms that produce specialty parts and subassemblies for data-processing machines. These firms are often startups, spun off from larger firms, and operating at the leading edge of technology; they depend on their narrow production base to finace R&D activity. The small firms are not significant importers of parts, but are believed to be important U.S. exporters because of the demand by foreign firms for the highest U.S. technology products. There is no single industrial classification that identifies these small firms since many of them are in industries other than those included under SIC number 3573. It is doubtful that these small, high-technology companies have the same trade objectives as the very large multinationals; they cannot easily develop different product lines, if they are impacted by imports.

Third, there are the primary industries, principally in SIC major groups 35 and 36, which provide the basic bit and piece parts such as the semiconductor, resistor, capacitor, typewriter, printer, and magnetic recorder industries; firms within these industries are major suppliers to manufacturers of office machine subassemblies, and many are believed to provide a large portion of their products to automatic data-processing machine industry.

The fourth major source of subassemblies and parts is imported products by U.S. firms whose products are classified in SIC major groups 35 and 36. For example, in 1981, the last year for which data on related-party transactions are readily available, over 85 percent of the value of imported parts and subassemblies of automatic data-processing machines was accounted for by related parties, i.e., the offshore source of imports was related to the U.S. importer. There is no available information indicating that this ratio has changed measurably since 1981.

Concentration of firms in the industry producing parts and subassemblies for data-processing machines is believed to be high because of the role of the end product manufacturer who produces for his own use. Thus, since the concentration ratio in the automatic data-processing machines industry is high, with the largest four manufacturers together supplying an estimated 85 to 90 percent of the market, it is believed that a similar concentration ratio exists for the suppliers of parts and subassemblies.

 $<sup>\</sup>underline{1}$ / Estimated on the basis of official statistics of the U.S. Department of Commerce and membership in trade associations.

The number of entries into and exits from the computer parts industry are not known precisely, although some have occurred. Some firms have combined with others. For example, the largest business machine company recently bought a large manufacturer of telecommunications apparatus (some of whose product line would be considered as accessories for or parts of data-processing machines) 1/2 and a major interest in a premier supplier of digital integrated circuits. 2/

Concerning the producers of parts and subassemblies of data-processing machines covered by this digest, employment can be inferred from the estimates of producers' shipments, the estimated efficiency of the manufacturing operations, and the levels of imports and exports. On the basis of these data, estimated employment is shown in the following tabulation (in thousands):

Employment	1979 :	1980 :	1981	1982	1983	1984
Total:	148.3 : :	: 174.0 : :	175.1 : :	: 183.9 :	186.3	: 195.4 :

The estimated increase in employment was influenced by increased shipments of new products, particularly in the small computer or personal computer market. The employment estimate for 1984 indicates a strong recovery from the recent recession.

The U.S. industry continues to spend considerable amounts on research and development (R&D). The U.S. Government provides some funds in the area of advanced research in military applications. However, these amounts are small compared with the contribution by the U.S. industry. The U.S. office machines industry spent about 7.6 percent of total revenue in 1983, or approximately \$12 billion, for R&D. 3/

#### U.S. consumption

Apparent U.S. consumption of parts and subassemblies of automatic data-processing machines is estimated to have increased from \$10.0 billion in 1979 to \$20.8 billion in 1983, or at a compound rate of 20 percent per year (table A).  $\frac{4}{}$  Although the increase in consumption in 1983 compared with that in 1982 was only 17 percent, indications are that consumption will be 20 percent higher in 1984 compared with that in 1983. Consumption has been

<sup>1/</sup> Standard and Poors Daily News, p. 6256.

<sup>2/</sup> Ibid. p. 3198.

 $<sup>\</sup>frac{3}{2}$ / Estimated by the staff of the U.S. International Trade Commission using data published in trade journals.

<sup>4/</sup> Estimated data on apparent U.S. consumption and producers' shipments of parts and subassemblies of automatic data-processing machines are derived from data applicable to the office machines industry in conjunction with import and export data.

fueled by the growth in the small-computer market. In addition, companies emerging from the recent recession are believed to be investing heavily in automatic data-processing machines to improve productivity and efficiency. The share of apparent U.S. consumption of parts and subassemblies accounted for by imports rose from 4.3 percent in 1979 to 11.1 percent in 1983; it was 15.4 percent during January-August 1984 compared with 9.9 percent in the comparable period in 1983.

#### <u>U.S. producers' shipments</u>

During 1979-83, U.S. producers' shipments 1/ increased from \$11.6 billion to \$23.3 billion. The annual increase in the value of shipments closely paralleled the increase in consumption (at an annual compound rate of 19 percent). The office machines industry, which is comprised in large part of producers of automatic data-processing machines, does not appear to have been heavily affected by the recent recession. The year 1984, however, is estimated to be a strong year for the U.S. industry, causing increased demand for both U.S. and foreign products.

### U.S. exports

Exports of parts and subassemblies of automatic data-processing machines increased to \$4.8 billion, or by 27 percent, in 1983, compared with those in 1982 (table B). On the basis of data for January-August 1984, exports in 1984 are expected to increase by 30 percent compared with those in 1983. For the 5-year period 1979-83, however, the compound annual growth rate of exports was 24.8 percent; this rate reflects the somewhat slower growth rate during the recent recessionary period.

Exports as a share of the value of U.S. producers' shipments have generally increased, as shown in the following tabulation (in percent):

Item	: 1979	:	1980	1981	:	1982	1983	1984
	:	:			:	•	:	
Ratio of U.S.	:	:	:	}	:	:	:	
exports to U.S.	:	:	:	•	:	•		
producers'	:	:	:	:	:	•	•	
shipments 1/	: 17.8	:	19.6	20.5	:	18.8:	20.8 :	23.1
	:	:			:	:	:	

 $\underline{1}$ / U.S. producers' shipments, and export data for 1984, were estimated by the staff of the U.S. International Trade Commission.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

<sup>1/</sup> U.S. producers' shipments have been derived from consumption estimates by factoring U.S. imports and exports.

As the U.S. and worldwide recoveries continue, exports of parts and subassemblies can be expected to remain strong. Canada, the United Kingdom, and West Germany remain the largest markets for U.S.-produced parts and subassemblies of automatic data-processing machines. In 1983, these countries together accounted for nearly 36 percent of the value of exports. Also, Japan and Singapore, major Asian markets, are the location of subsidiaries of U.S. firms which manufacture end products which incorporate computer parts.

#### U.S. imports

The value of imports of parts and subassemblies of automatic data-processing machines rose from \$427.7 million in 1979 to \$2,301.7 million in 1983, or by a compound rate of 52.3 percent per year (table C). On the basis of data for January-August 1984, it is estimated that imported parts and subassemblies will rise to \$4.3 billion in 1984, or by 87 percent over the value of 1983 imports. The ratio of imports to consumption increased from 4.3 percent to 11.1 percent during 1979-83. For January-August 1984, the ratio was 15.4 percent, compared with 9.9 percent during the corresponding period in 1983.

During January-August 1984, imports from Japan, Singapore, and Hong Kong together amounted to \$1.7 billion, or 66 percent of the total U.S. imports. During this same period in 1983, these three countries together accounted for imports totaling \$882 million.

Major U.S. importers and related party transactions.—During January-June 1984, \* \* \* major U.S. companies producing computers and peripherals accounted for over \* \* \* of the U.S. import market share for parts and subassemblies of automatic data-processing machines. 1/ In addition, in 1981, the latest year for which related-party transactions data are available, over 85 percent of imports (by value) were made by importers financially related to the foreign source of the imports.

Imports under TSUS item 807.00 and the GSP and the effective duty rate.—Imported parts and subassemblies of automatic data-processing machines are eligible for entry under the provisions of TSUS item 807.00 and, in some cases, 806.30. Imports of parts and subassemblies from certain beneficiary developing countries are also eligible for duty-free treatment under the GSP. 2/ The total value of imports during the period 1979-83, the duty-free value of imports entered under TSUS item 807.00, duty-free imports under the

<sup>1/</sup> The data include parts incorporating cathode-ray tubes, which are believed to be small. The top [15] importers during the period together accounted [59.3 percent] of the total value of imported parts. Data are computed from official statistics of the U.S. Department of Commerce and information supplied by the U.S. Department of the Treasury.

<sup>2/</sup> Certain of these countries (Hong Kong, Mexico, the Republic of Korea, Singapore, and Taiwan) have been removed from the eligibility list, since they recently exceeded the competitive-need limitations on the value of imports in a single year.

GSP, the MFN rate (col.1), and the effective duty rates 1/ are shown in the following tabulation (U.S. imports under TSUS item 806.30 are negligible and are not shown):

Year :	Total import value	:valu	-	:va	uty-free lue under GSP		duty rate	:	Effective duty rate
:		L,000,	000 dol:	lars		:	<u>Pe</u>	rce	<u>ent</u>
:		:		:		:		:	
1979: 1980:	459.8 606.4	-	69.8 74.8		26.7 28.1		5.5 5.3		4.3 4.4
1981:	954.4	:	101.6	:	40.6	:	5.1	:	4.3
1982:	1,319.1	:	112.8	:	115.6	:	4.9	:	4.1
1983:	2,475.0	:	163.0	:	114.5	:	4.7	:	4.2
		:		:		:		:	

Source: Compiled from official statistics of the U.S. Department of Commerce.

The MFN (col. 1) duty rate has been declining in accordance with the Multilateral Trade Negotiations annual staging schedule. However, the use of GSP (limited to some extent by removal of countries from the list of eligible countries) and the use of TSUS item 807.00 together have not kept pace with the increase in imports. Therefore, the effective duty rate, somewhat less than the MFN (col. 1) rate, has, nonetheless, remained relatively constant.

Potential trade diversion.—The differences in the customs tariff classification practices concerning parts of subassemblies for and components of peripherals vis—a-vis those regarding unfinished automatic data—processing machines are finely drawn. 2/ As noted in the section on U.S. customs treatment, there are a number of other TSUS items which encompass automatic data—processing apparatus; hence, the entry of merchandise under these provisions may serve as a source of diverted trade. Thus, articles which normally would be entered under a dutiable provision would be altered slightly and entered under a duty—free provision. The value of recent imports under certain of the TSUS classifications most akin to the classification for parts and subassemblies are shown in the tabulation below:

<sup>1/</sup> The effective duty rate is the actual duty paid divided by the total value of U.S. imports. The duty-free components of U.S. imports under TSUS item 807.00 and duty-free imports under the GSP effectively reduce the MFN (col. 1) rate.

<sup>2/</sup> The technical complexity of the parts and subassemblies, as well as the finished and unfinished end products, makes accurate tariff classification extremely difficult, even for the most expert in the field.

Digest No. 1--Con.

movo :	: Brief article	:	:	:	:	:	: Jan	Aug
TSUS item	: description	1979 :	. 1980 :	1981	. 1982 :	. 1983 :	1983	1984
	:	:	:	:	:	:	:	:
676.15	: Accounting,	:		<u>1,00</u>	0,000 d	<u>ollars</u>		
	: computing,	:	:	:	:	:	:	:
	: and other	:	:	:	:	:	:	:
	: data-process-	:	:	:	:	:	:	:
	: ing machines	172	: 203	: 234	: 336	: 515	: 331	592
676.30 (pt.)	: Other data-	:	:	:	:	•	:	:
-	: processing	• .	:	:	:	:	:	
	: machines	337	: 349	: 458	: 639	: 1,370	815	1,650

Source: Compiled from official statistics of the U.S. Department of Commerce.

#### Position of interested parties

At hearings before, and in statements submitted to, the U.S. International Trade Commission, representatives of two of the largest manufacturers of automatic data-processing apparatus in the United States, Digital Equipment Corp. and Hewlett Packard Corp 1/, supported the negotiated elimination of the tariff on imports of automatic data-processing apparatus and units thereof. The corporate representatives made their statements on behalf of the American Electronics Association (AEA), the Computer & Business Equipment Manufacturers Association (CBEMA), and the Scientific Apparatus Makers Association (SAMA), thus purporting to have the backing of the U.S. industry. The elimination of duty was opposed by the International Brotherhood of Electrical Workers (IBEW), representing approximately one-fifth of the workers in the industry. 2/

The industry representatives argued in favor of a negotiated duty elimination principally between Japan and the United States on the basis of substantial benefits to be derived. 3/ The most concrete benefit to be obtained by the firms represented is a duty reduction for those firms that import parts. The representative of Digital Equipment Corporation testified that the U.S. tariff on imported parts of automatic data-processing machines "diverted badly needed funds from research and capital investment." 4/ It is noted that although the trade associations appearing before the Commission purported to represent in excess of 2,700 firms, more than \* \* \* percent of the total imports in the first half of 1984 imports of \$1.96 billion were accounted for by \* \* \* firms. Imports are expected to continue to increase as the large companies internationalize their operations. 5/

<sup>1/</sup> According to "Datamation" magazine's top 100 survey, these two companies are in 2d and 7th places, respectively, in terms of sales of ADP apparatus and services.

<sup>2/</sup> Transcript of Proceedings, p. 83.

<sup>3/</sup> Ibid. p. 93.

<sup>4/</sup> Ibid. p. 95.

<sup>5/</sup> Ibid. p. 127.

with a reduction of the Japanese tariffs, the representative speaking on behalf of the Semiconductor Industry Association (SIA) anticipates no additional benefits for U.S. firms in the Japanese market. 1/ In spite of this assessment, the representative speaking for the AEA and CBEMA states that "without market access, we cannot compete." 2/ The industry representatives offered no suggestions or recommendations as to U.S. negotiating objectives, but representatives did opine that tariff reductions were an important negotiating point to remove non tariff trade barriers in the Japanese market.

Opposition to the duty reduction was presented by representatives of U.S. labor and addressed principally to the semiconductor industry in the prepared statement. However, in a posthearing submission, 3/ the IBEW ensured its concern over the exporting of jobs includes the industry which produces parts, subassemblies, and units of automatic data-processing apparatus.

Table A.--Parts of automatic data-processing machines and units (subassemblies)
thereof (other than parts incorporating a cathode-ray tube): U.S. producers'

shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, 1979-83, January-August 1983, and January-August 1984

Doring	Producers' shipments 1/	Exports	Imports <u>1</u> /	:	Apparent consumption <u>1</u> /	Ratio of imports to consumption 1/
:		<u>1,000</u>	dollars			: <u>Percent</u>
:			:	:		
1979:	• •	2,066,941			9,985,000	
1980:	15,201,567	: 2,972,500	: 557,933	:	12,787,000	: 4.4
1981:	17,489,533	3,583,911	: 868,478	:	14,774,100	: 5.9
1982:	20,260,074	3,810,020	: 1,187,146	:	17,637,200	: 6.7
1983:		4,849,016		:	20,758,901	: 11.1
JanAug :			:	:		:
1983:	15,596,481	3,120,424	: 1,363,243	:	13,839,300	: 9.9
1984:		4,028,921	: 2,550,734	:	16,607,100	: 15.4
:			:	:		:

<sup>1/</sup> Estimated by the staff of the U.S. International Trade Commission by allocating official statistics as indicated by data published in trade journals.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

<sup>1/</sup> Ibid. p. 58.

<sup>2/</sup> Ibid. p. 95.

<sup>3/</sup> IBEW letter. dated. Nov. 20, 1984.

Table B.--Parts of automatic data-processing machines and units (subassemblies) thereof (other than parts incorporating a cathode-ray tube): U.S. exports of domestic merchandise, by principal markets, 1979-83, January-August 1983, and January-August 1984

•	3.	in thousands of dollars/	. dollars/				
				1		January-August	ugust
Harket	: 6/61	. 1981	1981	1982	1983	1983	1984
: :Canada:	216,473	6		'			171 017
U King:	279,802 :	377,283 :	396,341 :	451,706	591.025	1 KOC 1 KK	66.000
r Germ:	280,647 :	62		9			46.4 0.4
Japan:	167, 159 :	6	311,337 :	4			414 242
France:	230,740 :	32					7676
Ireland:	85,075 :	65			•		700777
Neth1ds:	79.544 :	96	144.50		•	. 676 974	207,400
Singapr:	6.979	13,358		7 1	. 10/11/7	•	207,03
1 other:	720,520 :	1, 107, 288 :	•	- M	1.696.F76		2 10
Total:	2,066,941:	2,972,500 :	3,583,911:	19		3.120.624	4.028.921
••	••	••	••	•			

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table C.--Parts of automatic data-processing machines and units (subassemblies) thereof (other than parts incorporating a cathode-ray tube): U.S. imports for consumption, by principal sources, 1979-83, January-August 1983, and January-August 1984

	I)	(In thousands of dollars)	dollars)				
••		•• ••	•• ••		•• ••	January-August	uaust
Source :	1979 :	1980 :	1981 :	1982 :	1983	1983	1984
:	79,220	90,116 :	187,868	390,770	663,352 :	: 560.905	792.411
Singapr:	931 :	3,338 :	9,682 :	76,546 :	468.585	248.972	525,273
Hg Kong:	74,864	117,172 :	160,060	143,810 :	377,315 :	218.735	355,755
Canada:	44,797 :		127, 134 :	130,814 :	160,244 :	97.686	183,401
Mexico:	42,862 :	56,132 :	83,202 :	106,836:	149,023 :	85,399	141.938
China t:	2,696 :	9,988 :	42, 185 :	75,681 :	129,316:	91.249 :	128.650
Fr Germ:	41,334 :	32,397 :	41,762 :	44,729 :	70.736 :	41.635	81.512
U King:	15,533 :	28,678 :	39,390 :	38,811 :	64,314 :	40.579	96.354
All other:_	125,420 :	147,182 :	177, 195 :	179,149 :	218.846 :	134,895	245,440
Total:	427,658 :	557,933 :	868,478 :	1,187,146 :	2,301,731 :	1,363,244 :	2.550.735
••	••	••	••	••	•		

Source: Estimated by the staff of the U.S. International Trade Commission from the official statistics of the U.S. Department of Commerce. Source:

Turk (

CERTAIN SEMICONDUCTORS
AND PARTS THEREOF

TITLE: Certain semiconductors and parts thereof

1983.
#
imports
U.S.
information;
frate
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number;
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TSUS
. :

TSUS) item	46	Pre-MTN	Staged:	staged col. I face of duty effective with respect to articles entered on or after Jan. 1	les enter	articles entered on or after Jan. 1	after J	en resp. 1	ect to		. Col. 2	: U.S.
No. 1/	:	ئز ،	1980	1961	1982	1983	1984	1985	1986	1987	fate of duty	: 1n 1983
1.1												: 1,000 : dollars
687.70A	: 687.70A : Transistors	6.0% ad val.	5.8% ad :	5.6%	4.24%	: 4.2%	્રેલ :: :	્રેલ :: :	ે 	ر ان	: 35% ad	253,038
687.72A	: 687.72A : Diodes and rectifiers	6.0% ad val. :	5.8% ad	val.	val.	. Val.	, ને 	က် 	က်၊ 		: 35% ad	: : 199,421
		••	val.	sad	ad val.	: ad : val.			<b></b>		: val.	••
687.74	: Monolithic integrated : circuits.	6.0% ad val. :	5.8% ad :	5.6%	4.24% ad	: 4.2% : ad	ક્ષા 	ଳା 	က်၊ 	ભા 	: 35% ad : val.	:4,055,720
687.77	: Other integrated circuits:	6.0% ad val. :	5.8% ad:	5.6%	4.24% ad	4.2%	જો 	က်၊ 	က်၊ 	) ři	: 35% ad : val	123,467
687.81	: other (crystal components): 6.0% a	6.0% ad val. :	5.8% ad :	val. : 5.6% : ad	val. 4.24% ad	. val. . 4.2% . ad	<u>بر</u>	. જો	. હા	ે જો	35% ad val.	21,079
687.85	: Parts of semiconductors:	6.0% ad val. :	5.8% ad :	Val. : 5.6% : ad	Val. 4.24% ad	. val. : 4.2% : ad	ે ભો	ન જો :: :: ::	က်၊ ကျ	က်၊ 	: 35% ad : val.	302,834
	••••	•• ••	••	val.	val.	: val.	••			•		

1/ The designation "A" indicates that the item is currently designated as an eligible article for duty-free treatment under the U.S. Generalized System of Preferences and that all designated beneficiary developing countries are eligible for GSP treatment.

2/ Rate effective prior to Jan. 1, 1980.

2/ The rate of 4.2 percent ad valorem represents the final staged rate negotiated during the Tokyo round of the Multilateral Trade Negotiations (MTN) which was accelerated in the U.S.-Japanese bilateral agreement entered into on Sept. 30, 1981 (Presidential Proclamation No. 4889, Dec. 29, 1981, 47 F.R. 1).

#### II. Comment

#### Description and uses

Semiconductors are crystal devices having electrical properties that place them between insulators and conductors. These devices are usually produced from wafers of high-purity silicon whose surfaces are etched, implanted, and metalized. The etched patterns on the wafers (each a semiconductor chip) are created by using photographic masks whose precise alignments are necessary to deliver close tolerances. Fabrication is performed in dust-free environment to avoid device failure through surface contamination. Principal types of semiconductors are transistors, diodes and rectifiers, and integrated circuits.

Transistors are active semiconductors having three electrodes and are capable of signal amplification and circuit switching. Diodes and rectifiers are passive devices having two electrodes and are capable of passing an electrical current in one direction with a low resistance and in the opposite direction with a high resistance. Transistors and diodes, when produced and connected within, or on, a single crystal substrate along with other electrical components including resistors and capacitors, are called monolithic integrated circuits. Combinations of integrated circuits assembled into a single package or integrated circuits with the addition of discrete components are called hybrid integrated circuits.

Initial uses of semiconductors were limited to operational amplifiers, logic circuits, and shift registers incorporated into computers and other electronic products displacing vacuum tubes. Currently, semiconductors are complex devices containing thousands of components and performing hundreds of electrical functions. Digital computers, office machines, communications equipment, consumer electronic products, and military equipment account for much of U.S. semiconductor consumption.

#### U.S. customs treatment

Semiconductors and parts are classified under items 687.70-.74, 687.77, 687.81, and 687.85-.87 of the <u>Tariff Schedules of the United States Annotated (1984)</u> (TSUSA). However, item 687.87 was not included on the list of high-technology products provided by the United States Trade Representative for duty-free consideration. Semiconductors and parts, when imported from Canada and designated as original motor-vehicle equipment, are classified under TSUS item 687.89. Since 1982, the U.S. Customs Service has classified unmounted semiconductor chips, dice, and wafers as transistors, diodes, rectifiers, or integrated circuits, depending on their circuitry.

The rates of duty applicable to semiconductors and parts are determined by the trading status of the country of exportation. Articles imported from countries with most-favored-nation status (MFN) including certain least developed developing countries (LDDC's) are dutiable at 4.2 percent

ad valorem. 1/ The rate of 4.2 percent ad valorem represents the final stage rate negotiated during the Tokyo round of the Multilateral Trade Negotiations (MTN) that was accelerated in the U.S.-Japanese bilateral agreement entered into on September 30, 1981. 2/ Articles imported from certain countries which the President has designated as being under Communist control or domination are dutiable at 35 percent ad valorem. 3/ Imports into Japan and the European Community are dutiable at 4.2 percent ad valorem and 17 percent ad valorem, respectively.

Effective April 1, 1981, transistors, diodes, and rectifiers, classified under items 687.70 and 687.72, were designated for duty-free treatment as eligible articles under the Generalized System of Preferences (GSP). 4/ GSP eligibility is subject to certain competitive-need limitations as set forth in title V of the Trade Act of 1974. Duty-free imports entered under a TSUS item from a beneficiary developing country are limited to a percentage of the U.S. gross national product and to 50 percent of the appraised value of imports. Eligibility also requires that at least 35 percent of the appraised value of the TSUS item eligible under GSP be added in the beneficiary developing country. Semiconductors imported from Canada under item 687.89 also enter free of duty under the Automotive Products Act of 1965. 5/

### U.S. producers and employment

Semiconductors and parts were produced by about 150 U.S. firms in 1983 compared with about 115 firms in 1979. During the period, more than 32 new firms entered the industry, concentrating on the development of computer memory devices and custom integrated circuits. 6/ The large number of new

<sup>1/</sup> The rates of duty in col. 1 are MFN rates and are applicable to imported products from all countries except those Communist countries and areas enumerated in general headnote 3(f) of the TSUSA. However, such rates would not apply to products of developing countries which are granted preferential tariff treatment under the GSP.

<sup>2/</sup> Presidential Proclamation No. 4889, Dec. 29, 1981, 47 F.R. 1.

<sup>3/</sup> The rates of duty in col. 2 apply to imported products from those Communist countries and areas enumerated in general headnote 3(f) of the TSUSA. The only Communist countries currently eligible for most-favored-nation treatment (col. 1 rates) are China, Hungary, Romania, and Yugoslavia.

<sup>4/</sup> The GSP is a program of nonreciprocal tariff preferences granted by the United States to developing countries to aid their economic development by encouraging greater diversification and expansion of their production and exports. The GSP, as enacted in title V of the Trade Act of 1974, implemented by Executive Order No. 11888 of November 24, 1975, and renewed in title V of the Trade and Tariff Act of 1984, applies to merchandise imported on or after January 1, 1976, and is scheduled to remain in effect through July 4, 1993. It provides for duty-free entry of eligible articles imported directly from designated beneficiary developing countries.

<sup>5</sup>/ See app. D for communications concerning the negotiations for reducing semiconductor tariffs.

<sup>6/</sup> Electronic Business, U.S. Venture Capital Funds a Wave of Chipmakers, Apr. 1, 1984, p. 56.

entrants in the industry was principally related to two factors—favorable changes in U.S. tax laws and a shift in technology to complementary metal oxide semiconductors (CMOS). Changes in the laws reducing taxes on capital gains provided venture capitalists with incentives to invest more heavily in the industry. The shift to CMOS was related to the need to develop semiconductor devices with low power consumption.

With few exceptions, the major producers in the semiconductor industry are multiproduct firms largely producers of computers and office machines deriving their income principally from sales of products other than semiconductors. Through mergers or equity ownership, many of the former merchant suppliers in the industry are now operated as divisions of larger firms. The membership of the association representing the semiconductor industry accounted for about 90 percent of U.S. semiconductor shipments and is composed of 50 firms, 29 of which are principally original—equipment manufacturers, 14 of which are principally merchant suppliers, and 7 of which are foreign subsidiaries. 1/ Of the merchant suppliers, only five firms are believed to have sales exceeding \$100 million annually. One of the member firms is a foreign producer of telephone apparatus and is in the initial stages of semiconductor production.

Employment in the semiconductor industry increased from about 174,000 persons in 1979 to about 215,000 persons in 1983, or by about 6 percent annually.  $\underline{2}$ / A large share of U.S. producers operate assembly plants in developing countries. It is believed that employment in these plants increased by about the same rate.

#### U.S. consumption

Apparent U.S. consumption of certain semiconductors and parts increased from \$6.5 billion in 1979 to an estimated \$13.4 billion in 1983 (table A-1). Apparent consumption reached an estimated \$15.3 billion during January-August 1984 compared with an estimated \$9.7 billion during January-August 1983. The increase in apparent consumption during the period was related to an expanding economy, price declines, and numerous new applications for semiconductors, including applications in computers, office machines, telephone and telegraph apparatus, and military electronics. The import share of apparent consumption ranged between 33.5 and 38.7 percent during 1979-83 and January-August 1984.

Apparent consumption of transistors, diodes and rectifiers, integrated circuits (other than monolithic), and other crystal devices and parts ranged between only 17 to 31 percent of consumption of certain semiconductors and parts during the period (tables A-2, A-3, A-5, A-6, and A-7). The growth in consumption of these devices was limited to special applications or to their

<sup>1/</sup> The Semiconductor Industry Association's membership accounts for about 90 percent of U.S. semiconductor shipments. However, a large share of the members of the association derive their income principally from sales of products that incorporate semiconductors.

<sup>2/</sup> Estimated by the staff of the U.S. International Trade Commission on the basis of official statistics of the U.S. Department of Commerce.

power-handling capabilities. The largest category of these devices were integrated circuits (other than monolithic). Consumption of these semiconductors increased from \$594 million in 1979 to \$1.0 billion during January-August 1984 compared with \$842 million during January-August 1983.

Apparent consumption of monolithic integrated circuits, representing approximately 72 percent of the total, increased from \$4.4 billion in 1979 to an estimated \$10.4 billion in 1983 (table A-4). Apparent consumption reached \$12.4 billion during January-August 1984 compared with \$8.1 billion during January-August 1983. The import share of apparent consumption ranged between 38.9 and 45.9 percent during 1979-83, and declined to 32.7 percent during January-August 1984.

# U.S. producers' shipments

U.S. producers' shipments of certain semiconductors and parts rose by more than 92 percent during 1979-83, from \$6.7 billion to \$12.8 billion. During January-August 1984, U.S. producers' shipments were valued at \$13.8 billion, or about \$4.3 billion above the value of producers' shipments during the corresponding period of 1983. Monolithic integrated circuits accounted for the largest share of producers' shipments during the period, averaging about 66 percent of total semiconductor shipments. Following monolithic integrated circuits in importance were parts of semiconductors (9 percent), other integrated circuits (9 percent), transistors (7 percent), and diodes and rectifiers (6 percent). The remainder of U.S. producers' shipments was accounted for by shipments of other crystal components.

#### U.S. exports

U.S. exports of semiconductors and parts increased from \$2.6 billion in 1979 to \$4.3 billion in 1983, or by 65 percent (table B-1). Exports were valued at \$3.6 billion during January-August 1984 compared with \$2.8 billion during January-August 1983. U.S. exports of semiconductors and parts are largely chips which are sent to developing countries for wire bonding and encapsulation. These developing countries include Malaysia, the Philippines, Singapore, and the Republic of Korea, where U.S. assembly plants are located. U.S. assembly plants are also located in Mexico and Hong Kong. Other than these developing countries, Japan and Canada were the principal export markets for semiconductors (tables B-2 through B-7).

### U.S. imports

U.S. imports of certain semiconductors and parts increased from \$2.4 billion in 1979 to \$5.0 billion in 1983, or by 105 percent (table C-1). During January-August 1984, imports rose significantly, reaching \$5.1 billion, compared with \$3.1 billion during January-August 1983. The ratio of imports to consumption of certain semiconductors and parts remained fairly constant at

approximately 37 percent during the period 1979-83. For January-August 1984, the ratio was 33.5 percent, compared with 31.5 percent during the corresponding period in 1983.

Malaysia, the Philippines, Singapore, and the Republic of Korea, where U.S. assembly plants are located, were the principal suppliers of semiconductors entered under TSUS items 806.30 and 807.00. Imports from these countries accounted for 61 percent of total imports in 1979 and 57 percent in 1983. Imports from Japan, however, increased faster during 1979-83 than imports from any other source. Imports from Japan increased from \$242 million in 1979 to \$924 million in 1983. During January-August 1984, imports from Japan were valued at \$1.3 billion compared with \$576 million during January-August 1983. During January-August 1984, Japan accounted for 24.9 percent of total imports, increasing from 10.0 percent in 1979. Monolithic integrated circuits accounted for about 81 percent of U.S. imports during 1979-83 (table C-4), and transistors, diodes and rectifiers, and other devices accounted for the remainder (tables C-2, C-3, C-5, C-6, and C-7). About 75 percent of the value of U.S. imports in 1983 was entered by U.S. producers. The remainder was imported by or from foreign producers and were principally memory devices which are highly price sensitive, not unlike a commodity product.

Imports under TSUS items 806.30 and 807.00.--U.S. imports under TSUS items 806.30 and 807.00 accounted for the largest share of imports during 1979-83. 1/Imports entered under these provisions increased from \$1.9 billion in 1979 to \$3.4 billion in 1983. The duty-free share of imports entered under TSUS items 806.30 and 807.00 reached \$2.1 billion in 1983 compared with \$1.2 billion in 1979. The duty-free share accounted for 49 percent of total imports in 1979, decreasing to 44 percent in 1983. Since duty was not paid on the duty-free share, the effective rate of duty for all semiconductors and parts in 1983 was 1.6 percent ad valorem, rather than 4.2 percent ad valorem.

Imports under the GSP.—Since transistors, diodes, and rectifiers became eligible articles in 1981, imports of these devices under the GSP have been relatively small, increasing from \$36 million in 1981 to \$58 million in 1983. Taiwan and Singapore were the principal suppliers under the GSP.

# Position of interested parties

The association representing the industry takes the position that the elimination of the import duty will have no impact on trade patterns in

<sup>1/</sup> Under the provisions of TSUS item 806.30, articles of metal (except precious metals) that have been manufactured, or subjected to a process of manufacture, in the United States, and exported for processing and returned to the United States for further processing, are subject to duty only on the value of the foreign processing. Under TSUS item 807.00, imported articles assembled in foreign countries with fabricated components that have been manufactured in the United States are subject to duty upon the full value of the imported product less the value of the U.S.-fabricated components contained therein. No further processing is required for articles entered under TSUS item 807.00.

semiconductors and that the current \$100 million in duties paid by the industry could be more meaningfully used to finance capital investment and research and development. 1/ The association believes that, "for the semiconductor industry, the effective duty is too small to be a significant determinant in plant location decisions. Labor costs, transportation costs, inventory transit period, and tax considerations are far more important factors." 2/ According to the association, "the tariff is equivalent to a production tax on imported, U.S.-origin products". 3/ The association strongly supports the elimination of the duty to "serve as a reaffirmation of the commitment of the United States and Japan to compete on an equal basis in an open international market. Additionally, it would signal a commitment to eliminate all remaining restrictions on high technology items". 4/

On November 29, 1984, in response to a request from the Commission during the public hearing, 5/ a seminar on determinants and significance of pricing in the semiconductor industry was conducted at the Commission by representatives of the Semiconductor Industry Association. During the seminar, representatives of the association expanded their position taken at the public hearing, contending that semiconductor pricing is less important than certain other factors affecting semiconductor sales. The representatives contended that quality and delivery were more important considerations than price, particularly since semiconductor prices are constantly falling as the production base increases. The representatives argued that Japanese producers follow a market share strategy and will price their products to achieve that market share irrespective of profits. As a result, the representatives contend that the proposed tariff elimination will not affect prices of imports from Japan in the U.S. market.  $\underline{6}$ / They also emphasized the greater importance of customer liaison and the costs of the total component package required by the end product producer, rather than the cost of individual devices. The key issue as to how semiconductor pricing would be affected by the elimination of duty, especially since U.S. producers are subject to an effective 1.6-percent ad valorem duty rate, whereas foreign producers are subject to a 4.2-percent ad valorem duty rate, was largely left unanswered.

Micron Technology, Inc., a small U.S. producer of semiconductor memory devices, believes that the tariff elimination should be deferred until foreign countries remove the restrictions in their markets to our products. 7/ Micron Technology claims that semiconductor memories are the largest volume products

<sup>1</sup>/ Transcript of Proceedings, Nov. 15, 1984, p. 23.

<sup>2/</sup> Statement of Semiconductor Industry Association, Nov. 15, 1984, p. 13.

<sup>3/</sup> Ibid. p. 12.

<sup>4/</sup> Semiconductor Industry Association, The International Microelectronic Challenge, 1981, p. 52.

<sup>5/</sup> Ibid., Proceedings, p. 71.

<sup>6/</sup> The representatives offered no statement on the pricing strategies of other suppliers to the U.S. market that will also benefit from any tariff elimination.

<sup>1/</sup> Micron Technology Inc., was the only small U.S. semiconductor producer that recorded its opposition to the duty elimination. Some small producers in the industry, elected not to oppose the duty elimination, since certain large firms in the industry favoring duty elimination are important customers.

entering international trade and that Japanese producers dominate the business. With the elimination of the duty, Japanese producers will increase their market share by becoming more competitive in the U.S. market. At the same time, U.S. producers will not increase their share of the Japanese market, since Japan will not buy from foreign sources unless the products are not locally available. Micron also believes that the elimination of the tariff will accelerate the trend by U.S. firms to locate wafer fabrication or assembly operations abroad with the resultant loss of employment in the United States. Additionally, the firm believes that it is unfair and detrimental to our national interest to provide duty-free treatment for Korean-produced semiconductors while the Korean duty rate is maintained at 30 percent ad valorem.

The International Brotherhood of Electrical Workers (IBEW) is opposed to the elimination of the duty on semiconductors. In a posthearing brief filed with the Commission, the IBEW estimates that the Japanese Government will derive five times the benefits from the duty elimination than the U.S. Government. The union reported that during January-August 1984, U.S. exports of \$253 million to Japan yielded revenues of \$10.6 million to the Japanese Government, exports from Japan to the United States of \$1.274 billion during this period yielded revenues of \$53.5 million to the U.S. Government. duty elimination, according to the union, would provide Japanese producers with five times the revenues to invest in plants and equipment, thereby enhancing their competitive strength and resulting in a negative impact on U.S. employment. The IBEW believes that in this time of large Federal deficits, the U.S. Treasury should not be deprived of hundreds of millions of dollars in duties to promote imports from Japan and at the same time, give U.S. firms incentives to rationalize production abroad. The union also believes that the duty elimination would adversely affect our high-technology leadership, which is critical to the international competitiveness of other U.S. industries. In the absence of employment opportunities created by high-technology industries, the IBEW questions future sources of employment opportunities.

\* \* \* \* \* \* \* \*

Table A-1.--Certain semiconductors and parts thereof: U.S. producers' shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, 1979-83, January-August 1983, and January-August 1984

Period	Producers' shipments	Exports	Imports	Apparent consump- tion	Ratio of imports to consumption-
<b>:</b>		<u>1,000</u>	<u>dollars</u>		<u>Percent</u>
:		•	:	to yet	
1979:		: 2,593,513			37.3
1980:	8,635,000	: 3,436,931	: 3,279,146	<b>8,477,215</b> :	38.7
1981:	9,769,000	: 3,569,888	: 3,553,083	: 9,752,195 :	36.4
1982:	10,309,900	: 3,787,122	: 4,134,299	: 10,657,077 :	38.8
1983:	1/ 12,790,000	: 4,342,838	: 4,955,560	: 1/ 13,402,722 :	1/ 37.0
JanAug:		:	:	:	<del>-</del>
1983:	9,445,000	: 2,777,502	: 3,072,217	: <u>1</u> / 9,739,715 :	1/ 31.5
1984:				: 17 15,256,852 :	1/ 33.5

<sup>1/</sup> Estimated by the staff of the U.S. International Trade Commission by allocating official statistics as indicated by data published in trade journals.

Table A-2.--Transistors: U.S. producers' shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, 1979-83, January-August 1983, and January-August 1984

Period :	Producers' shipments	Exports	Imports	: Apparent : consumption :	Ratio of imports to consumption
:		<u>1,000</u>	dollars		: Percent
•		:	:	•	:
1979:	631,000	: 211,048	: 204,695	: 624.647	32.8
1980:			: 224,098		
1981:			: 264,446		
1982:			: 259,662		
1983:			: 253,038		
JanAug :		:	:	:	
1983:	<u>1</u> / 450,000	157,617	: 160,638	: <u>1</u> / 453,021	: 35.4
1984:			: 232,512		
			<u>:</u>	<b>:</b>	

<sup>1/</sup> Estimated by the staff of the U.S. International Trade Commission by allocating official statistics as indicated by data published in trade journals.

Table A-3.--Diodes and rectifiers: U.S. producers' shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, 1979-83, January-August 1983, and January-August 1984

Period :	Producers' : shipments :	Exports	Imports		pparent : nsumption :	Ratio imports consum	s to
:		<u>1,000</u>	dollars		:	Percer	<u>ıt</u>
•			:	:	:		
1979:	459,300 :	227,096	: 146,149	:	378.353 :		38.6
1980:	540,600 :	296,433	: 145,694	:	389,861 :		37.4
1981:	714,000 :	297,516	: 177,182	:	593,666 :		29.8
1982:	644,200 :	306,733	: 192,632	:	530,099 :		36.3
1983:	<u>1</u> / 695,000 :	358,157	: 199,421	: <u>1</u> /	536,264 :	1/	37.2
JanAug :	:		:	:	:		
1983:	1/520,000:	167,604	: 127,427	: 1/	479,823 :		26.6
1984:	<u>1</u> / 702,000 :		: 210,489	_	681,851 :	<u>1</u> /	30.9

<sup>1/</sup> Estimated by the staff of the U.S. International Trade Commission by allocating official statistics as indicated by data published in trade journals.

Table A-4.—Monolithic integrated circuits: U.S. producers' shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, 1979-83, January-August 1983, and January-August 1984

Period	Producers' shipments	Exports	Imports	: Apparent : consumption :	: Ratio of : imports to : consump- : tion
		<u>1,000</u>	dollars		: <u>Percent</u>
		:		:	:
1979	3,851,100	: 1,297,471 :	1,876,066	: 4,429,695	42.4
1980	5,490,900	: 1,753,068 :	2,742,278	: 6,480,110	: 42.3
1981	5.844.400	: 1,773,964 :	2,938,204	: 7,008,640	: 41.9
1982		: 1,968,228 :	• •		: 45.9
1983		: 2,355,238 :	4,055,720	•	: <u>1</u> / 38.9
JanAug	,	:		:	
	1/ 6,652,000	: 1,085,340 :	2,549,687	: 1/8,116,347	: 31.4
	1/ 9,890,000		•		

<sup>1/</sup> Estimated by the staff of the U.S. International Trade Commission by allocating official statistics as indicated by data published in trade journals.

Table A-5.--Other integrated circuits: U.S. producers' shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, 1979-83, January-August 1983, and January-August 1984

Period :	Producers' shipments	Exports	Imports	: Apparent : consumption :		Ratio of imports to consumption
:	***	<u>1,000</u>	dollars		:	Percent
:		:	•	:	:	
1979:	655,500	: 193,761	: 131,792	: 593,531	:	22.2
1980:	728,900	: 272,710	: 120,001	: 576,191	:	20.8
1981:	896,400	: 280,377	: 116,441	732,464	:	15.9
1982:	1,073,600	: 272,708	: 114,579	: 915,471	:	12.5
1983:	<u>1</u> / 1,250,000	: 342,465	: 123,467	: <u>1</u> / 1,031,002	:	<u>1</u> / 12.0
JanAug:		:	•	•	:	
1983:	1/ 925,000	: 169,897	: 86,856	: <u>1</u> / 841,959	:	1/ 10.3
1984:	1/ 1,156,000	: 209,039 :	71,030	: <u>1</u> /1,017,991	:	<u>1</u> / 7.0

<sup>1/</sup> Estimated by the staff of the U.S. International Trade Commission by allocating official statistics as indicated by data published in trade journals.

Table A-6.--Other (crystal components): U.S. producers' shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, 1979-83, January-August 1983, and January-August 1984

Period	Producers' shipments	Exports	Imports	: Apparent consumption	: : Ratio of imports : to consumption
:		<u>1,00</u> (	dollars-		: Percent
1979	249,700 327,000 388,700 <u>1</u> / 450,000	: 130,165 : 184,778 : 200,635 : 218,477 : 262,266 :	45,480 : 20,925 : 25,112 :	110,402 142,272 291,335	: 41.2 : 14.2 : 12.9
1983: 1984:	1/ 250,000 1/ 507,000	: 121,551 : : 168,432 :			

<sup>1/</sup> Estimated by the staff of the U.S. International Trade Commission by allocating official statistics as indicated by data published in trade journals.

Table A-7.--Parts of semiconductors: U.S. producers' shipments, exports of domestic merchandise, imports for consumption, and apparent consumption, 1979-83, January-August 1983, and January-August 1984

Period	: Producers' shipments	Exports	: : Imports :	: Apparent consumption	: : Ratio of imports : to consumption
		<u>1,000</u>	dollars		: Percent
1979 1980 1981 1982 1983 1983	975,000 1,250,000 1,310,000 1/1,320,000	: : 593,841	: 47,076 : 27,907 : 205,900 : 302,834 : : 139,476	: 187,351 : 347,867 : 576,689 : 1/696,018 :	25.1 : 8.0 : 35.7 : <u>1</u> /43.5
1984:	<u>1</u> / 955,000	: 668,368	: 485,721	$\frac{1}{1}$ , 772,353	

<sup>1/</sup> Estimated by the staff of the U.S. International Trade Commission by allocating official statistics as indicated by data published in trade journals.

TableB-1.--Certain semiconductors and parts thereof: U.S. exports of domestic merchandise, by principal markets, 1979-83, January-August 1983, and January-August 1984

	(1)	(In thousands of	nds of dollars)				
•• ••	••	•• ••	•• ••	••	••		1
Market :	: 6761	1980	1981	1982 :	1983	1983 :	1984
: eske[e]	666.106				١.		
DE CETEL	•	400000		•	ŝ,	200	7
·		ָרָ מ	۵	•	5,51	60,88	1,74
:debuis	ิ	84	ŝ	•	9,73	56,8	3,5
Kor Rep:	189,718 :	96	,	•		244,677 :	1.04
Japan	171,424 :	59	-		8.99	50.3	× ×
Canada:	139,321 :	67	9		96.6		
Mexico:	154,074 :	49	2		232,572	M	10,1
Hg Kong:	133,011:	134,075 :	143,839	135,434 :	188,210:	, N	5.2
	750,554 :	∞	2		-	_	949,583
Total:	2,593,513:	3,436,931 :	3,569,888 :	3,787,122 :	4,342,838 :	2,777,502 :	3,632,466
••	••	••	••	••	••		

Table B-2.--Transistors: U.S. exports of domestic merchandise, by principal markets, 1979-83, January-August 1983, and January-August 1984

	3	(In thousands of	ds of dollars)				
		 E				January-August	igust
			. 1881	1982 :	1983	1983	1984
Malaysa:	37,512 :	48,824 :	57.105		1	. 647 64	١.
Phil R;	14,113 :	24,313					70010
Kor Rep:	11,460 :	12.407	16.671		•		٠,
. 1111111111111111111111111111111111111	* 007 62	- 77K UK		•	i	_	ì
	26,000	* *******	51,842	•	î	ò	÷
Canada:	. VCD . C.	19,250 :	22,960 :	-	6		à
Hg Kong:	19,876 :	19,203	18.030 :		16.071		707.0
Mexico:	11,469 :	15.000 :	19.67			•	•
111111111111111111111111111111111111111	. 682 21	- F \ 0		_	* ++0.40	•	•
) :		. /00161	13,353	11,839 :	12,987 :		
All other:	₹.		69,375 :	76,689	82.704 :		
lotal	211,048	265,546:	271,043 :	282,432 :	336,750 :	ی ا	281.279
••	•	••	•	•		, , , , , , ,	

Sourca: Compiled from official statistics of the U.S. Department of Commerce.

Table B-3.—-Diodes and rectifiers: U.S. exports of domestic merchandise, by principal markets, 1979-83, January-August 1983, and January-August 1984

	I)	(In thousands of dollars)	dollars)				
•••	•• ••	•• ••	<b></b>	•• •• •	•• ••	January-August	aust
Market :	1979 :	1980 :	1981	1982 :	1983	1983 :	1984
:E3/e1#	33,289	46,818	75	7.24		:	59.701
Phil R:	13,448 :	23,453 :	30,437	35,849 :	46,209	30,020 :	36,450
Kor Rep:	12,100 :	2	3	9.86	6		27,821
Singapr:	32,450 :	35,065 :		5,96	80		24,90
Canada:	11,619 :	17,109 :	9	3,37			13,262
Mexico:	8,246 :	~		. 48	. •		17,686
Fr Germ:	15,260 :	-		84	. •		14.42
Thai Ind:	3,500 :	16,229 :		46	11,402 :		10,059
All other:	86,377 :	•		4	63,852 :	41,198 :	65,693
Total:	216,289 :	278,913 :	251,954 :	263,582 :	305,150:	195,056 :	270,020
••	••	••	••	••	••	••	

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-4.--Monolithic integrated circuits: U.S. exports of domestic merchandise, by principal markets, 1979-83, January-August 1983, and January-August 1984

		In thousands of	ids of dollars)				
Market Set	1979			1080		January-August	1084
					2	500	+071
Malaysa:	205,829	287,500	•	416,526:	ະບ	311,240 :	3.82
Phil R:	85,985	R.	•	227,154:	n	191,430 :	230.353
Singapr:	214,190	G.	•	178,566:	194,401 :	Ŋ	77
Japan	133,942 :	109,509 :	•	133,392 :		102,861:	. M
Kor Rep:	70,272	•	•	132,560 :		~	<b>×</b>
Canada:	83,581 :	æ	139,851	123,612:	158, 162:	: 059'56	146,171
U King:	48,634 :	v	•	112,412 :			_ C
Fr Germ:	111,847 :	163,993 :	•	114,520 :			, IC
All other:	343, 192 :	563,824 :	•	529,486 :	67	383,376 :	7.37
Total:	1,297,471	1,753,068:	1,773,964 :	1,968,228 :	2,355,238	1,492,481:	2,056,178
••	••	••	••	••	••	••	

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-5.--Other integrated circuits: U.S. exports of domestic merchandise, by principal markets, 1979-83, January-August 1983, and January-August 1984

		(In thousands o	nds of dollars)				
Market :	1979	1980	1981	1982	1983	January-August	August
	•			••	••	2	1061
Malaysa:	33,574 :	47,610 :	56,767	75, 108			ŧ
TOT X LICE.	13,211 :		30.179			. 454.40	•
:uedef	13, 151 :		15,696			29,982 :	•
Kor Rep:	11, 158 :		. + 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. p. / 02		24,740 :	
Singapr:	32,357 :			. 60/16		16,816 :	_
Hg Kong:	10:126 :		. +06.170	20,659	27,430 :	18,786 :	23,774
Canada:	10.650 :		. 024.0	. 282.8	21,492 :	16,083 :	
Fr Germ:	26.181		200101	12,246	14,343 :	9,660 :	10.050
All other:	43,459	_	. 02.24	11,924:	13,029 :	9,346 :	٠.
Total:	193.761		69,260	62,898 :	64,085 :	41.437 :	ייייי אר הייייי
		. 01/47/7	280,377	272,708 :	342,465 :	231,386	10
		•	•	••	•	F 1 1	>

Source: Compiled from official statistics of the U.S. Department of Commerce.

TableB-6.--Other (crystal components): U.S. exports of domestic merchandise, by principal markets, 1979-83, January-August 1983, and January-August 1984

32,462 : 46,450 : 13,537 : 23,702 : 34,574 : 12,358 : 12,358 : 4,453 : 5,259 : 4,453 : 5,259 :	•	•			***************************************
### 13,9462 ### 46,450 ### 13,537 ### 23,702 ### 24,574 ### 24,574 ### 24,574 ### 24,574 ### 24,574 ### 24,574 ### 24,557 ### 24,557 ### 24,557 ### 24,557 ### 24,557 ### 24,557 ### 24,557 ### 24,557 ### 25,259 #### 25,259 ### 25,259 ### 25,259 ### 25,259 ### 25,259 ### 25,259 #### 25,259 #### 25,259 #### 25,259 #### 25,259 #### 25,259 ####################################		1982 : 1983		January-August 983 : 198	1984
her: 20,697 : 27,563 : tal: 130,165 : 184,778 : 2	450 : 54, 354 : 31, 358 : 14, 171 : 16, 259 : 6, 778 : 200,	66,423 : 77, 36,139 : 46, 26,965 : 29, 19,798 : 28, 9,567 : 14, 15,355 : 11, 6,942 : 8, 7,126 : 8, 7,126 : 8,	77,425 : 49 46,662 : 30 29,148 : 19 28,025 : 16 11,383 : 7 8,178 : 5 8,178 : 5 8,178 : 5	49,909 : 10,246 : 16,816 : 5,468 : 5,468 : 5,3,066 : 5,667 : 5,667 : 5,667 : 5,667 : 5,667 : 5,667 : 5,667 : 5,667 : 5,667	59,950 36,850 25,043 28,13 11,535 10,029 8,029 8,837

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table B-7.--Parts of semiconductors: U.S. exports of domestic merchandise, by principal markets, 1979-83, January-August 1983, and January-August 1984

	(1	In thousands of	is of dollars)				
	••	•• ••	•• ••	••	••	January-August	qust
Market :	1979 :	1980	1981	1982 :	1983	1983 :	1984
:	155.683	188.921	215,660 :	242,300 :	251,833	158,358	167,294
Phi 1 R:	48.615	89,376 :	109,042 :	107,531:	120,669 :	77,629 :	88,974
Mexico:	92,023 :	110,294 :	119,350 :	109,967 :	116,797 :	76,961 :	115,595
Kor Rep:	84,415 :	99,323 :	91,071 :	81,997 :	108,780 :	75,980 :	75,062
Singapr:	101,476 :	112,609 :	124,775 :	134,796 :	107,580 :	66,261 :	52, 196
China t:	25,875	30,729 :	38,578 :	34,861 :	31,244 :	15,408 :	22,176
Canada:	16,068 :	20,740 :	30,828 :	47,665 :	27,666 :	18,809 :	J
Thai Ind:	18, 143 :	39,724 :	37,894 :	28,440 :	27,207 :	16,681 :	19,774
All other:	111,842 :	143,010 :	162,843 :	_	135,041 :	87,753 :	109,850
Total:	654,141 :	834,725 :	930,040 :	939,211 :	926,816 :	593,841 :	668,368
••	••	••	••	••	••	••	

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table C-1.--Certain semiconductors and parts thereof: U.S. imports for consumption, by principal sources, 1979-83, January-August 1983, and January-August 1984

••	••	••	••	••	••		
			• •	••	'	January-August	lugust
Source :	: 6/61	. 0861	1481	1982 :	1983	1983	1984
••			۱,	•		••	
:es Ae TeE	591,202 :	817,081	ô	1,054,079		705,737	962, 106
Japan	242,086:	391,931 :	÷	585,378 :		575,515	
il R:	204,809	356,322 :	469,328 :	565,602	650.535	418,945	576.766
Singapr:	414,225 :	564,061 :	'n	622.788 :		107 LOX	
Rep:	255,433	236.645 :	'n	317.466 :		710,010	
China t:	96.500	147.488 :	ì	466 972			_
	1000		•	3777110			_
:	: 6/1/2/	122, 125	155,247	107,065 :		87,907	_
30X1C0	107,310	104,238	6,19	141,370 :	ò	94.963 :	
l other:	433,842 :	548,725 :	558,940 :	595,579 :	722,476 :	437.621 :	Ι.
Total:	2,417,606:	3,279,146:	3,553,083 :	4, 134, 299 :	4,955,560 :	3,072,217	5,116,308
••	••	••	•	•	•		

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table  $^{\mathrm{C-2.--Transistors:}}$  U.S. imports for consumption, by principal sources, 1979-83, January-August 1983, and January-August 1984

•••	•• ••	<b></b>	••	••	•• ••	January-Au	aust
Source :	1979 :	1980 :	1981 :	1982 :	1983 :	1983 : 1984	1984
: :	31,659	: 889.44	51.971 :	9.	46.243	29.116 :	44.784
Kor Rep:	47,092 :	33,476 :		34, 178 :	37,288 :	24,994 :	32,045
Japan:	24,604:	23,033 :	_		36,400 :	25,014 :	40,516
Mexico:	21,786 :		41,130 :	35,719 :	34,591 :		27,676
la Kong:	32,176 :	38, 104 :	9	N	30,055 :		16,212
Singapr:	15,346 :	15,342 :	9		16, 139 :		13,919
Phil R:	3,729 :	10,762 :	18,573 :		15, 135 :	8,502:	18,931
I taly:	2,848 :	: 669'9	33	10,661 :	12,086 :		10,299
All other:	25,456 :	23,142 :	25,242 :	23,604 :	25, 101:	15,843 :	28,132
Total:	204,695 :	224,098 :	564,446 :	259,662 :	253,038 :	160,638 :	232,512
••		••	•	••	••	•	

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table C-3,--Diodes and rectifiers: U.S. imports for consumption, by principal sources, 1979-83, January-August 1983, and January-August 1984

••		EDIBERONIS III	:	••			
	1979					January-August	Jaust
				: 7961	1983	1983	1984
Mexico:	27,864 :	23,593 :		39,335	51.582 :	11.702 :	70 + 67
Japan	17,960 :	18,045 :	23,383	24,713 :	28.671	. CCR. 81	76 177
China t:	18, 144 :	13,902 :		19,354	21.279	. 666	
Singapr:	10,959 :	9,873 :		11.275 :	9		
11 R:	240 :	849 :		5.048		. 780 /	70 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
Malaysa:	11,527 :	18,534			• •	. 60047	0000
Germ:	9,794 :	12,082 :	10.570	10,161	•	00' 1	750.0
Hg Kong:	9,255 :	8,515 :	13,307 :	14.056	10	. 225.7	0 0
1 other:	. 905'05	40,301:	37,729 :	43,661 :	36.712 :	. 800.80	
Total:	146,149 :	145,694 :	177,182 :	192,632 :	199,421 :	12	13
••	••	••	••	••	••	•	

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table C-4.--Monolithic integrated circuits: U.S. imports for consumption, by principal sources, 1979-83, January-August 1983, and January-August 1984

	(1	(In thousands of	dollars)				
••	••	••	••	••	••	January-August	uqust
Source :	1979 :	1980 :	1981	1982 :	1983 :	1983 :	1984
•	••		ا ا	ŧ	••	••	
Malaysa:	538,467 :	w	795,518 :	•	•	638,954 :	767,978
Japan	109,685 :	4,	•	•		437,326 :	1,004,420
Phil R:	193,438 :	v	•	•	•	395,437	492,873
Singapr:	373,302 :	521,429 :	546,268 :	569,878 :	459,328 :	287,273 :	371,368
Kor Rep:	203,051 :	v	•	•	•	283,976 :	480,749
Thai Ind:	. 848. 55	$\mathbf{c}$		•	•	84,041:	147,424
China t:	72,246 :	ъ,		•	0	80,106:	142, 126
Canada:	62,489 :	<b>u</b> 1	.,9	•	•	61,593 :	201,616
All other:	278,540 :	359,324 :	335,879 :	393, 121:	9	280,982 :	458,939
Total:	1,876,066:	2,742,278 :	2,938,204 :	3,476,089 :	4,055,720 :	2,549,687 :	4,067,491
••	••	••	••		••	••	

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table C-5.--Other integrated circuits: U.S. imports for consumption, by principal sources, 1979-83, January-August 1983, and January-August 1984

	IJ.	(In thousands of	s of dollars)				
						January-August	
Source	: 6/61	1980	1981 :	1982 :	1983 :	1983 :	1984
:uedef	72.301	22.850	21.136 :			: 671 16	750 50
	024 44					. 24//12	9/6//2
o ingaprilia	. 94/16	166,01	: /97'/1	•		16,022 :	3,405
"alaysa:	6,584 :	9,104 :	7,203 :			12,555	8.365
China t:	3,132 :	16,737 :	16,414 :	8.386	15,820	12.660 :	7 373
Hq Kong:	2,729 :	6,824 :	12,605 :			. αττ α	254
Phil R:	7.069 :	14.084	10.680				0011
.∝	730 :	1,500	. 986.9		•		99+17
C				. 27977		. 11012	2,2,3
	• • • • • • • • • • • • • • • • • • • •	. 621.00	•	•	: /02'5	. 658,1	1,525
All other:	20,056 :	24,090 :	22,088 :	14,871 :	12,553 :	7.056 :	12.910
Total:	131,792 :	120,001:	116,441 :	114,579 :	123,467 :	86,856 :	71,030
••	••	••	••	••	••	••	

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table C-6.--Other (crystal components): U.S. imports for consumption, by principal sources, 1979-83, January-

••	••	••	••	••	••		
						January-August-	qust
. agange	. 6761			. 7961	: 5861	1983 :	1984
: Singapr:	381 :	260 :	255 :	66	6,835 :	592	24.760
)apan:	5,399 :	7,375 :	4,457 :	0	5,949 :	5,106:	5,192
Malaysa:	2,650:	4,277 :	3,306 :	6,860 :	2,497 :		5,794
ni 1 R:	: 41	237 :	339 :	108 :	1,838 :	1	5,864
1exico:	9,262 :	16,642 :	2,310 :	1,889 :	1,626 :	633 :	2,217
nada:	1,457 :	ഹ	542 :	1,535 :	100	421 :	1,799
China t:	168 :	270 :	112 :	159 :	454 :	157 :	347
Hg Kong:	7,702 :	3,520 :	639 :	303 :	: 692	: 02	459
1 other:	12,221	11,376:	8,965 :	8,067 :	932 :	. 166	2.633
Total:	39,256 :	45,480 :	20,925 :	25,112 :	21,079 :	8,133 :	49,065
••	•	•	•	•			

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table C-7.--Parts of semiconductors: U.S. imports for consumption, by principal sources, 1979-83, January-August 1983, and January-August 1984

••	••	••	••	••	••		
						January-August	iqust
	. 6761	; 0861	: 1861	1982	1983	1983 :	1984
:	12.980 :	22.482 :	16.895	1 4			
	. 900 0				· 204121	: /551/9	
BCKBYBI	. 17617	* 0+0*+	. 96941	7	47,151 :	14.641 :	
Canada:	1,443 :	1,840 :	4,120 :	10.719 :	28.881	. 627.06	
r Germ:	5.704 :	5,721	2.015	u		101101	) )
DA: 1 D	• •	ا د د د		ם ו	: 286112	10,525 :	28,368
·		. 899	533 :	1,740 ::	19.406 :	2.976	,
Franceller	3, 131 :	1,541 :	771 :	19.574	. 270 01		0
Kor Ron:	2 480			- P	00000		_
		• /0+40	. 200	4,558	11,687	1,748 :	25.690
· · · · · · · · · · · · · · · · · · ·	. 595	: 969	: 5/1	6.287	9.666	. 282	7 KC C T
All other:	3,002 :	6, 124 :	2.932 :	26.396			1000
Total:	32,260 :	: 9/0'25	27,907 :	250.990 :	302.834	70	29,278
••	••	••	•	•		•	•

Source: Compiled from official statistics of the U.S. Department of Commerce.

## APPENDIX A

List of Witnesses Appearing at the Commission Hearing

## TENTATIVE CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject

: Probable Economic Effect of Providing

Duty Free Treatment for U.S. Imports

of Certain High Technology Products

Inv. No.

: TA-131(b)-9

Date and time: November 15, 1984 - 10:00 a.m.

Sessions were held in the Hearing Room of the United States International Trade Commission, 701 E Street, N.W., in Washington.

## WITNESS AND ORGANIZATION

## **GENERAL**

International Brotherhood of Electrical Workers, Washington, D.C.

Robert B. Wood, Director of the Department of Research and Education

Richard E. Collins, International Representative

Dale Dunlop, Research Economist

## PARTS OF AUTOMATIC DATA-PROCESSING MACHINES AND UNITS (SUBASSEMBLIES) THEREOF

Verner, Liipfert, Bernhard & McPherson--Counsel Washington, D.C. on behalf of

Digital Equipment Corporation, The Computer and Business Equipment Manufacturers Association (CBEMA), the American Electronics Association (AEA) and Scientific Apparatus Makers Association (SAMA)

Bruce Holbein, Manager, Government Relations

Larry Langdon, Corporate Tax Director, Hewlett Packard

R. Michael Gadbaw--OF COUNSEL

### PARTS OF SEMICONDUCTORS

Verner, Liipfert, Bernhard & McPherson--Counsel
Washington, D.C.
 on behalf of

The Semiconductor Industry Association (SIA)

George Scalise, Senior Vice President, Advanced Micro Devices, Sunnyvale, California

Ms. Carolyn Dickins-Lowe, Corporate Customs Manager, Intel Corporation, Santa Clara, California

Timothy Richards, Economist, Verner, Liipfert, Bernhard & McPherson

R. Michael Gadbaw--OF COUNSEL

## APPENDIX B

U.S. Trade Representative Request of October 19, 1984, for Probable Effect Advice

# THE UNITED STATES TRADE REPRESENTATIVE WASHINGTON 20506

October 19, 1984

The Honorable Paula Stern Chairwoman U.S. International Trade Commission 701 E Street, N.W. Washington, D.C. 20436

Dear Chairwoman Stern:

On October 9, 1984, the Trade and Tariff Act of 1984 (the Act) passed the Congress and will soon be before the President for signature. Once enacted into law, section 308 of the Act will authorize the President to continue, modify or eliminate the duties on certain enumerated high technology products in order to carry out agreements concluded pursuant to section 104(A)(c) of the Trade Act of 1974, as amended.

In preparation for such negotiations, I am requesting the Commission, at the direction of the President, to conduct an investigation pursuant to section 332(g) of the Tariff Act of 1930 in order to advise the President, with respect to each item listed in Annex I to this request, as to the probable economic effect of providing duty free treatment on imports of these items on industries in the United States producing like or directly competitive articles and on consumers.

Since the President will in the very near future have the Act for signature, the Commission should in all respects conduct this investigation as if this request had been made pursuant to section 131 of the Trade Act of 1974, including the holding of public hearings. At such time that the Act becomes law, I request that the investigation be converted into an investigation under section 131 of the Trade Act of 1974, and the advice provided thereunder.

The Commission is requested to provide its advice to the President in this investigation as soon as possible, but not later than December 14, 1984. In order that we may coordinate our public hearing with that of the Commission's, I would appreciate your informing me as soon as possible as to the date the Commission expects to hold its hearing. For the convenience of

the public, we would prefer to hold our hearings on the day following those of the Commission's. So, for example, if the Commission holds hearings on November 15, 1984, my Office could hold hearings on November 16, 1984.

Very truly yours,

WILLIAM E. BROCK

WEB:hcc

## ANNEX I

TSUS Item Nos.	Product Description
676.52 (pt)	Parts of automatic data-processing machines and units (subassemblies) thereof (other than parts incorporating a cathode-ray tube)
687.70	Transistors
687.72	Diodes and rectifiers
687.74	Monolithic integrated circuits
687.77	Other integrated circuits
687.81	Other (crystal components)
687.85	Parts of semiconductors

## APPENDIX C

U.S. International Trade Commission Notices of Investigation and Hearing

## United States International Trade Commission Washington, D.C.

#### (332-199)

Probable Economic Effect of Providing Duty Free Treatment for U.S. Imports of Certain High Technology Products

AGENCY: United States International Trade Commission

ACTION: In accordance with a request dated October 19, 1984, from the United States Trade Representative, the Commission has instituted investigation No. 332-199 for the purpose of providing advice requested by the U.S. Trade Representative (USTR) with respect to the probable economic effect on U.S. industries producing like or directly competitive articles, and on U.S. consumers, of the elimination of U.S. duties on certain high technology products.

EFFECTIVE DATE: October 24, 1984

#### FOR FURTHER INFORMATION CONTACT:

TSUS item

- (1) Articles covered under item 676.52(pt.), Mr. William Fletcher (202-523-0378)
- (2) Articles covered under items 687.70 -.85, Mr. Nelson Hogge (202-523-0377)

Product description

The above staff are in the Commission's Office of Industries. For information on legal aspects of the investigation contact Mr. William Gearhart of the Commission's Office of the General Counsel at (202-523-0487).

SUPPLEMENTARY INFORMATION: On October 19, 1984, the USTR furnished the United States International Trade Commission with a list of high technology products which are being considered for duty free treatment. The investigation covers the following articles and their respective tariff classification provisions in the Tariff Schedules of the United States:

1000 Item	I LOGGE C GESCLIPCION
676.52(pt.)	Parts of automatic data- processing machines and units (subassemblies) thereof (other than parts incorporating a cathode-ray tube)
687.70	Transistors
687.72	Diodes and rectifiers
687.74	Monolithic integrated circuits
687.77	Other integrated circuits
687.81	Other (crystal components)
687.85	Parts of semiconductors

PUBLIC HEARING: A public hearing in connection with this investigation will be held in the Commission Hearing Room, 701 E Street, NW., Washington, D.C. 20436, beginning at 10:00 a.m., on November 15, 1984, to be continued on November 16, 1984, if required. All persons shall have the right to appear by counsel or in person, to present information, and to be heard. Requests to appear at the public hearing should be filed with the Secretary, United States International Trade Commission, 701 E Street, NW., Washington, D.C. 20436, not later than noon, November 9, 1984.

WRITTEN SUBMISSIONS: In lieu of or in addition to appearances at the public hearing, interested persons are invited to submit written statements concerning the investigation. Written statements should be received by the close of business on November 14, 1984. Commercial or financial information which a submitter desires the Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. All submissions requesting confidential treatment must conform with the requirements of section 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6). All written submissions, except for confidential business information, will be made available for inspection by interested persons. All submissions should be addressed to the Secretary, United States International Trade Commission, 701 E Street NW., Washington, D.C. 20436.

By order of the Commission.

Kenneth R. Mason

Secretary

Issued: October 26, 1984

# United States International Trade Commission Washington, D.C.

(TA-131(b)-9)

Probable Economic Effect of Providing Duty Free Treatment for U.S. Imports of Certain High Technology Products

AGENCY: United States International Trade Commission

ACTION: Redesignation of Commission investigation No. 332-199 to investigation No. TA-131(b)-9, with no change in the scope or time frame of the investigation.

BACKGROUND: Upon enactment into law by the President of the Trade and Tariff Act of 1984, on October 30, 1984, the authority of the Commission to provide the advice requested by the U.S. Trade Representative, on October 19, 1984, concerning the probable economic effect of the elimination of U.S. duties on certain imports of high technology products, has been changed from that granted pursuant to section 332(g) of the Tariff Act of 1930 to section 131(b) of the Trade Act of 1974. Notice of the Commission's institution of investigation No. 332-199 and public hearing in connection therewith appeared in the Federal Register on October 31, 1984 (49 F.R. 43811).

EFFECTIVE DATE: October 30, 1984

By order of the Commission.

Renneth R. Mason

Secretary

Issued: October 31, 1984

## APPENDIX D

Certain Official Communications Exchanged Prior to Passage of The Trade and Tariff Act of 1984 Provided to the U.S. International Trade Commission in the Post Hearing Brief of the Semiconductor Industry Association

#### LAW OFFICES

## VERNER, LIIPFERT, BERNHARD AND MCPHERSON

CHARTERED

SUITE 1100

1660 L STREET, N. W.

WASHINGTON, D. C. 20036

588

CABLE ADDRESS

VERLIP

ഗ

(202) 452-7400

November 23, 1984

The Honorable Paula Stern Chairwomen U.S. International Trade Commission 701 E Street, N.W. Washington, D.C. 20430

Dear Dr. Stern:

In the course of the November 15, 1984 public hearing regarding the effects of duty free treatment for imports of certain high technology products, you requested further clarification regarding 1) import penetration in the semiconductor—market; 2) ownership (i.e., whether U.S. or foreign) of the 13 largest "merchant" semiconductor producers in the U.S.; and 3) determinants and significance of pricing in the semiconductor industry.

On the first matter, the Semiconductor Industry Association (SIA) estimates that Japanese import penetration into the U.S. market was 10% in 1982, 13% in 1983 and an estimated 13% - 14% in 1984. The share of U.S. producers in the Japanese market was 10% in 1982, 9% in 1983 and approximately 8% in 1984. These figures represent percentages of the total Japanese semiconductor market as opposed to the figures generated by the U.S.-Japan High Technology Working Group (cited in our testimony) which do not include some Japanese shipments. Nevertheless, both measures indicate a similar trend.

As regards the ownership of the thirteen largest merchant semiconductor producers (listed in the attachment to this letter), I believe it was noted at the hearing that the shares of most of these firms are listed on various U.S. stock exchanges, and that the portion of each firm's stock that is held by American citizens is difficult to determine. However, the only two companies on the attached list which are specifically designated as subsidiaries of foreign firms by either Standard & Poor's Register or the SIA Yearbook are Fairchild Camera and Instruments Corp. (a subsidiary of the French firm, Schlumberger) and Signetics Corp. (a subsidiary of the Netherlands-based U.S. Philips Corp.).

Dr. Stern November 23, 1984 Page 2

You may also be interested to learn that Texas Instruments has completed the procedures for joining the SIA and a representative from TI was elected to the SIA Board of Directors earlier this week.

Finally, we would be pleased to arrange an opportunity for the USITC staff to meet with sales and purchasing officials in semiconductor and computer companies. As we discussed with your staff earlier this week, we are attempting to put together a meeting including Commission staff and industry executives for next week.

As a further supplement to the above and to the information provided in the testimony presented on November 15th, I am enclosing with this letter additional materials. In particular you may wish to refer to copies of letters expressing the support of both members of Congress and industry associations for the elimination of duties on semiconductors and parts of computers.

Should you require any further supporting information on any of the above points, please do not hesitate to contact me.

Sincerely,

R. Michael Godhaw

R. Michael Gadbaw Counsel for the Semiconductor Industry Association

## 13 Largest U.S. Merchant Producers of Semiconductors

Texas Instruments, Inc.

Motorola Inc.
Intel Corporation
National Semiconductor Corp.
Advanced Micro Devices Inc.
Fairchild Camera and Instrument Corp.
Signetics Corp.
Mostek Corp.
RCA Corp.
Monolithic Memories Inc.
Harris Semiconductor Sector
General Instrument Corp.
American Micro Systems Inc. (AMI)

Note: Of the above firms, 12 are members of the Semiconductor Industry Association (SIA). Texas Instruments has recently joined the SIA and Fairchild, although not an Association member, is a participant in the World Semiconductor Trade Statistics (W.S.T.S.) program, which is administered by SIA.

ml - 7:5

D-5

# OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE

EXECUTIVE OFFICE OF THE PRESIDENT

WASHINGTON

2050€

FOR IMMEDIATE RELEASE Tuesday, November 15, 1983 83/30

Contact: David Demarest

(395-4647)

Barbara Bain

(395-4647)

## BROCK ANNOUNCES U.S.-JAPAN APPROVAL OF MEASURES REGARDING SEMICONDUCTORS TRADE

U.S. Trade Representative Bill Brock today announced that the Governments of Japan and the United States have formally approved the recommendations of the U.S.-Japan Work Group on High Technology Industries regarding trade in semiconductors.

Ambassador Brock and Japanese Foreign Minister

Shintaro Abe, in an exchange of letters on November 14,

confirmed the endorsement by their respective governments

of the recommendations, which include the mutual elimination

of a 4.2 percent tariff (current tariff rate in both

countries) on semiconductors.

In his letter to Minister Abe, Ambassador Brock, the President's chief trade negotiator, said, "The recommendations provide a constructive framework in which to address the trade issues in semiconductors."

But, he cautioned, full and effective implementation of the recommendations will require the renewed efforts of the semiconductor industries and governments of both countries.

"A major U.S. objective of these recommendations is to increase opportunities for U.S. semiconductor suppliers to participate in the Japanese market," Ambassador Brock said. "I believe these recommendations will facilitate achievement of that objective," he added.

Ambassador Brock and Minister Abe, in an exchange of letters last February, endorsed the recommendations of the Work Group urging the two governments to work to ensure full and mutual access to trade and investment opportunities in high technology industries and toward reducing and eliminating impediments and distortions that exist in high technology trade.

The latest set of recommendations focuses on trade in semiconductors and launches the long-term work program of the U.S.-Japan Work Group on High Technology Industries to address trade issues in high technology on a sector-by-sector basis.

The Work Group was established in April 1982, and is chaired jointly for the United States by the U.S. Trade Representative's Office and the Department of Commerce and for Japan by the Ministry of International Trade and Industry.

# THE UNITED STATES TRADE REPRESENTATIVE WASHINGTON - 20506

November 11, 1983

His Excellency Shintaro Abe Foreign Minister Ministry of Foreign Affairs 2-1, Kasumigaseki 1-Chome, Chiyoda-Ku Tokyo 100, JAPAN

Dear Minister Abe:

I was pleased to receive your letter of November 11 informing me that the Government of Japan has endorsed the Recommendations on Semiconductors submitted by the U.S.-Japan Work Group on High Technology Industries, and that the Japanese Government intends to respect and implement these Recommendations.

It is my pleasure to inform you, on behalf of the United States Government, that the United States Government has also endorsed the Recommendations on Semiconductors submitted by the U.S.-Japan Work Group on High Technology Industries, and intends to respect and implement these Recommendations.

I am encouraged that the Work Group, through its extensive studies and discussions, has been able to develop these Recommendations. As you know, one of the United States objectives in these Recommendations is to increase opportunities for United States semiconductor suppliers to participate in the Japanese market. It is our belief that these Recommendations will facilitate achievement of that objective.

It is our understanding that endorsement by either of our governments is of a unilateral nature and that nothing in this letter or these Recommendations is intended to constitute a legally binding obligation.

The Recommendations provide a constructive framework in which to address the trade issues in semiconductors. Successful resolution of these issues requires the full and effective implementation of the Recommendations. The United States is now committed to devote the greater effort needed to achieve full and effective implementation of the Recommendations.

Very truly yours,

WILLIAM E. BROCK

## RECOMMENDATIONS OF THE U.S.-JAPAN WORK GROUP ON HIGH TECHNOLOGY INDUSTRIES

#### SEMICONDUCTORS

### PREAMBLE

The U.S.-Japan Work Group on High Technology Industries has discussed the current status and the future prospects of development of the semiconductor industries in both countries and believes that:

- it is essential for the health of the world semiconductor market that free and open markets exist in both countries.
- it is important that both governments, without having resort to restrictive measures, maintain and facilitate mutually beneficial trade, investment and technology transfer between the two countries in the semiconductor sector.

In view of this, the U.S.-Japan Work Group on High Technology Industries makes the following recommendations to the appropriate authorities and semiconductor industries of both countries.

#### I. TRADE

#### (Tariff)

1. Both governments should take steps towards the mutual elimination of their tariff on semiconductors.

Note: The tariff elimination will naturally be realized after necessary internal procedures are completed in both countries.

## (Data Collection)

The joint semiconductor data collection effort initiated in July this year should be continued with good faith in order to prevent unnecessary misunderstandings caused by the lack of statistics that tends to take place in high technology areas where the product life cycle is short; and to promote mutual access to each other's market supported by a better appreciation of the market trend. The joint data collection should be operated in a flexible manner, as has been discussed, responding to the progress in technology.

#### (Promotion of Trade)

3. Both governments and semiconductor industries of both countries should take the following actions with the expectation that the trade between the United States and Japan would expand under the free trade principle.

- (1) For the purpose of increasing U.S. participation in the Japanese market, the Government of Japan should encourage Japanese semiconductor users to enlarge opportunities for U.S.-based suppliers so that long-term relationships could evolve with Japanese companies.
- (2) The Government of Japan should take care to apply the Comprehensive Economic measures, announced on October 21, 1983, to the promotion of imports of semiconductors produced by U.S. based manufacturers as well.
- (3) The U.S. Government should encourage the U.S. semiconductor industry to: (a) strengthen its sales and marketing efforts, (b) hold sales promotion seminars and exhibitions, (c) increase its understanding of the Japanese market by opening an office in Japan, and (d) consider utilizing the applicable provisions of the U.S. Export Trading Company Act where appropriate.

Both governments should extend their good offices to such endeavors by providing information and other appropriate assistance, as necessary.

- (4) The U.S. Government should continue to enforce its laws which assure competitive and nondiscriminatory opportunities in the U.S. market for Japan-based semiconductor firms.
- (5) Both governments should reaffirm the importance of the role of governments in the semiconductor market in vigorously safeguarding the rules of the marketplace and preventing anti-competitive or predatory practices.
- (6) Both governments should encourage their semiconductor producers to make active use of NTT's system for testing and certification of conformance with its reliability guidelines. In support of this objective, the Government of Japan should encourage NTT to hold meetings in Japan and the U.S. to explain the certification process.

## II. INVESTMENT

(Removal of barriers to investment)

 Recongnizing the importance of the free flow of investment where hindrances or inhibiting factors for investment flow exist, both governments should make best efforts to mitigate or remove them. 2. Each government should encourage the inward flow of investment by the semiconductor industry of the other country.

(Investment promotion measures for foreign capitalized domestic companies)

3. Both governments should facilitate participation of foreign capitalized domestic companies in regional investment promotion schemes such as Technopolis Development Scheme of the Government of Japan, with a view to encouraging investment by foreign capitalized domestic companies. Both governments should continue to take measures such as provisions of information for this purpose.

### III. TECHNOLOGY

(Promotion of technology exchange)

- 1. Both governments should encourage mutually beneficial exchanges of technology on a commercial basis.
- 2. The Reliability Center for Electronic Components of Japan and an appropriate organization in the United States such as the Semiconductor Industry Association's Committee on Quality should be encouraged to proceed with information exchange and other cooperative undertakings in order to promote technical exchange in the fields of semiconductor reliability and testing methods.
- 3. Both governments should recognize that some form of protection to semiconductor producers for their intellectual property is desirable to provide the necessary incentives for them to develop new semiconductor products. And both governments should take their own appropriate steps to discourage the unfair copying of semiconductor products and the manufacturing and distribution of the unfairly copied semiconductor products.
- 4. Each government should strive to provide inventors with sufficient patent protection taking note of the different situation in examination procedure between the two countries.

Both governments should further strengthen the cooperative relationship between their patent agencies and strive to minimize the time required for the processing of patent applications.

#### IV. OTHER

### (Access to trade associations)

 Both governments should encourage that all firms in the semiconductor industry (whether such firms are directly or indirectly owned or controlled by nationals or firms of any country) have equal access to relevant trade associations.

### (Implementation)

2. The relevant authorities and semiconductor industries of both countries should begin implementation of these recommendations by November 1983.

#### (Miscellaneous)

- 3. Both governments should consider, as appropriate, issues relating to semiconductor trade, investment and technology in the semiconductor sector in the U.S.-Japan Work Group on High Technology Industries. The Work Group should review implementation of the measures described above and their effects at least twice a year, with the first review to occur during the first quarter of 1984.
- 4. These recommendations are submitted in accordance with the terms of reference of the U.S.-Japan Work Group on High Technology Industries and are subject to the terms of its Recommendations of February 1983.

\* \* \* \* \* \* \* \*

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## Congress of the United States House of Representatives Washington, D.C. 20515

September 14, 1984

The Honorable Robert Dole Chairman, Committee on Finance United States Senate 219 Dirksen Senate Office Building Washington, DC 20510

Dear Mr. Chairman:

The Senate will soon take up legislation, sponsored by your Committee, which contains a provision of special importance to the California delegation and to the high technology industries of America.

Section 308 of H.R. 3398, the miscellaneous tariffs bill pending on the Senate calendar, authorizes the President to reduce U.S. duties on semiconductors and parts of computers in return for mutual and reciprocal concessions from foreign countries. The authority granted in this provision is urgently needed to implement an agreement already concluded between the United States and Japan calling for the two countries to eliminate their duties on semiconductors, a critical step toward further opening the Japanese market to U.S. high technology sales.

As the Senate moves to take up H.R. 3398, we ask that you keep in mind our interest in Section 308. If there is any move to delete or amend portions of this omnibus trade measure, we strongly urge that this noncontroversial section be retained in the final bill approved by the Senate.

Thank you for your kind consideration of our position on this section of the bill.

Sincerely,

Gebet J. Mateu:

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Don Eduards Hours Vinie

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## Congress of the United States House of Representatives Washington, D.C. 20515

The Honorable Dan Rostenkowski Chairman, Committee on Ways and Means House of Representatives 1102 Longworth House Office Building Washington, DC 20515

Dear Mr. Chairman:

As you go to Conference with the Senate on H.R. 3398, the miscellaneous tariffs bill, we want to alert you to a provision in the Senate-passed bill which is of special importance to the California delegation and to the high technology industries of America.

Section 308 of H.R. 3398 authorizes the President to reduce U.S. duties on semiconductors and parts of computers in return for mutual and reciprocal concessions from foreign countries. The authority granted in this provision is urgently needed to implement an agreement already concluded between the United States and Japan calling for the two countries to eliminate their duties on semiconductors, a critical step toward further opening the Japanese market to U.S. high technology sales.

As the Conference Committee works on H.R. 3398, we ask that you keep in mind our interest in Section 308. If there is any move to delete or amend portions of this omnibus trade measure, we strongly urge that this noncontroversial section be retained in the final bill approved by the Conference Committee.

Thank you for your kind consideration of our position on this section of the bill.

Sincerely,

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# United States Senate

WASHINGTON, D.C. 20510

March 16, 1984

ABBERICE & BIANNINT CHIEF COURSEL AND STAFF BIRECTOR APCHALL STEIN WHORNTY STAFF BIRECTOR

### Dear Colleague:

On March 2 the Senate began consideration of H.R.3398, a bill that includes miscellaneous tariff and customs provisions, along with the so-called "Reciprocity Trade Bill." Known as the "International Trade and Investment Act," Title III of H.R. 3398 is designed to increase American exports and export-related jobs through stronger enforcement and expansion of domestic and international rules dealing with foreign unfair trade practices.

Formerly numbered S.144, Title III of H.R.3398 is identical to legislation reported unanimously by the Senate Finance Committee on three occasions in 1983 and twice passed by the full Senate. As principal authors of key provisions contained in Title III, we urge you to join us to ensure swift passage when it returns to the Senate floor in the near future. Given widespread support for this important trade measure in its current form, we would strongly urge you to oppose any protectionist amendments or any amendments that would damage or weaken key components of the bill.

Specifically, the International Trade and Investment Act provides for:

- o An annual report to Congress of major foreign barriers and distortions to U.S. exports of products (including agricultural commodities), services and investment, including estimates of their impact on the U.S. economy and efforts to achieve their elimination.
- o Foreign barriers not removed through negotiation or enforcement of the GATT (General Agreement on Tariffs and Trade) could be offset by the United States through withdrawal of prior U.S., concessions, imposition of duties and other restrictions available under present law as clarified by this legislation.
- o Other U.S. retaliatory options not currently available to the President could be taken in the form of legislation enjoying accelerated consideration by the Congress.
- o Unfair trade practices for which relief is available under U.S. law would be broadened to cover performance requirements and other harriers to investment, as well as commercial counterfeiting and similar violations of intellectual property rights.

o Finally, the legislation provides for major negotiations to achieve international agreements that encourage fair and open trade in services, investment flows and high technology. The high technology provision also contains semiconductor tariff-cutting authority to provide for reciprocal duty reductions in ongoing negotiations with Japan and other countries.

In its current form, the International Trade and Investment Act has gained the strong bipartisan support of 44 members of the Senate. The legislation is also supported by the Administration and by all major business and agriculture organizations in the United States.

Given the importance of exports to the American economy, we are sure that you would agree that opening markets to competition from U.S. exports is of the utmost urgency. The \$100 billion trade deficit that looms before us for 1984 makes the timely passage of this legislation all the more necessary. We urge your support for swift passage of Title III of H.R. 3398 in its current form.

If you have any questions or would like further information, please contact Susan Schwab (4-6154) or Jim Gould (4-5922).

Sincerely,

John C. Danforth

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Steven Symms

Steven Symms

John H. Chafee

Jahn H. Chafee

Bill Bradley

Bill Bradley

Alan Craisson

Enclosures: S.144 Senate Supporters and Cosponsors

S.144 Endorsements



February 29, 1984

Honorable John C. Danforth United States Senate Washington, D.C. 20510

Dear Jack,

I understand that the Senate will soon consider passage of the Miscellaneous Tariff-Bill; H.R. 3398. Fam-writing-to-urge-your-support-for-passage-of-the bill and to underscore the importance of two sections which would allow the United States to eliminate barriers to overseas opportunities for American business and to expand its semiconductor market in Japan.

Title III of the bill, the International Trade and Investment Act, provides the Administration with important tools to pursue greater opportunities for U.S. exporters. It would be an important addition in our strategy to eliminate foreign barriers, including trade related investment restrictions, which hurt the competitive position of our industries.

U.S. investment is an important factor in stimulating demand for U.S. products overseas. Based on our most recent analysis, over 30 percent of U.S. merchandise exports involved sales to foreign affiliates of U.S. firms.

Title III correctly emphasizes the need to reduce foreign barriers rather than raise our own. Our efforts in the services and investment areas have been hampered by the lack of effective international disciplines to invoke when dealing with other countries. The negotiating mandates in both of these areas contained in Title III will provide important support to our efforts bilaterally as well as in the GATT and the OECD.

At the same time, Title III provides an important new domestic statutory tool for the President to protect our interests against unfair foreign investment practices. For the first time certain foreign trade related investment practices would be clearly identified as unfair under Section 301 of the Trade Act of 1974. Through this amendment the President would be in a position to respond effectively to these and other practices which impede the performance of our firms internationally.

I also urge you to approve the authority to negotiate tariff suspensions for semiconductors contained in Section 308(b) of H.R. 3398, as reported by the Senate Finance Committee. The measure has the clear support of the U.S. industry as well as the Administration.

For more than a year, the Administration's U.S.Japan Work Group for High Technology Industries has negotiated with the Government of Japan on ways to increase U.S. access to the Japanese market. A set of recommendations covering semiconductors was agreed to in November 1983. These recommendations establish conditions under which the U.S. semiconductor industry can compete effectively in the Japanese market. Full implementation should lead to increased purchases of U.S. products by Japanese companies.

One of the key recommendations endorsed by both governments was the mutual suspension of semiconductor tariffs. The Japanese government has already taken steps to implement such a duty suspension when the United States does. Passage of Section 308(b) will allow the United States to meet its commitment in the process.

The semiconductor industry is one of the most successful industries in the U.S. economy. Over the past decade employment in this sector has more than doubled and is expected to grow at a faster rate than the economy as a whole for the next decade. Your support for this provision is essential to the continued economic vitality of the industry.

Sincerely,

Secretary of Commerce

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# THE UNITED STATES TRADE REPRESENTATIVE WASHINGTON 20506

February 22, 1984

The Honorable Howard H. Baker, Jr. United States Senate Washington, D.C. 20510

#### Dear Howard:

I am writing to urge your full support for H.R. 3398, a legislative package of important trade measures. In particular, this bill contains the original S. 144, the Danforth-Bentsen International Trade and Investment Act, which has passed the full Senate on two previous occasions. There is strong bipartisan support for S. 144 as shown by the 43 cosponsors on both sides of the aisle.

S. 144, as included in the larger trade package, is a critical piece of trade legislation. This measure will require the Administration to seek "reciprocal" or substantially equivalent commercial opportunities in foreign markets, to take action to enforce U.S. trading rights, and to eliminate foreign unfair trading practices.

Further, this legislation would encourage growth of U.S. services trade through the negotiation of international agreements designed to protect and help promote U.S. service exporters. Currently, there are no international rules governing trade in services, and the United States, with its favorable balance of trade in this area, is especially vulnerable to foreign barriers.

Also, the bill would promote greater free flow of direct investment through internationally negotiated agreements. This is important to the United States for two reasons: such agreements will encourage more foreign investment and job creation in the United States and will enhance U.S. investment in foreign nations in such sectors as banking, insurance, and transportation. In turn, these investments can provide new bases for United States exporters in selling their goods and services abroad.

Another important aspect of this legislation is the authority to negotiate tariff reductions on certain specified semiconductor products. These reductions have been sought by the U.S. semi-conductor industry in exchange for similar reductions on the same products by the Government of Japan. This mutual reduction of duties on high technology products will greatly assist our telecommunications and computer companies to be more productive and competitive.

Also included in H.R. 3398 is legislation that would require the United States to "mirror image" the discriminatory Canadian practice of denying tax deductions to U.S. advertisers. This legislation was proposed by the President in response to a complaint under Section 301 of the Trade Act of 1974. This so-called "border broadcasting" issue has been a long-standing problem for the United States. This legislation would demonstrate to the Canadian government that the United States intends to take strong action against unfair trade practices and to seek reciprocal treatment.

H.R. 3398 contains provisions which will provide the necessary tools for the Administration to take action against foreign unfair trade practices, in any area or sector (including services and investment), and in whatever form they take. These are new, tougher tools, and there is a need for the U.S. government to use them.

Your vote on H.R. 3398 will be a vote on whether the United States intends to enforce its trade rights, and on whether the United States intends to create more jobs, not lose jobs to unfair foreign competition. In my view, enactment of these measures will help us immeasurably in dealing with our trading partners in negotiating trade concessions. This is the single most important piece of trade legislation that Congress will consider in 1984.

There are several provisions included in H.R. 3398 which the Administration cannot support. However, on balance the positive provisions far outweigh the few minor negatives. For this reason, the Administration urges passage of this package of important legislation without amendments that change the substance of the bill, while reserving the right to suggest alterations in some of the tariff proposals.

I urge your support for H.R. 3398, and for the principles of fair trade which this bill mandates.

Very truly yours,

WILLIAM E. BROCK

WEB: wsb