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File Folder SEMICONDUCTOR 301 (2 OF 5)

FOIA

S17-8440

Box Number 12246

SYSTEMATIC

140

ID	Doc Type	Document Description	No of Pages	Doc Date	Restrictions
248788	MEMO	WILLIAM ODOM TO THE ASSISTANT TO THE PRESIDENT FOR NATIONAL SECURITY AFFAIRS, RE: SUPPORT TO THE U.S. SEMICONDUCTOR INDUSTRY	2	12/6/1985	B1

Freedom of Information Act - [5 U.S.C. 552(b)]

- B-1 National security classified information [(b)(1) of the FOIA]
- B-2 Release would disclose internal personnel rules and practices of an agency [(b)(2) of the FOIA]
- B-3 Release would violate a Federal statute [(b)(3) of the FOIA]
- B-4 Release would disclose trade secrets or confidential or financial information [(b)(4) of the FOIA]
- B-6 Release would constitute a clearly unwarranted invasion of personal privacy [(b)(6) of the FOIA]
- B-7 Release would disclose information compiled for law enforcement purposes [(b)(7) of the FOIA]
- B-8 Release would disclose information concerning the regulation of financial institutions [(b)(8) of the FOIA]
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Semiconductor
301

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CABLE: DEWBALAW

December 13, 1985

*MEMBER N.Y. BAR:
NOT ADMITTED D. C.

Mr. Michael Driggs
Special Assistant to the President
Office of Policy Development
Room 224
Old Executive Office Building
17th St. & Pennsylvania Ave., N.W.
Washington, D.C. 20500

Dear Mike:

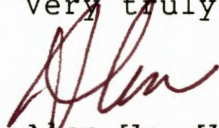
Enclosed is a report on the state of the U.S. semiconductor industry, reflecting the serious adverse effects of Japanese unfair trade practices. Over the last quarter, one U.S. semiconductor company, Mostek, has essentially gone out of business. Seven others reported aggregated quarterly operating losses of \$180.1 million. For these companies' semiconductor operations alone, the losses were even more severe. The result has been a 19% decline in employment by U.S.-based semiconductor companies. This translates into over 54,000 lost jobs between December 1984 and October 1985.

A semiconductor market downturn has contributed to the current losses, but if the unfair trade practices of the Government of Japan and of Japanese semiconductor companies that are the subject of the SIA Section 301 case, three antidumping investigations, and two antitrust actions are not halted, U.S. companies will continue to lose market share even as the market recovers. For that reason, SIA welcomed the decision by the U.S. Government to self-initiate an antidumping investigation in 256K and above DRAMs. We also are encouraged by the Government's commitment to negotiate a comprehensive and effective solution to semiconductor trade issues with the Government of Japan.

December 13, 1985
Page 2

As the most recent operating loss and employment figures indicate, the response of the U.S. Government to these unfair Japanese trade practices comes none too soon.

Very truly yours,

A handwritten signature in dark ink, appearing to read 'Alan Wm. Wolff', written in a cursive style.

Alan Wm. Wolff

THE WHITE HOUSE

WASHINGTON

December 9, 1985

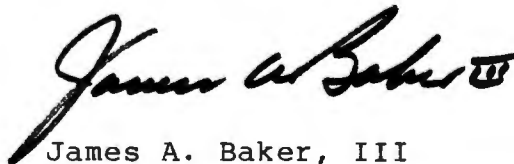
MEMORANDUM FOR THE ECONOMIC POLICY COUNCIL

SUBJECT: Presidential Policy Directive -- Semiconductors

301

Pursuant to the November 21 memorandum from the Economic Policy Council, the President has decided that:

1. The Commerce Department will announce that it is self-initiating an antidumping case regarding Japanese 256K RAMS.
2. The Office of the United States Trade Representative will announce that it is accelerating its consideration of the Semiconductor Industry Association's Section 301 case.
3. The Office of the United States Trade Representative will confirm the Administration's intention to remedy the current situation if negotiations pursuant to the Section 301 case are not concluded to our satisfaction.



James A. Baker, III
Chairman Pro Tempore

Semiconductor 301

NATIONAL SECURITY COUNCIL

December 20, 1985

TO: MIKE DRIGGS

FROM: STEVE DANZANSKY

Distribution on this has to be severely limited. I would request that you keep it very close hold.

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SEMICONDUCTOR 301 (2 OF 5)

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Semiconductor Industry

Overview

Semiconductors are the heart of computers, robots, industrial process controls, and other electronic devices, and the key to technological and cost leadership in many industries. Worldwide sales of semiconductors in 1986 are expected to be \$26.6 billion, a 23.7 percent increase over the \$21.5 billion in 1985.

Semiconductor production is divided between merchant and captive production. Merchant semiconductor firms are independent manufacturers (about 70 percent of U.S. companies), in which semiconductors constitute a major portion of their business, i.e., Intel and AMD; and the semiconductor divisions of major corporations which actively market their semiconductor products, e.g., RCA and Motorola. Captive manufacturers are those that make semiconductors for their own use but do not market devices to industry, e.g., IBM and GM.

After a long period of dominance in this technology, U.S. industry now shares leadership with Japan but is losing ground in the newest generations of semiconductor products. The Japanese now dominate much of the semiconductor memory products and the U.S. is facing new competition in non-memory products, e.g., micro processors and semi-custom chips such as ASIC's (applied specific integrated circuits).

In 1984, overall world market share was 55 percent U.S., 35 percent Japanese, and 10 percent others, with Japan in the lead in the newer high density memory products, especially dynamic random access memories. These overall market shares are derived from WSTS (World Semiconductor Trade Statistics) which involve direct reporting by individual suppliers (U.S., Japanese, American) of their net shipments to each regional market. WSTS includes products which compete in the market, i.e., captive production not available for sale in the open market is not included.

Description of U.S. Industry

- o 1986 value of products shipments - \$14.6 billion (current dollars); up 5% over 1985 (based on WSTS statistics).
- o Projected 1987 value of product shipments - \$16.2 billion (current dollars); up 11% over 1986.
- o Expected average annual U.S. growth rate through 1991 - 12%.
- o Current capacity utilization - approximately 80%.
- o Semiconductors comprise 68% of international trade in electronic components.
- o Due primarily to semiconductors, a 1980 trade surplus in electronic components of over \$500 million turned into a deficit of \$2.37 billion of 1985.

The deficit in net semiconductor imports from Japan accounted for over two-thirds of the trade deficit in electronic components.

Health of Industry

The industry is recovering from a severe recession in 1985; losses totalled more than \$1.0 billion. One result has been a marked restructuring process in the industry. In 1985, United Technologies liquidated its semiconductor division (Mostek); Daewoo (Korea) took over Zymos; Mitsubishi acquired Siltec, leaving Monsanto as the only remaining major U.S. supplier of silicon; Intel, AMD, and National Semiconductor withdrew from the RAM segment; Motorola left the DRAM market (although now is in a joint venture with Toshiba); several other firms -- Fairchild, INMOS, STC, and Tristar -- refrained from entering the 256 K DRAM business after producing the 64K DRAM. Layoffs are still occurring, and market uncertainty stems from softness in end-use markets. The book-to-bill ratio ranged from 0.75 in September 1985 to 1.18 in April 1986 to 0.98 in September 1986. (This ratio is an industry standard that provides an indication of growth or decline of the semiconductor market. A ratio greater than one generally indicates market growth, and a ratio less than one indicates a declining market).

- o ASIC's (applied specific integrated statistics) refer to the design approach of very large scale integrated circuits (VLSI) which allow the user to configure the circuit to their respective requirements. By definition they are semi-custom chips. Cell-based designs (standard cells), programmable logic devices, and gate arrays are types of ASICs that vary according to the degree of customization. (See untitled Treasury paper, pages 7-9.)
- o ASICs are a growth segment; 13 percent of the global IC market in 1985 and expected to grow to 22-25 percent in 1990. By definition, they require custom engineering and, consequently, will be slower in becoming a commodity product. 125 start-up companies appeared in the last year, many offering only design capabilities without fabrication facilities. Most of these go after small niche markets that the Japanese and U.S. giants do not have the flexibility to pursue. The United States clearly leads in this field, but concern exists whether these firms will become dependent on Japanese fabrication lines in the long term.
- o Microprocessors are also an area of leadership for U.S. industry, though the Japanese are quickly diversifying into the field NEC, Hitachi, Toshiba. These "brains" of the microchip and computer worlds are design-intensive, but greater production volumes are giving certain of those chips

commodity status.

Semiconductor Trade Agreement

The two primary objectives of the U.S.-Japan Semiconductor Agreement are to: (1) obtain substantial improvement in market access (sales) in the Japanese market and (2) prevent Japanese dumping of semiconductors in the U.S. and third country markets. (See attachment for additional background information on the Agreement.) By virtue of this Agreement, it is estimated that semiconductor revenues could increase by as much as \$8 to 12 billion over the life of the Agreement and these would provide the necessary monies to improve the industry's technological and price competitiveness.

In exchange for this agreement with Japan, the Administration agreed to suspend the Semiconductor Industry Association (SIA) Section 301 case. If the Agreement is not implemented as negotiated, the U.S. can reinstate the 301 case. Regarding DRAMs and EPROMs, the Department of Commerce agreed to suspend these dumping cases on the pledge by the Japanese companies to stop dumping these products in the future. If violated, Commerce can reinstate the dumping cases without prejudicing the entire 301 Agreement.

The Agreement seeks to prevent Japanese companies from using unfair trade practices as a means of out-competing and gaining additional market share from U.S. firms. While other factors also are play, the low-price structure for semiconductors (dumping of EPROMs and DRAMs) was creating extreme pressure on the financial situation of the U.S. industry. The Agreement seeks to rectify the "unfairness" aspect of this, thereby permitting U.S. industry the opportunity to strengthen their competitive position in the marketplace.

The Agreement does nothing to preclude Japanese firms from purchasing U.S. firms, some who are still weakened, less profitable, and unable in the near term (1-2 years) to make the necessary capital investments to stay competitive. While not attempting to dictate a status quo in the market, the impact of the Agreement -- through significant increased sales by U.S. and foreign firms in the Japanese semiconductor market (now the world's largest) and the prevention of dumping -- could be a significantly strengthening in the market presence of U.S. semiconductor firms.

The Agreement directly addresses only low price strategies that give Japanese electronic firms an unfair advantage over U.S. industry. It does not, however, address investment, whether in the form of acquisition or de novo, that could also lead to increases in the share of the U.S. market held by Japanese-owned firms. The Agreement, by imposing disciplines on the pricing practices related to semiconductors manufactured in Japan, makes foreign

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... investment a more attractive way to maintain market presence in the United States. The recent yen/dollar realignment and cash-rich status of Japanese electronics companies merely enhanced the attractiveness of this alternative market strategy.

It should be noted that Fujitsu was reported to have a very high initial fair market value (FMV) set by the Department of Commerce for its 256K DRAM -- the highest of any producer and double that of its chief rivals.

Impact of the Takeover on the U.S. Semiconductor Industry:

- o The acquisition by 7th ranked Fujitsu of 13th ranked Fairchild will create the 5th largest semiconductor supplier in the world. Fujitsu Microelectronics Inc. is the U.S. subsidiary of Japan's biggest computer company.
- o The acquisition demonstrates the ability of Japanese firms (which are much larger than their U.S. electronics counterparts competing in the merchant market) to use acquisition as a means of strengthening both their technical base and their marketing abilities within the United States and elsewhere.
- o The two companies have very compatible technological capabilities and product strengths. One of Fujitsu's strengths lies in commodity memory products while Fairchild is a leader in high speed logic devices. Together, the companies represent the world's largest producer for sale in the open market of high speed logic devices with a [47.5] percent market share. Thus, one of the results of the Fujitsu acquisition of Fairchild is the improved position of Fujitsu in the area of high speed logic devices such as ECL (emitter-coupled logic devices).
- o A ready-made point of entry into the U.S. market will be established. Fujitsu is a leader in both MOS (Metal Oxide Silicon) and bipolar memory products. It had \$425 million in 1985 revenues in this category. Fairchild is not strong in this area, but does have some DRAM (Dynamic Random Access Memory) fabrication facilities that could be reactivated as a point of entry into U.S. DRAM production. Fairchild also has strong relationships with U.S. customers and has a solid U.S. marketing base for semi-custom devices.
- o Fairchild has important gate array and 32 bit microprocessor (MPU) technology, which Fujitsu could benefit from. Both are key semiconductor technologies in the broader information systems area. NEC and Hitachi have introduced MPU families; Fujitsu has not yet. MPU's are increasingly critical to a broad range of information processing equipment from personal computers to mini-supercomputers to telecommunications

switches. By acquiring Fairchild technology, Fujitsu will be the first Japanese company to offer a 32 bit microprocessor to systems manufacturers. A capital investment of over \$100 million and long start up times to enter this particular field are being avoided by Fujitsu.

- o U.S. microprocessor leaders such as Intel and Motorola, have to date dominated the design-in's for the systems markets. Symbiotically, this leadership has helped U.S. firms in related industries such as software. Collaboration between U.S. microprocessor and software firms have resulted in U.S. leadership in microcomputer software worldwide. Loss in microprocessor leadership could negatively affect the software industry.
- o Bipolar, gate array technology is important to mini-and mainframe computer suppliers. The technology allows a trade-off between achieving high speed, design flexibility, and cost benefits of volume circuit production techniques. Combined, Fujitsu/Fairchild would control 34 percent of the 1985 global bipolar gate array market. Alone, Fujitsu represented 25 percent of this market in 1985.
- o As a gate array supplier, Fujitsu will be privy to its systems clients' key circuit design requirements. Fairchild under Schlumberger was not a vertically integrated information systems company. Fairchild under Fujitsu would be. If Fujitsu achieves leadership in both gate array and microprocessor technologies, U.S. systems firms could be dependent on one of their toughest competitors for their key semiconductor needs.
- o As the yen increases in value, and technology demands closer working relationships, we can expect to see a continued Japanese effort to establish operating bases in the United States. The impact of the takeover on the psychology of other Japanese firms should not be ignored. They may not be willing to acquiesce to Fujitsu's move and may feel forced to take similar steps.

Positive Aspects of the Takeover

- o New infusion of capital and strengthening of Fairchild. Schlumberger bought Fairchild for \$425 million in 1979 and reportedly has invested \$500 million in Fairchild. Survival in the chip business depends on access to sizeable amounts of capital.
- o Transfer of technology and manufacturing knowhow. Fairchild cutback its MOS operations severely in the mid 1980's concentrating instead on improving its bipolar technology

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(which is crucial components for mainframes and supercomputers). Recently, it has become somewhat more involved in MOS and now will gain CMOS technological knowhow from Fujitsu. CMOS, which uses less power and has higher densities than bipolar technology is becoming the technology choice for most high density semiconductor devices. Fujitsu was the world's 6th largest seller of MOS ICs in 1985, Fairchild was 47th.

- o Transfer of managerial expertise.
- o By avoiding the bankruptcy or liquidation of Fairchild, the acquisition will encourage continued competition in the U.S. market.
- o Fujitsu could help Fairchild expand its sales in Japan.

DEWEY, BALLANTINE, BUSHBY, PALMER & WOOD

TO

Michael Driggs

FYI

1/29 Alex Waff
1986

NEWS RELEASE C-700
JANUARY 24, 1986



Semiconductor 301

CONTACT: NORMAN NEUREITER
214-995-5550
214-995-4093
214-995-2984

TI BRINGS PATENT INFRINGEMENT ACTIONS
AGAINST SEMICONDUCTOR MAKERS

DALLAS, JANUARY 24--(Special)--Texas Instruments said today it is filing patent infringement lawsuits against one Korean and eight Japanese semiconductor firms that are producing semiconductor memory chips (DRAMs) and selling them in the United States without having licenses under TI's semiconductor patents. In addition, the company plans to file a related action with the International Trade Commission against the same manufacturers under Section 337 of the Tariff Act of 1930.

TI Executive Vice President Pat Weber said, "The company has taken these actions in order to protect its intellectual property and to increase the return on the investments in research and development that led to the technology embodied in TI's patents. This reflects a more assertive policy on the part of TI with respect to licensing and protection of patents than in the past."

Semiconductor technology is today the core technology that supports the entire electronics industry. TI is one of the principal originators of this technology and holds many important patents on its inventions. For example, in the area of semiconductor memories TI has a pervasive patent position covering a wide spectrum of the individual technologies that go into the production of DRAMs. These include the memory architecture, the decoder and sense amplifier circuits, and memory cell structure, as well as packaging and mounting. The intellectual property represented by these patents is the result of great effort and expense for the necessary research and development.

Semiconductor memory producers not presently licensed by TI are being informed of the company's actions. "The real issue here is the value of knowledge, as reflected in our patents," Weber concluded.

##

January 24, 1986

SIA STATEMENT:

TEXAS INSTRUMENTS' ANNOUNCEMENT ON PATENT INFRINGEMENT ACTIONS

The Semiconductor Industry Association (SIA) is in full support of the actions taken today by Texas Instruments. These actions utilize the means afforded by U.S. law to protect intellectual property.

Semiconductor industry R&D investment as a percent of sales is 10%--the highest rate of any industry in the United States. Earning a return on this investment is fundamental to our industry's continuing ability to sustain technology leadership.

Additional background statement:

The Semiconductor Industry Association took the lead in the development and enactment of the Semiconductor Chip Protection Act, affording intellectual property protection for the masks which contain semiconductor designs.

BOB DOLE, KANSAS
 WILLIAM V. ROTH JR., DELAWARE
 JOHN C. DANFORTH, MISSOURI
 JOHN H. CHAFFE, RHODE ISLAND
 JOHN HENZ, PENNSYLVANIA
 MALCOLM WALLOP, WYOMING
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RUSSELL B. LONG, LOUISIANA
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 DAVID PRYOR, ARKANSAS

Semiconductor 301

United States Senate

COMMITTEE ON FINANCE

WASHINGTON, DC 20510

February 7, 1986

WILLIAM DIFENDERFER, CHIEF OF STAFF
 WILLIAM J. WILKINS, MINORITY CHIEF COUNSEL

The Honorable George Shultz
 Secretary of State
 Department of State
 2201 C Street, N.W.
 Washington, D.C. 20520

Dear Mr. Secretary:

I know you share my desire to maintain a strong and amicable relationship with Japan. I believe this relationship is tenable only if we ensure that U.S.-Japan trade is equitable. Our trade laws afford a party injured by practices which are unreasonable or unfair a means of obtaining a remedy which can restore equity to our trading relationship. It is only by enforcing our laws dealing with unfair trade that we have standing to defend fair trade.

I was pleased to learn, therefore, of your public statement this week that you agree with this proposition. In particular, I am glad to learn that you consider the Semiconductor Industry Association Section 301 case to be very strong on its merits. As you may realize, Oregon has been very hard hit by unfair Japanese practices in the semiconductor industry. Just last month, Intel Corporation laid off nearly 500 semiconductor workers in Portland. The product these workers had been producing is one in which Japanese companies have been shown -- in preliminary Department of Commerce and International Trade Commission determinations -- to be dumping in the United States market.

I would like to emphasize, therefore, the importance of a rapid and effective settlement of the SIA case. The United States semiconductor industry is the most competitive in the world, but it is rapidly being driven from key product lines by the unfair pricing practices of Japanese semiconductor companies and the closed nature of the Japanese semiconductor industry. To speed progress toward an effective resolution of the trade problem, I hope the President will announce a formal finding that Japanese government actions in support of its semiconductor industry are actionable under Section 301. On that basis, a negotiated settlement can be reached with Japan which will return U.S.-Japan semiconductor trade to a fair competitive basis.

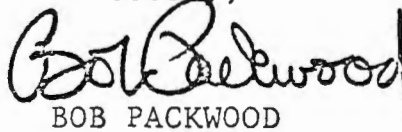
The Honorable Geroge Shultz

Page 2

February 7, 1986

It would be very constructive for Congressional consideration of U.S.-Japan trade issues this spring if a settlement were reached in this case by the time the President and Prime Minister Nakasone next meet.

Sincerely,

A handwritten signature in dark ink, appearing to read "Bob Packwood". The signature is fluid and cursive, with a long vertical stroke at the end.

BOB PACKWOOD



HARRIS

Semiconductor 301

Impact of Semiconductor Industry Trends On U.S. Defense & National Security

JON CORNELL

SIA Board of Directors

**Chairman, SIA Committee
on Government Procurement**

**Senior Vice President, Semiconductor Sector
Harris Corporation**

JEC/3-12-86
602218

SEMICONDUCTOR SECTOR



HARRIS

Discussion Outline

- **INDUSTRY TRENDS**
- **IMPLICATIONS TO U.S. DEFENSE**
- **RECOMMENDATIONS**

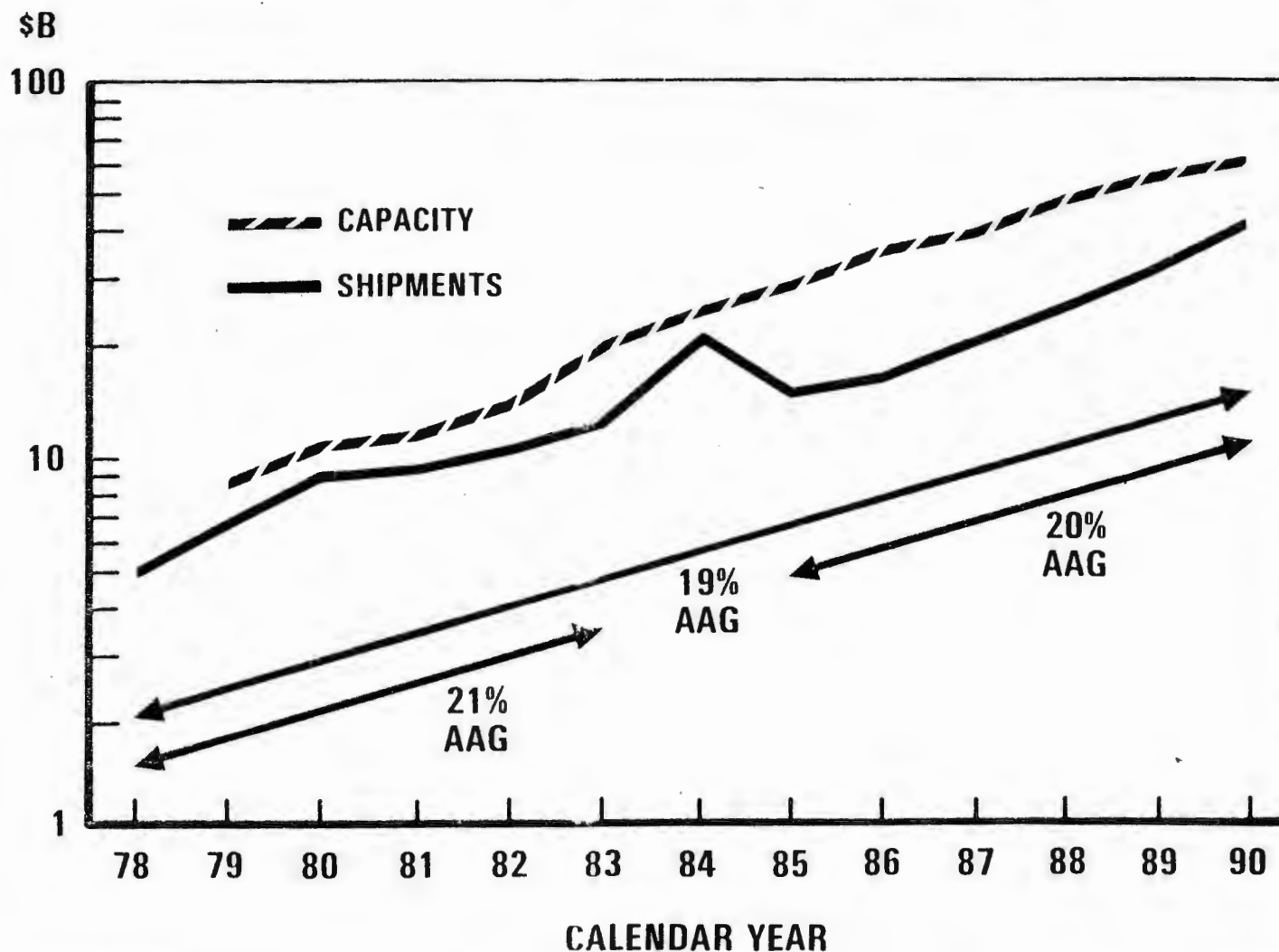
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SEMICONDUCTOR SECTOR



HARRIS

Worldwide IC Shipments Worldwide IC Capacity



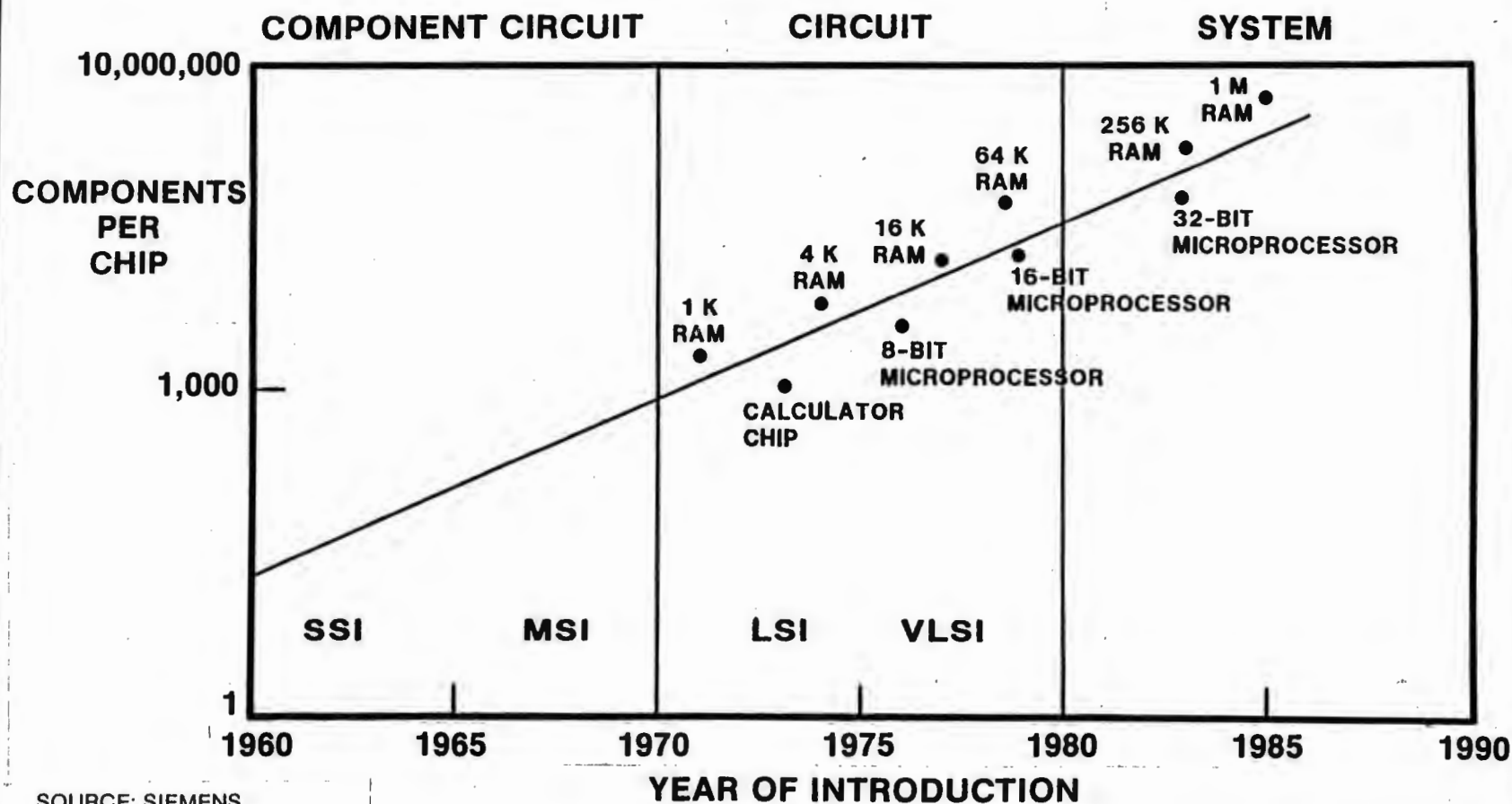
SEMICONDUCTOR SECTOR

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HARRIS

Evolution of Components to Systems on Silicon



SEMICONDUCTOR SECTOR

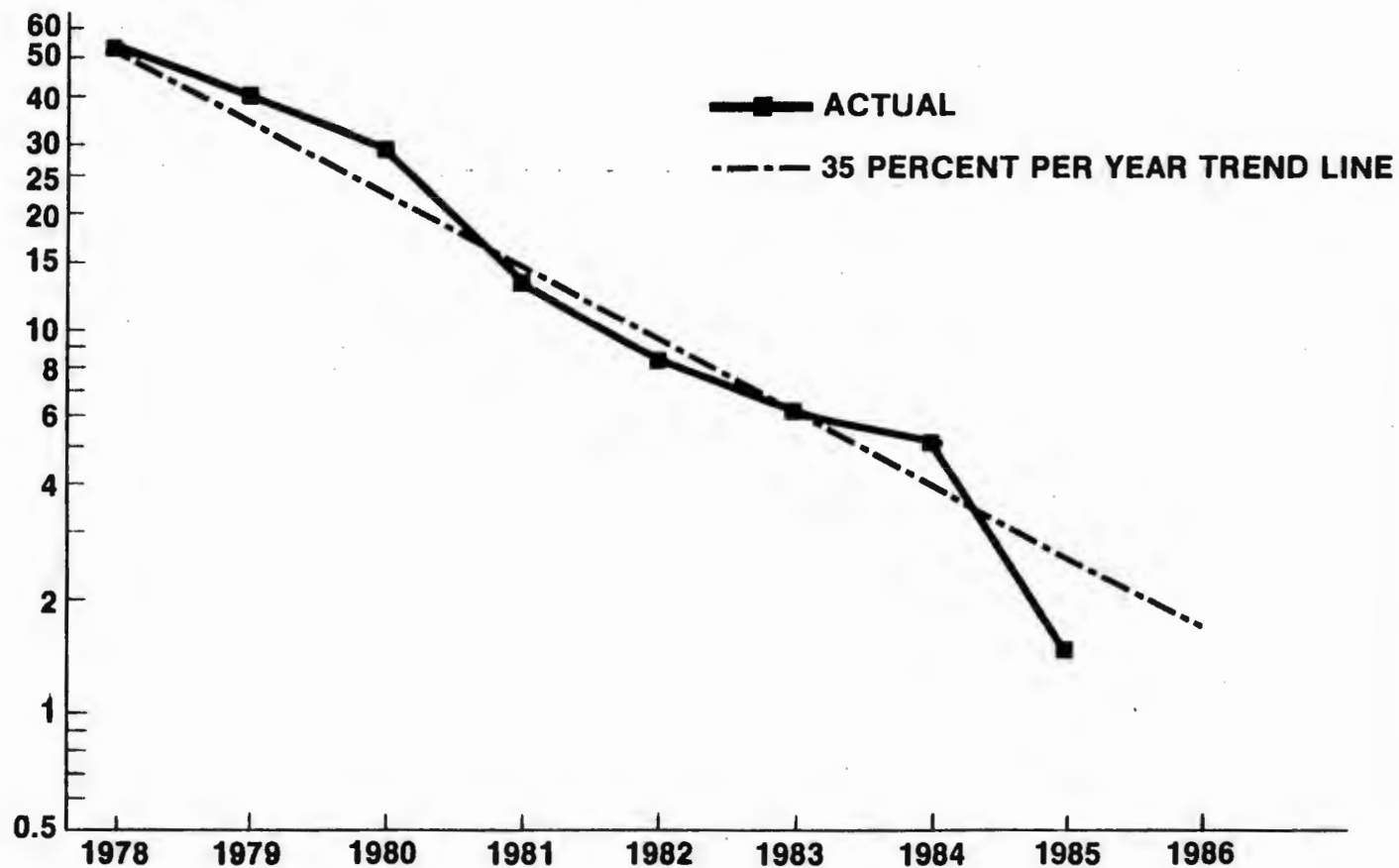
JEC/3-12-86
602222



HARRIS

Dynamic RAM Average Selling Prices Per Bit

MILLICENTS PER BIT



SOURCE: DATAQUEST

CALENDAR YEARS

SEMICONDUCTOR SECTOR

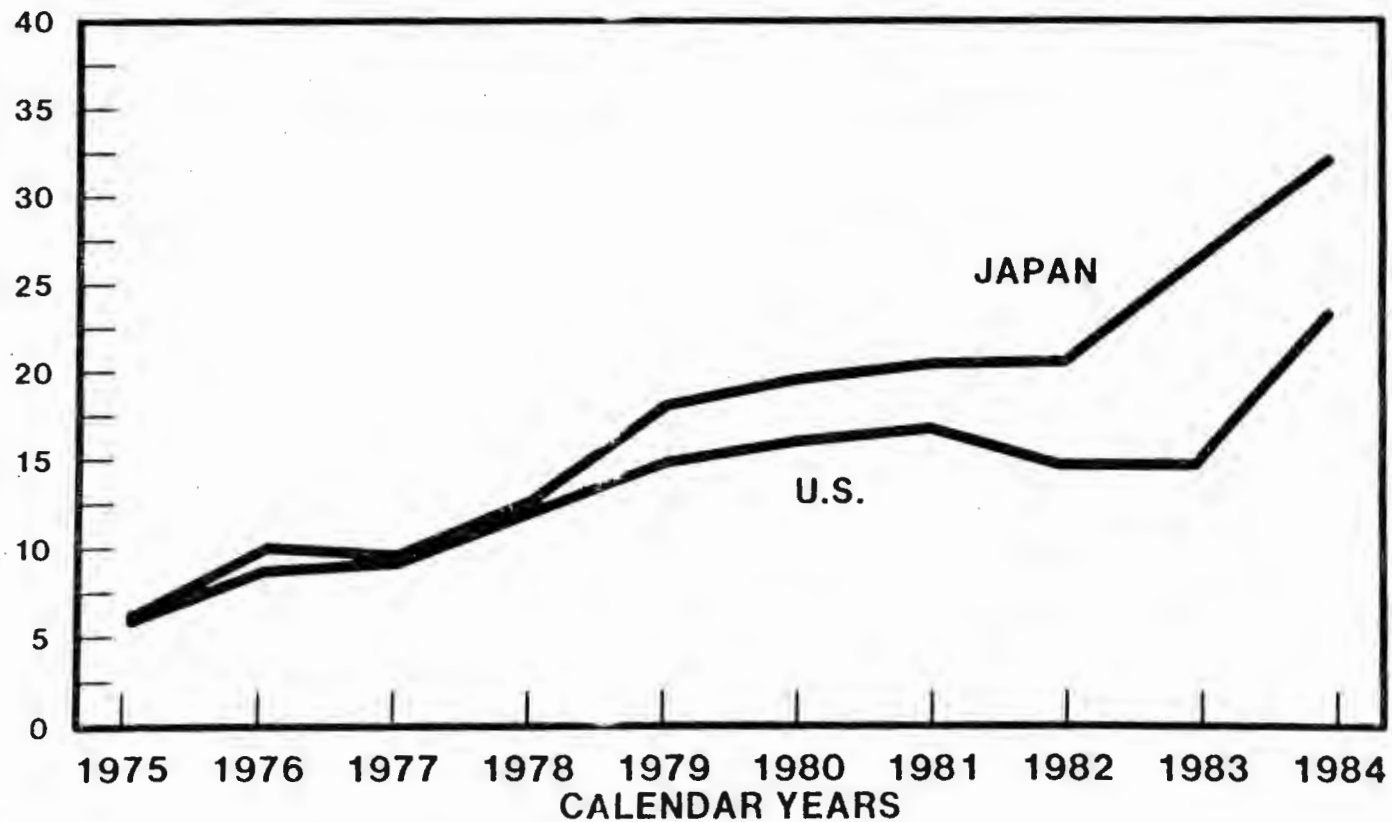
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602223



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Capital Spending (AS PERCENT OF SALES)

PERCENT



SOURCE: DATAQUEST

SEMICONDUCTOR SECTOR

JEC/3-12-86
602204

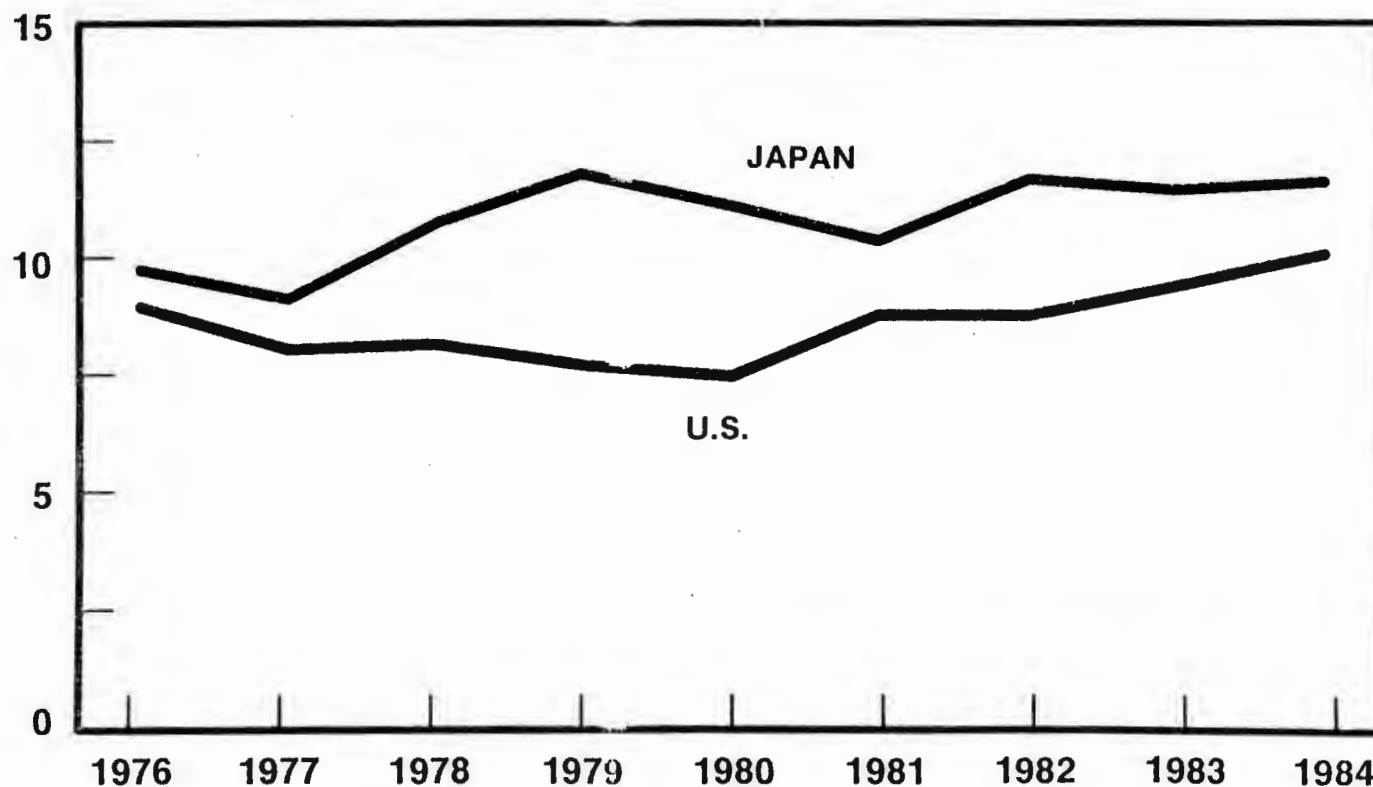


HARRIS

U. S./Japan Semiconductor Industry R & D Expenditures

(AS PERCENT OF SALES)

PERCENT



SOURCE: DATAQUEST

CALENDAR YEARS

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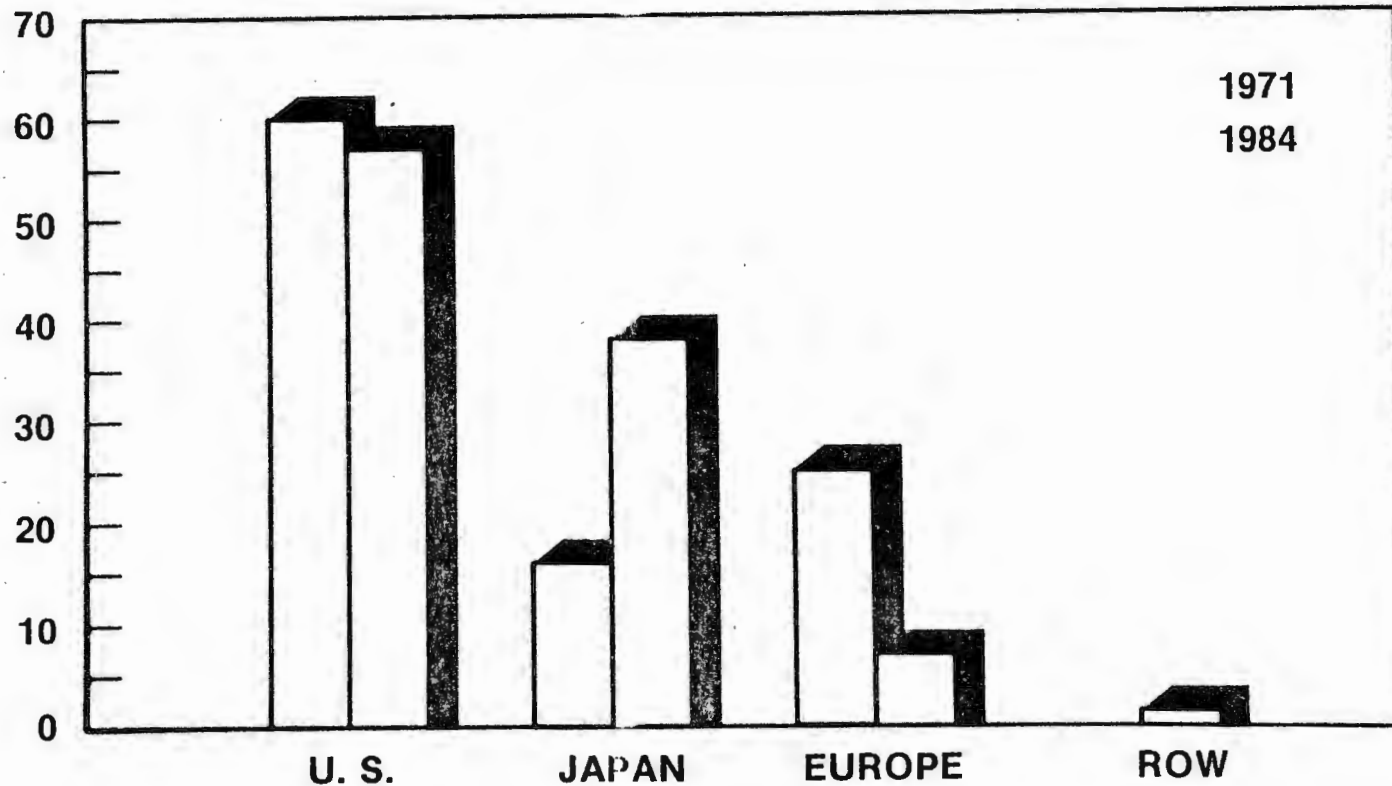
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Integrated Circuit Production By Geography

PERCENTAGE
OF WORLD
PRODUCTION

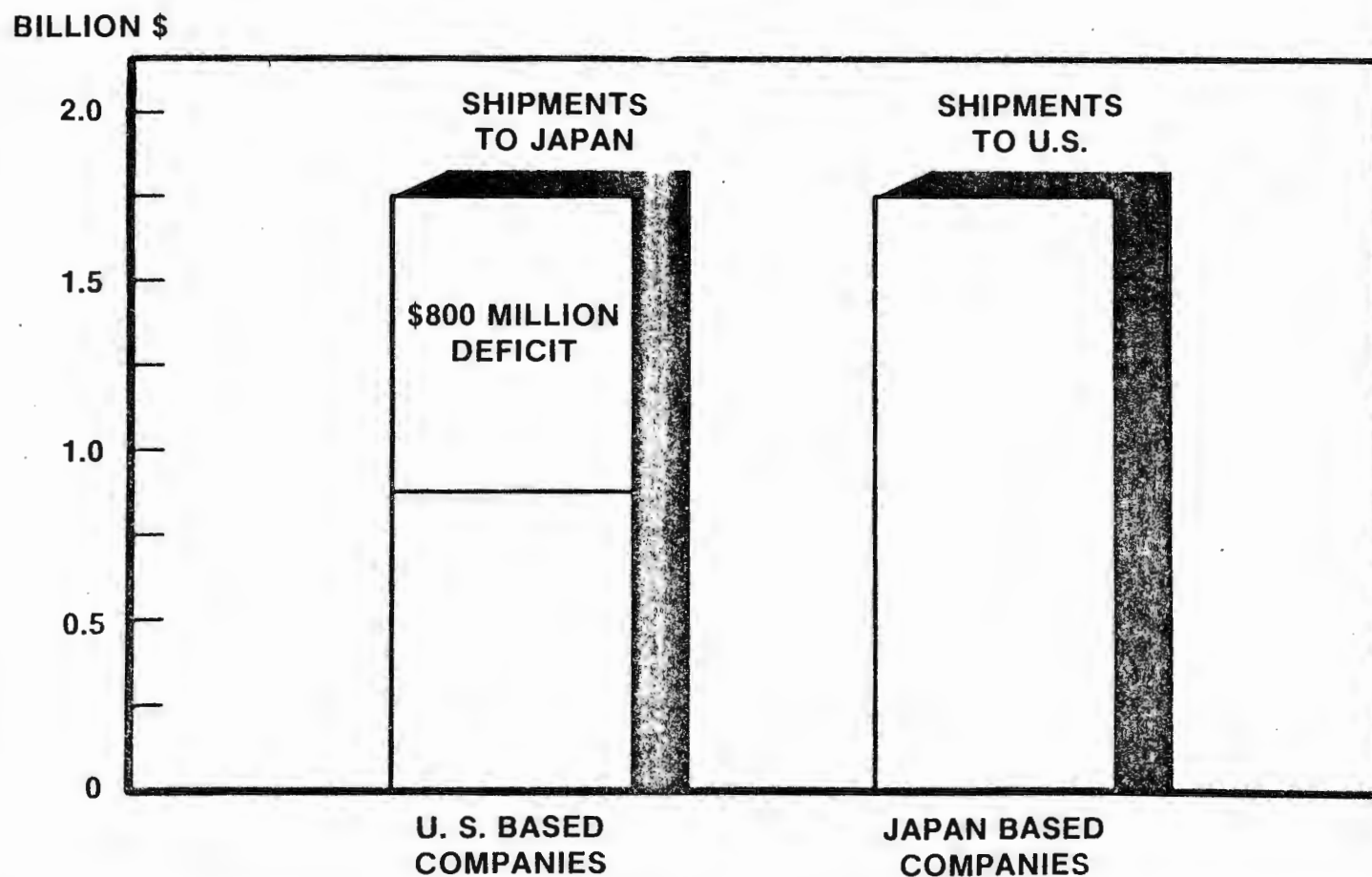


SOURCE: SIA AND DATAQUEST

SEMICONDUCTOR SECTOR

JEC/3-12-86
602206

1984 Semiconductor Foreign Trade



SOURCE: SIA

SEMICONDUCTOR SECTOR

JEC/3-12-86
602207



Total Worldwide IC Supplier Ranking

1985 RANKING *	WORLDWIDE IC SUPPLIER	1985 SALES (\$M)	1984 RANKING
1	TEXAS INSTRUMENTS	1,677	1
2	NEC	1,603	2
3	MOTOROLA	1,298	3
4	HITACHI	1,236	4
5	INTEL	1,020	6
6	TOSHIBA	995	9
7	FUJITSU	940	7
8	NATIONAL	892	5
9	PHILIPS/SIGNETICS	808	8
10	AMD	603	10
11	MATSUSHITA	595	13
12	MITSUBISHI	510	11
13	FAIRCHILD	451	12
14	SANYO	314	16
15	OKI	289	15
16	HARRIS	265	18
17	SGS	240	19
18	RCA	235	17
19	ANALOG DEVICES	206	22
20	SIEMENS	205	21

*PRELIMINARY
SOURCE: DATAQUEST, INC.

SEMICONDUCTOR SECTOR

JEC/3-12-86
602209



HARRIS

Estimated IC Sales of Top Ten U.S. Open-Market Military Suppliers

Rank	Company
1	Texas Instruments
2	Fairchild
3	Harris
4	National Semiconductor
5	Signetics
6	AMD
7	Motorola
8	Intel
9	RCA
10	Monolithic Memories

SOURCE: INTEGRATED CIRCUIT ENGINEERING/HARRIS

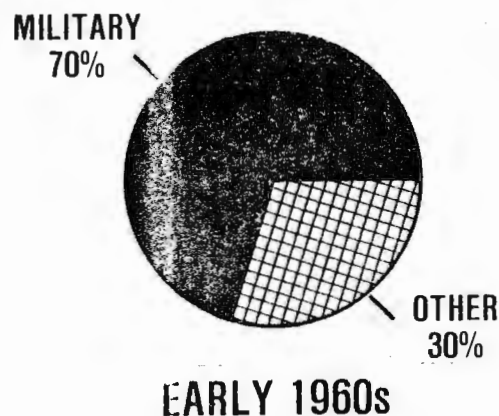
JEC/3-12-86
602210

SEMICONDUCTOR SECTOR

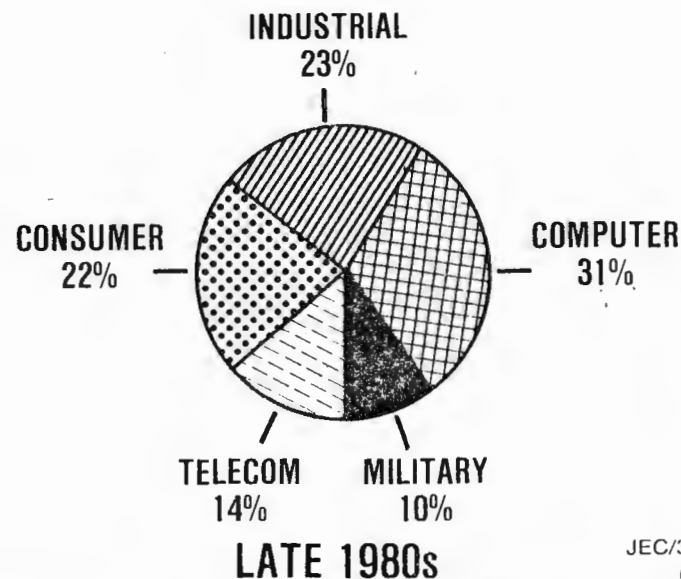
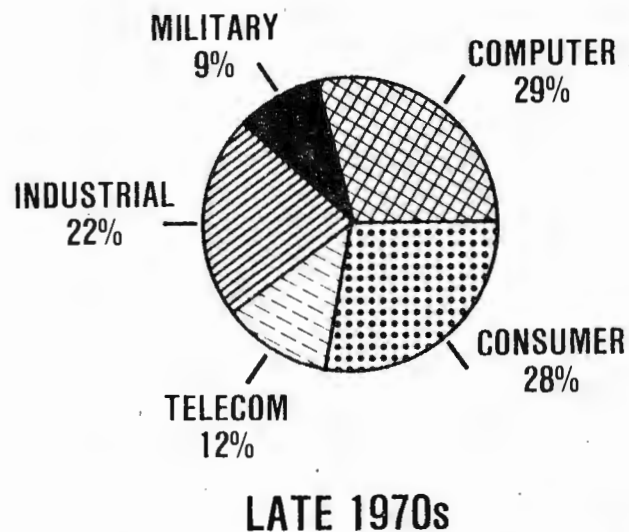


HARRIS

The Changing Composition of the U. S. Semiconductor End—Use Market



Source: Texas Instruments
Defense Electronics, June 1984



JEC/3-12-86
602202

SEMICONDUCTOR SECTOR

**HARRIS**

1985 Sales/R & D Estimates

	Consumption (\$B / %)	Production (\$B / %)	R & D (\$B / %)
U.S. Merchant	8.9 / 31	11.0 / 38	1.3 / 36
U.S. Captive	5.1 / 18	5.1 / 18	0.8 / 22
U.S. Subtotal	14.0 / 49	16.1 / 56	2.1 / 58
Japan	8.2 / 29	9.4 / 33	1.2 / 33
Europe	5.0 / 17	2.6 / 9	0.2 / 6
ROW	1.5 / 5	0.6 / 2	0.1 / 3
Total	28.7 / 100	28.7 / 100	3.6 / 100
U.S. Government	1.4 / 5	—	0.3 / 8

SOURCES: SIA/DATAQUEST/ICE/HARRIS ADJUSTED
FOR CONSISTENCY

JEC/3-12-86
602217

SEMICONDUCTOR SECTOR



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Implications to U. S. Defense

GENERAL SCENARIO:

- **JAPAN ATTEMPTING TO BUY
W/W SEMI BUSINESS**
 - ▶ **Serious Threat to U. S.
Merchant Semi Suppliers**
 - ▶ **Even Worse for U. S.
Semi Equipment Suppliers**
 - ▶ **Simultaneous Struggle with Capital/Labor
Cost and Legal/Policy Inequities**
- **U. S. GOVERNMENT INCREASINGLY
DIFFICULT TO DO BUSINESS WITH**
 - ▶ **Waste, Fraud, Abuse, Cost/Risk**
 - ▶ **Increasing Technological Divergence
with Commercial Practice**
 - ▶ **Bureaucratic Quagmire**



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Implications to U. S. Defense

SPECIFIC CONCERNS

LOSS OF MERCHANT SUPPLY TO DOD

- **MAINSTREAM COMPONENTS**
(e.g. DRAM, EPROM, UP, ETC.)
- **CRITICAL TECHNOLOGY**
(e.g. CMOS, SOI, RAD HARD, GaAs, ETC.)
- **SPECIALIZED COMPONENTS**
(e.g. OVERWHELMING MERCHANT PREDOMINANCE)
- **NON-VIABLE CAPTIVE SUPPLIERS**
(e.g. LOSS OF CRITICAL MASS)

NON-VIABLE U. S. INDUSTRIAL BASE

- **PRODUCT TECHNOLOGY LEADERSHIP**
(e.g. SEMICONDUCTOR VALUE ADDED)
- **SOURCE OF SUPPLY**
(e.g. DISCRIMINATORY SOURCING)
- **COMMON TECHNOLOGY**
(e.g. CAD/CAM, ETC.)



HARRIS

Recommendations

- **TRADE**
- **GOVERNMENT PROCUREMENT**
- **R & D**
- **INVESTMENT**



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Trade Recommendations

- **ENFORCE TRADE LAWS**
 - ▶ Targeting
 - ▶ Dumping
 - ▶ Market Access
- **BROADEN TRADE LAWS**
 - ▶ W/W Cost Based Pricing
 - ▶ Address Market Exclusion
 - ▶ Mandatory USTR Action
- **STRENGTHEN TRADE LAW REMEDIES**
 - ▶ Progressive Penalties
 - ▶ Reimbursement to Injured Parties
 - ▶ Timely Determination
- **REALISTIC EXPORT CONTROLS**
 - ▶ Recognize Foreign Supply
 - ▶ Reasonable Licensing Practices



HARRIS

Government Procurement Recommendations

- **IMPROVED STANDARDIZATION PROGRAM**
 - ▶ **Military Drawing System**
 - ▶ **Require JAN/MIL 883 Certification**
- **MODERNIZATION OF SPEC SYSTEM**
 - ▶ **Eliminate Obsolete Practices**
 - ▶ **Realize Benefits of Commercial Practice**
 - ▶ **Timely Insertion of New Technology**
- **ENCOURAGE GOVERNMENT SUPPLY**
 - ▶ **Waste-Fraud-and-Abuse Issue**
 - ▶ **Technical Data Rights**
 - ▶ **Procurement Documentation**



R & D Related Recommendations

- **ANTI-TRUST LAWS**
 - ▶ **Extend to Imports to U. S. Market**
 - ▶ **Broaden Allowable Joint R & D**
- **PROTECT INTELLECTUAL PROPERTY**
 - ▶ **Insist on Reciprocal Copyright Legislation**
 - ▶ **Strong Enforcement of All Related Laws**
 - ▶ **Strengthen Existing Laws if Necessary**



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Investment Related Recommendations

- **RATIONAL TAX CODE**
 - ▶ Permanent R & D Credit
 - ▶ Accelerated Depreciation
 - ▶ Investment Credit
- **IMPROVED INVESTMENT ENVIRONMENT**
 - ▶ Encourage Individual Savings
 - ▶ Consider Consumption Tax

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Semiconductor 301

OFFICE OF THE UNITED STATES
TRADE REPRESENTATIVE
EXECUTIVE OFFICE OF THE PRESIDENT
WASHINGTON
20506

DECLASSIFIED *E.O. 13526 Sec 3.3(b)*
Authority *State Waiver/Commerce*
BY *dr* NARA DATE *11/16/2022*

April 3, 1986

MEMORANDUM

To: The Trade Policy Review Group
From: Ambassador Michael B. Smith *MS*
Subject: April 4 Meeting on Semiconductor 301 Case

We are circulating the attachment in preparation for the TPRG meeting scheduled for 10 a.m. Friday, April 4, in Room 203 at USTR. It is a confidential draft determination that the Government of Japan has engaged in acts, policies and practices that are actionable under Section 301 of the Trade Act because inconsistent with trade agreements or otherwise unjustifiable, unreasonable or discriminatory and a burden or restriction on U.S. commerce. The Section 301 Committee reviewed an earlier draft on April 1, and many (although not all) its comments are reflected in the attachment. The Section 301 Committee did not unanimously endorse this document or the concept of an unfairness determination.

Attachment

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BACKGROUND

On July 11, 1985, the United States Trade Representative initiated an investigation under Section 302(b) of the Trade Act of 1974, as amended ("Act"), in response to a petition filed by the Semiconductor Industry Association, concerning Japanese Government acts practices affecting the U.S. semiconductor industry. The petition alleges that the Government of Japan, through a variety of acts, practices and policies, created a market structure for the Japanese semiconductor market that has acted and continues to act as a barrier to U.S. exports of semiconductors, and may have led to over/capacity by putting downward pressure on worldwide semiconductor prices. Some of the specific allegations include:

- the Japanese Government pressured the Japanese semiconductor producer-consumers to form a cartel, with each producer specializing in certain device types which would be produced on a commission basis for the benefit of other makers.
- the Japanese Government encouraged this through subsidies which were conditioned upon device specialization. Such encouragement, or "liberalization countermeasures," which served to foster an industry "counterattack structure" in response to market liberalization.
- Japanese semiconductor companies are linked by multiple horizontal ties (encouraged by GOJ-sponsored R&D in the post-liberalization (1975) period); and
- these companies are characterized by a "Buy Japan" attitude.

The petitioner alleges that these practices are actionable under Section 301 of the Act.

The interagency Section 301 Committee began its investigation of whether the Government of Japan's policies or practices with respect to semiconductors are actionable under Section 301, by considering information submitted for the record. The Committee desired to obtain some direct evidence of the government acts, policies and practices concerned from the Government of Japan. However, the Japanese Government did not answer some of the USG's questions during the Section 301 consultations, so that the Committee necessarily relied in part on circumstantial evidence.

CRITERIA FOR A POSITIVE FINDING

The Committee concluded that Japan's policies or practices would be actionable under Section 301 if it could be shown that:

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DECLASSIFIED ON OADR

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1. The Government of Japan maintains a policy of protecting and promoting its semiconductor industry through measures that are unjustifiable, unreasonable, or discriminatory in order to shield it from the effects of import competition, and either: (a) it still maintains such a policy (although the practices implementing it have changed); or (b) it has not acted effectively to terminate this policy and there is no evidence that the practices implementing it have actually stopped; and
2. Such Japanese Government acts, policies and practices have burdened or restricted U.S. commerce as evidenced by U.S. sales in Japan by U.S.-based semiconductor manufacturers that do not reasonably reflect the competitiveness of U.S. industry where the most reasonable explanation for this unsatisfactory performance is the continued existence of a Japanese Government policy of the type described above.

FINDINGS

The United States and Japanese Governments have met a number of times to discuss the allegations in the petition. The 301 Committee was unable to verify all of the allegations in the Semiconductor Industry Association petition, i.e., confirmation of the existence of a semiconductor cartel in Japan. However, based on information provided during these discussions and documents submitted by U.S. and Japanese industry sources, the Committee concluded that there is sufficient evidence to support a finding of unfairness under Section 301.

1. The Government of Japan's policy of protecting and promoting its semiconductor industry from foreign competition has been consistent over time, although its policy tools have changed as Japanese industry grew and prospered. In the 1960's and early 1970's, it protected its semiconductor industry through quotas and investment restrictions that were key to the industry's development. In the 1970's, under pressure by the United States Government, it replaced these tools with more subtle measures: promotion of horizontal ties and product specialization among Japanese manufacturers; conditional loans and other subsidies; Japan Development Bank loans; Japan Electronic Computer Company (JECC) leveraged and subsidized leasing arrangements; and NTT sponsored research and development and closed procurement of domestically-produced electronic-based goods. These policies significantly enhanced the industry's growth in the 1970's by impairing the ability of foreign companies to participate actively in the Japanese market. In the 1980's, as the Japanese semi-

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conductor industry became internationally competitive, the nature of the Japanese Government's support changed, with an emphasis on research and development assistance and active involvement in the semiconductor market through MITI's "administrative guidance."

2. Until 1975, the Government of Japan protected its semiconductor industry from import competition principally through quantitative restrictions on imports in violation of GATT Article XI; and prohibition of direct U.S. investment in Japan in the area of semiconductor manufacturing (with the exception of Texas Instruments, a special case) in violation of its obligations to provide national treatment for U.S. investment in Japan under the U.S.-Japan Treaty of Friendship, Commerce, and Navigation (FCN). These practices restricted U.S. trade and investment access to the Japanese semiconductor market.
3. In response to concerns raised by the United States Government beginning as early as the late 1960's about these Japanese Government practices in breach of GATT and FCN obligations, the Government of Japan made a series of bilateral commitments to the United States Government to open its market. First, in the summer of 1971, President Nixon secured a pledge from Japanese Premier Sato committing his Government to liberalize its computer and integrated circuit industries and to open these sectors to foreign competition. Two years later, after lengthy bilateral negotiations, the Japanese Government announced that its liberalization policy would become fully effective by December 1975.
4. During the period when Japanese quotas and investment restrictions were being lifted (1973-1975), the Government of Japan initiated "counter-liberalization" measures. These measures were intended to help Japanese companies meet increased import competition successfully and to nullify some of the beneficial effects for U.S. industry resulting from liberalization.

While initially resisting pressure from MITI to reorganize the industry, i.e., rationalization, Japanese semiconductor producers agreed to MITI's "counter-liberalization" proposals to restructure the market once the final timetable for liberalization was announced in 1973. Specifically, from 1973 to 1976, the Government of Japan promoted joint-research by groups of semiconductor manufacturers and promoted the horizontal ties and product specialization by these groups among Japanese manufacturers, directly and through subsidies (34 billion yen or \$136 million at an exchange rate of

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250:1) and research and development programs (42 billion yen or \$172 million).

In our Section 301 consultations, the Japanese Government acknowledged as correct the December 1975 statement by the then MITI Minister that the Government of Japan had adopted a policy of promoting the development of computers, peripherals, and large-scale integrated circuits for the next generation of computers:

"The Ministry of International Trade and Industries recognizes that it is essential for the self-reliance and development of the electronic computer industry of our country that the national computers get the reasonable share of the market in our country. The Ministry has made it known it will ... deploy various promotional measures such as promoting the development of super LSI for the next generation of the electronic computers and securing rental fund (sic) for the national computers. I would like to ask everybody concerned for sufficient cooperation in this regard."

In our Section 301 consultations, the Government of Japan admitted that these measures were intended to strengthen its semiconductor industry vis-a-vis foreign competition despite its earlier decision to liberalize its semiconductor market.

5. While quotas and investment restrictions were lifted in 1975, no major change in the U.S. market share in Japan occurred despite recognized U.S. leadership in semiconductors. Note the U.S. market share in the Japanese semiconductor market before and after "liberalization" is set forth in the table below:

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U.S. PENETRATION OF THE JAPANESE SEMICONDUCTOR MARKET

<u>Year</u>	<u>U.S. Market Share</u> (Percent of domestic consumption)
1973	9.0
1974	10.0
1975 ("Liberalization" completed)	10.2
1976	10.2
1977	9.0
1978	10.0
1979	14.0
1980	12.0
1981	9.5
1982	10.3
1983	10.8
1984	11.4
1985	8.9

6. The leading U.S. semiconductor producer in Japan, Texas Instruments, was allowed to establish a local subsidiary in Japan in 1968, but only on the condition that it license its basic semiconductor patents to Japanese companies. After Texas Instruments' entry into Japanese the market and continuing through the 1970's, MITI periodically gathered statistics (production, shipments, sales, etc.) from Texas Instruments' Japanese subsidiary. In our Section 301 consultations, the Government of Japan acknowledged that MITI collected these data to ensure, among other things, that Texas Instruments market share in Japan did not grow too rapidly. While there is no evidence that MITI ever made a specific request of Texas Instruments to lower its sales level in Japan, MITI officials admitted during our Section 301 consultations that such a request might have been considered if Texas Instruments' market share was increasing too much. It should be noted that Texas Instruments, the largest American semiconductor company with the largest U.S. commitment in the Japanese market, has never achieved more than a five percent share of Japanese semiconductor sales. MITI still meets periodically with Texas Instruments Japan as it does with other Japanese semiconductor firms to gather production and other statistics. According to the Government of Japan, these meetings are informal and only held for information gathering purposes. The Government of Japan contends that cooperation by the companies is not mandatory.
7. Since 1975 as part of the "counter-liberalization" measures, the Government of Japan has provided substantial assistance to its semiconductor industry through subsidies for research

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and development. This R&D was aimed principally at commercial semiconductor applications rather than basic research. Moreover, the Government of Japan encouraged cooperation among Japanese semiconductor competitors in the context of such R&D, i.e., establishing private, joint laboratory facilities. For the period 1976-1990, MITI semiconductor R&D expenditures are expected to total over \$300 million. The most controversial R&D program was VLSI (very large-scale integrated circuits) during the period 1975-1979, in which MITI provided \$132 million in conditional loans (hojokin) and participating Japanese firms contributed \$191 million in matching funds. NTT expenditures for initially separate, but later combined, VLSI R&D was over \$360 million between 1975-1982. Japan's five leading semiconductor firms participated in these VLSI projects -- NEC, Hitachi, Toshiba, Fujitsu and Mitsubishi. The VLSI project contributed to Japan's present success in the semiconductor industry by way of numerous and significant advances in semiconductor device, materials and production technologies. For example, MITI's R&D contributed to the following semiconductor production advances, which are still being used in the marketplace and which improved the quality of end-product Japanese semiconductors: projection aligner (Canon's MPA-500); wafer stepper (Nikon's 1010G); and electron beam (JEOL JBX-GA). NTT R&D was especially important for the development of some prototype VLSI circuits (265K DRAM), as well as the technologies to design, fabricate and test them. These process and production breakthroughs contributed to the current Japanese successes in producing high-quality, low-cost memory chip devices.

8. The Japanese Government has neither acted effectively to terminate this policy to protect its semiconductor industry nor repealed its policy of industry promotion reflected by its "counter-liberalization" measures, subsidy and R&D practices. A number of Japanese Government acts, policies and programs strongly suggest a continuing policy to protect and promote its semiconductor industry, despite its commitments to the United States Government to liberalize its market. These include:

- (a) The 1978 Law for Extraordinary Measures for the Promotion of Specific Machinery and Information Industries (Kijoho), which provided for subsidization of research and development and the development of "elevation plans" for 89 industries including semiconductor elements, integrated circuits, and other "leading edge" technologies. The elevation plan for semiconductors set forth very precise MITI "visions" of performance and production cost targets to be achieved for specified semiconductor technologies by set dates, together

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with estimates of funds that would need to be expended to achieve those targets. The Japanese Government claims that none of the possible measures provided for by the Kijoho for semiconductors and electronics was implemented by the Government, and therefore the existence of the Kijoho had no market impact. U.S. industry claims that such a detailed "plan," combined with on-going government-sponsored R&D, Japan Development Bank below-rate loans, and other government activities did in fact affect the market. The Section 301 Committee believes the Kijoho served to provide a "signal" to the semiconductor industry, financial institutions, and consumers of semiconductors that the semiconductor industry

would and should receive preferential treatment. The Kijoho expired only last year.

(b) In 1979, NTT announced the development of the world's first 256K DRAM prototype. It then worked with NEC, Hitachi, and Fujitsu (and later Toshiba) over the next two years to develop specifications for a commercial version of the 256K DRAM. NTT's role was to steer the four companies through a series of technical problems. The firms received free prototype design specifications and manufacturing assistance from NTT's Electrical Communications Laboratories. In 1982, NTT transferred its 256K DRAM technology to these four Japanese firms at no cost, i.e., no royalties were charged. The 256K DRAM reached the mass production stage in late 1982.

(c) The Government of Japan preserved the Oki Electric Company's position in the Japanese semiconductor industry in November 1982 when it suffered a major fire at one of its semiconductor production facilities. MITI asked five other Japanese firms to supply Oki's customers during the period Oki was unable to meet its production requirements. Among these firms, NEC, Hitachi and Toshiba were to supply various components under Oki's label. MITI also asked that when Oki resumed operations, that the firms permit Oki to recoup its pre-fire share of the market. This particular incident indicates direct government involvement in private business decisionmaking as late as 1982, which is inconsistent with free market principles.

9. Japanese producers of semiconductors continue to act consistently with Japanese Government policies to foster Japanese inter-company cooperation; for example, by providing each other with company-specific production data through the Electronics Industry Association of Japan (EIAJ). This data sharing is reported to be much more detailed than would be considered prudent in the United States. In addition, despite repeated assertions in Japanese newspapers of

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cartels being established by the Japanese semiconductor industry before and after the liberalization timetable was announced, the Japanese Government, including the Japan Fair Trade Commission (JFTC), has never taken action or initiated an investigation against possible collusive activity by the semiconductor industry under Japan's Antimonopoly Law.

10. The inference may reasonably be drawn that such cooperation between producers acts to impede imports given the extraordinary lack of growth in the U.S. market share in Japan over the past 15 years. This deterioration in the U.S. industry's relative position in Japan has occurred despite the Japanese Government's sequential undertakings to: (1) liberalize its semiconductor market (1971-1975); (2) provide U.S. industry with access to relevant semiconductor patents; and (3) most recently, as part of the 1983 recommendations on semiconductors by the U.S.-Japan Working Group on High Technology Industries. The High Technology Working Group's recommendations, which both Government's Cabinets formally approved, included one that the Government of Japan "should encourage Japanese semiconductor users to enlarge opportunities for U.S. based suppliers..." U.S. market share in Japan subsequently increased in 1984 during a period of sharply increasing demand, but began falling to the point where U.S. market share is currently lower than it was in 1973.
11. In 1983 the Government of Japan agreed, as part of the Recommendations of the U.S.-Japan High Technology Work Group, to take steps to liberalize its semiconductor market and to encourage its industry to avoid predatory practices. For a variety of reasons, the Japanese semiconductor industry made excessive investments in 1985-1986 resulting in over-capacity in several product categories, especially the commodity chip products -- DRAMS and EPROMS. One of the concerns raised by the USG in the Section 301 Committee consultations and the MOSS Electronics discussions was whether the Government of Japan might use the Kijoho or depressed industry cartel authority to protect their industry if their investment decisions threatened their profitability and future viability. The Japanese Government responded that such action on their part would not take place. However, the Government of Japan refused to make a public announcement to that effect.
12. The continuing lack of growth of U.S. market share in Japan significantly exacerbated the impact on U.S. industry of the the major 1985 contraction of the U.S. semiconductory industry. This has resulted, among other things, in U.S.

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firms' disinvestment in several product areas U.S. industry was previously competitive.

13. It appears that over time, the Japanese Government has consistently protected its semiconductor industry from import competition by using differing methods, practices, and programs that have been inconsistent with a trade agreement or unjustifiable, unreasonable or discriminatory and a burden or restriction on U.S. commerce. In view of its continuing involvement in the Japanese semiconductor market, the Government of Japan has not terminated its policy of promoting and protecting its industry in order to shield it from the effects of import competition. Therefore, the Japanese Government acts, policies, and practices concerning its semiconductor industry are actionable under Section 301 because they are inconsistent with a trade agreement or unjustifiable, unreasonable or discriminatory and a burden or restriction on U.S. commerce.

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STATE SENATOR
ALFRED E. ALQUIST

THIRTEENTH SENATORIAL DISTRICT

REPRESENTING
SANTA CLARA COUNTY
IN THE

Senate

Semiconductor 301

COMMITTEES
APPROPRIATIONS
~~CHAIRMAN~~
BUDGET AND FISCAL REVIEW
CHAIRMAN
ENERGY AND PUBLIC UTILITIES
GOVERNMENTAL ORGANIZATION

M. Driggs

May 14, 1986

Mr. John A. Svahn
Assistant to the President
Office of Policy Development
The White House
1600 Pennsylvania Avenue, N.W.
Washington, D.C. 20500

Dear John:

Immediate U.S. government action on the Semiconductor Industry Association's Section 301 trade case is a matter of serious concern to me. The 301 case will be considered by the Economic Policy Council sometime in May. Under the law, Ambassador Yeutter must make his recommendation on this case to the President by July 11 and the President must then decide what action to take no later than August 1.

The U.S. semiconductor industry (which as you know is heavily concentrated in California), views this as the most important time period in the case. The Japanese negotiators have perceived a lack of interagency consensus within the Administration, and have been particularly effective in delaying any meaningful settlement discussions. The Japanese feel that the Administration will refrain from taking direct retaliatory action under any circumstances. In order to facilitate the negotiations, it is vital at this time that there be a Cabinet level (EPC) finding that the SIA case is actionable under Section 301. This action, whether through a formal or informal finding, would give the necessary leverage to the U.S. negotiators to resolve this case, short of any direct action.

The Administration has made the effective enforcement of Section 301 cases the bulwark of its trade policy. Congressional interest in this case is very strong. There is legislation

Mr. John A. Svahn

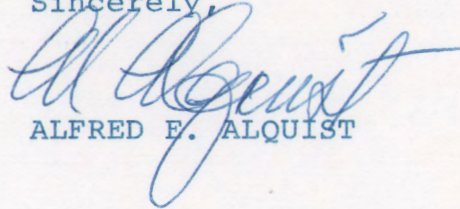
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May 14, 1986

currently being drafted in both the House and Senate which addresses Administration action on the semiconductor 301 case.

If not resolved, the current semiconductor trade problem with Japan could have a very serious negative impact on the viability of our country's broader industrial base. I appreciate your consideration of this critical national issue.

Sincerely,

A handwritten signature in blue ink, appearing to read "Alfred E. Alquist", written over the typed name.

ALFRED E. ALQUIST

AEA/mmhc

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semiconductor 801

DEPUTY UNITED STATES TRADE REPRESENTATIVE
EXECUTIVE OFFICE OF THE PRESIDENT
WASHINGTON, D.C. 20508
202-395-5114

Jan
Jzi

dr 11/16/2022

DECLASSIFICATION
OF CONFIDENTIAL INFORMATION

February 20, 1987

~~UNCLASSIFIED with~~
~~CONFIDENTIAL ATTACHMENT~~

MEMORANDUM

TO: MEMBERS OF THE TRADE POLICY REVIEW GROUP
FROM: MICHAEL B. SMITH, ^{*dm*}Chairman
SUBJECT: Meeting of the TPRG, February 25, 8:00 A.M.

A meeting of the TPRG has been scheduled for Wednesday, February 25 at 8:00 a.m. in Room 203 of the Winder (USTR) building to discuss the U.S.-Japan Semiconductor Agreement (paper attached).

~~UNCLASSIFIED with~~
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CLASSIFIED E.O. 13526
AUTHORITY State Waiver/Commerce Sec 3.3(b)
BY dm PARADATE 11/16/2024

U.S.- Japan Semiconductor Agreement

ISSUES

The Administration needs to decide upon a set of contingency plans for possible trade action against Japan if dumping of semiconductors in third country markets continues and there is no positive trend of increased sales by foreign based semiconductor firms in Japan. The objective of any such action would be to encourage the Government of Japan and the individual Japanese companies to forthrightly implement the dumping and market access provisions of the agreement.

RECOMMENDATIONS

1. If the analysis being conducted by the Department of Commerce (to be completed by February 27) indicates that dumping by Japanese companies of semiconductors continues in third countries, the Administration should inform the Government of Japan that the USG will initiate a process of possible retaliation under Section 301 for violations of the Agreement.
2. This process would begin with a Federal Register notice in early March announcing such action (to be implemented on a unspecified date sometime after April 1) and requesting public comment on the possible application of prohibitive tariffs on a selected list of products of Japan origin (non-MFN).
3. This public comment period would be completed to coincide with a report to the EPC in early April on: (1) whether any positive trend in foreign-based semiconductor sales in Japan has been detected through mid-March; and (2) a final report from Commerce on whether Japanese dumping in third countries continues.
4. The Section 301 Committee analysis on the size of lost sales opportunities and, therefore, size of retaliation due to inadequate implementation of the Semiconductor Agreement by Japan ranges from \$255 million to \$303 million. These numbers are separated into two components: (1) lack of "gradual and steady" increase in sales in Japan by foreign companies to date; and (2) continued Japanese dumping in third-country markets. Each of the two are briefly described below.

Market Access: \$165 million. (See Attachment A)

This analysis is based on the expectation that foreign sales of semiconductors in Japan (of which 98-99 percent historically are by U.S. firms) should increase, at a gradual and steady rate, to approximately 20 percent by 1991 (as provided in the agreement). Most agencies agree with this approach; some do

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not on the grounds that the agreement is expressed in terms of an expectation, not a commitment; hence, the "violation of a trade agreement" standard may not have been met for retaliation.

Third-Country Dumping: Range estimated between \$90 million to \$138 million. (See Attachments B and C)

This range is derived from two separate approaches. The lower value (Attachment B) is calculated on the basis of conceptualized losses in producer surplus by U.S. semiconductor firms due to below cost pricing of DRAMs and EPROMs by Japanese firms compared to Commerce's fair market values.

The higher value (Attachment C) is calculated on the basis of lost U.S. industry sales revenue derived by multiplying the following three numbers: (1) the difference between averaged Japanese below cost market prices of DRAMs and EPROMs and the Commerce fair market values, adjusted for differences in selling and transportation costs; (2) the increase in Japanese share of MOS memory products in third country markets in 1986; and (3) the size of the third country MOS memory market.

Both approaches appear to be reasonable attempts at measuring lost sales opportunities. Both include assumptions which were not totally acceptable to all agencies. Pros and cons for each approach are provided in Attachment D.

5. Attachment E provides a potential list of products the Section 301 Committee has considered but for which further analysis is necessary before a final recommendation is possible. Most of the products on this preliminary list are electronic-based; contain semiconductors; and are produced by some Japanese companies engaged in dumping in third country markets. The total import value of the products listed is much greater than the estimated range of lost sales opportunities to allow flexibility in choosing a final retaliation list.

BACKGROUND

In the President's determination of the Section case on July 31, he noted that the agreement:

...in effect until March 31, 1991, will open up the Japanese market to U.S. exports of semiconductors and will help prevent dumping of semiconductors in the United States and third country markets...I hereby determine that any future failure by the Government of Japan to meet the commitments and objectives of the Agreement would be inconsistent with a trade agreement or an unjustifiable act that would be inconsistent with a trade agreement or an unjustifiable act that would burden or restrict U.S. commerce.

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On January 28 emergency consultations were held under the terms of the agreement to address continued widespread and significant sales below cost in third countries by Japanese companies and lack of progress on market access. This meeting (led by Smith/Smart/McMinn) concluded official bilateral meetings begun in October and continuing through November, December and January to address major problems, principally in the area of MITI's implementation of the dumping provisions. These meetings ended with MITI's rejection of our evidence of continued dumping and a request for an additional 6 months to "wait and see" whether foreign sales in Japan increase. This was judged unacceptable. The Japanese were given 30 days to eliminate all aspects of dumping in third country markets and 60 days for some positive trends to develop on actual sales in Japan; otherwise the U.S. reserved the right to take action.

Third Country Dumping

In the arrangement, the Government of Japan agreed to prevent dumping in third country markets by Japanese semiconductor firms by monitoring company-specific cost and export prices. The arrangement also provided that the government monitor company-specific sales prices to the first unrelated party in third country markets.

MITI's compliance has been late and inadequate. The GOJ's failure to immediately enforce the provisions against third country dumping resulted in major price differences between the United States and third country markets.

The GOJ initialed the arrangement on August 1, but did not take its first step to implement the prevention of dumping provisions until September 20. At that time MITI merely requested the companies not to make sales in third countries at prices below cost, and left it for the companies to "determine" on their own what below cost meant. Moreover, MITI interpreted the arrangement as not requiring Japanese companies to submit cost and price data to it until November 30. Therefore, it would be at least two full months before the Government would have access to the data necessary to uncover violations.

MITI then agreed to begin monitoring exports effective October 1, only after the USG provided evidence¹ of Japanese dumping. This evidence demonstrated that sales in third countries by Japanese companies were at prices so far below the foreign market values

¹Pricing information available to U.S. DOC is obtained from the U.S. semiconductor producing industry, semiconductor users, industry analysts, and U.S. Government sources.

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established in the antidumping suspension agreements as to defy any reasonable explanation other than the existence of dumping.

MITI's description of its monitoring program at the mid-November consultations, demonstrated that their program fell short of the terms of the arrangement. The system MITI established on October 1 in response to our complaints dealt solely with the export price from Japan, not the price to the unrelated party in third countries.

MITI's response to our concerns at the November consultations was the issuance of administrative guidance to Japanese companies, effective November 17, that all future contracts entered into with unrelated parties in third countries should be at, or above, company-specific cost of production. Despite USG protests, MITI refused to apply these instructions to export shipments contracted for prior to November 17. These "pre-existing" contracts account for a large quantity of sales with delivery scheduled for the future. Another problem was that Japanese companies were still defining the level of their own costs without verification by MITI.

The Commerce Department has access to confidential data on Japanese semiconductor pricing. These data indicate that while prices to unrelated parties in third countries have halted their decrease, they continue to be significantly below the foreign market values (FMVs) established in the antidumping suspension agreements.²

Information from industry sources indicate that from October 27th through the end of December, Japanese companies continued to quote and make sales of EPROMs at prices considerably below the 4th quarter FMVs. Some of these sales occurred at only 40 percent of their FMV. In addition, many of these sales were in high density EPROM products, where the U.S. is still the technology leader.

For example, we have evidence of the following sales (this is a small list to give an example of other confidential data):

Fujitsu	Dec. 15	128K EPROM	Taiwan	64.3% of FMV
Hitachi	Dec. 15	256K EPROM	Europe	47.3% of FMV
Mitsubishi	Dec. 8	512K EPROM	Europe	58.0% of FMV
NEC	Dec. 15	256K EPROM	Singapore	55.6% of FMV
Toshiba	Dec. 15	128K EPROM	Taiwan	62.8% of FMV

² The FMV's are based on company-specified cost of production data provided by the Japanese companies. Although there could be some differences in costs on the basis of market, the prices in third country markets are significantly below the costs that the Japanese companies are reporting to Commerce.

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U.S. Government data (from intelligence sources) demonstrates that during the month of December, prices of Japanese DRAMs and EPROMs from manufacturers through brokers in third country markets continued to range from 40 to 65 percent of FMVs.

For example, we have evidence of the following sales (this is a small list to give an example of other confidential data):

Fujitsu	256K DRAM	Taiwan	60.8% of FMV
Hitachi	256K DRAM	Taiwan	34.7% of FMV
NEC	256K DRAM	Singapore	57.2% of FMV
Oki	256K DRAM	Singapore	52.4% of FMV
Toshiba	256K DRAM	Europe	69.0% of FMV

In response to this evidence, MITI requested more specific information, including customer names, and additional time to study the data presented. MITI representatives stated that they were in the process of implementing the agreement and, to date, had (1) issued administrative guidance to their companies not to sell in third country markets at prices below company-specific cost of production; (2) implemented export controls through the approval or denial of export license applications; and (3) effective January 1, 1987 lowered (from 1 million yen to 50,000 yen) the value of individual exports for which an export license is required. As a result, they said, their companies were complaining that the orders received during December in both the EC and SE Asia had declined substantially (by as much as 99 percent for 256K DRAMs in SE Asia).

In the expert level talks on January 23-24, MITI described its monitoring methodology as follows: (1) MITI accepts the cost data and projections provided by the Japanese companies; (2) it does not conduct any separate analysis of the data; (3) no verification of the cost data is conducted; (4) prices on the export license applications are compared to the cost of the producer; and (5) no verification of the actual sales prices in third countries is conducted.

We told MITI that the agreement was initialed on August 1 and while no transition period was provided for, in essence we had already given them over 6 months to complete the "process of implementation". Given the apparent lack of a MITI system to prevent dumping and the continuing sales significantly below Commerce's FMVs, the GOJ was informed that the U.S. expects all elements of dumping to cease immediately. At the closing of the January 28 emergency consultation, MITI was told that we would review the pricing activities of Japanese companies in third country markets by February 27 and would communicate the results of this analysis to the Japanese Government. In the event a

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finding of continued dumping is made, the U.S. reserved the right to take action it deemed appropriate. This is the issue at hand for the TPRG.

Market Access

The Agreement calls for "gradual and steady" improvement of access by foreign capital-affiliated semiconductor companies in Japan over the life of the Agreement. U.S. company sales were 8.4 percent of the Japanese semiconductor market over the 9 months prior to the signing of the Agreement. At the time of the November consultations, the Government of Japan forecast that foreign sales of semiconductors in Japan would grow about 1.2 percent by March 31, 1987. If this came to pass, this appeared to us to meet the requirements of the Agreement, i.e., gradual and steady growth.

At the January 28 emergency consultations, however, we conveyed to the Japanese concerns over the apparent lack of progress on increasing market access to date and U.S. industry statistics demonstrating no increase to date and possible reduction in the foreign share of the Japanese market (U.S. sales made-up 99.5 percent of foreign semiconductor sales in Japan in 1986) since the Agreement was signed (third and fourth quarter 1986 data indicate U.S. share is flat at 8.4 percent and industry bookings suggest future sales are deteriorating).

The Government of Japan confirmed these concerns by indicating they had revised their November forecast and any increase in the foreign share in the Japanese market was unlikely before April 1. It cited the following reasons for this: (1) low price structure for semiconductors in the Japanese market; (2) the tendency for Japanese firms to buy internally-produced semiconductors during periods of low growth; and (3) the reluctance of pure consumers (non-producers) to buy foreign products, notwithstanding the shift in exchange rates. The Government of Japan requested that given the sluggishness of the Japanese semiconductor market, the issue of market access should be put off for six months.

We provided information to the Government of Japan on U.S. semiconductor industry efforts to increase sales in the Japanese semiconductor market (including increased investment, expansion of product and design facilities to meet Japanese market requirements, personnel and personnel expenditures, and selling expenditures) and cited the delay in opening the foreign semiconductor sales promotion organization as proposed by the Government of Japan.

Discussions were also held to reconcile differences over the methodology to measure sales by U.S. and foreign semiconductor firms in Japan. We proposed a compromise whereby the U.S.-Japan Data Collection Program, jointly established by both governments

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in 1983, would be used to measure U.S. sales in Japan and MITI statistics would be used to measure the size of the Japanese market. MITI rejected this proposal, maintaining its insistence that official Government of Japan statistics be used to measure sales levels. The issue was not resolved.

Similar to how it was left on the dumping issue, the GOJ was told the U.S. must be able to detect within 45 to 60 days a positive trend on the Agreement's objective of "gradual and steady" increase in access to the Japanese market. If not, the U.S. reserved the right to take action as is deemed appropriate.

Recent Developments

On February 13, MITI issued Administrative Guidance to Japanese semiconductor producers that they should cut back their DRAM and EPROM production 10 percent in the first quarter of 1987 (January-February). MITI also announced its intention to establish in March the foreign semiconductor sales promotion organization.

GATT Developments

On February 17, the EC notified the GATT Secretariat its request that a GATT dispute settlement panel be established to review Japan's role in implementing the agreement. The GATT Council will take up this matter on March 4.

Attachments

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MARKET ACCESS

ESTIMATED LOST U.S. SALES
(\$ millions)

DATE	<u>1Q 1986</u>	<u>2Q 1986</u>	<u>3Q 1986</u>	<u>4Q 1986</u>	<u>1Q 1987</u>	<u>2Q 1987</u>	<u>3Q 1987</u>	<u>4Q 1987</u>
U.S. SALES ¹	179	224	242	227 ²	251 ³	274 ³	295 ³	317 ³
SIZE OF JAPANESE MARKET ⁴	2,229	2,631	2,882	2,732	2,800 ⁵	2,869 ⁵	2,937 ⁵	3,005 ⁵
U.S. SHARE IN JAPAN	8.0%	8.5%	8.4%	8.4%	8.4%	8.4%	8.4%	8.4%
EXPECTED MARKET SHARE ⁶	NA	8.5%	8.5%	9.125%	9.75%	10.375%	11.0%	11.625%
LOST SALES	\$0	\$0	\$3.2	\$20.1	\$37.8	\$56.7	\$50.4 ⁷	NA

ESTIMATED TOTAL LOST SALES (12 month period -- 9/01/86 to 8/31/87): \$168 Million

REDUCTION TO ACCOUNT FOR NON-U.S. SALES \$168 x 99 percent = \$166.32 Million

TOTAL (with rounding) = \$165 MILLION

DESCRIPTION OF ANALYSIS

Despite the market access provisions of the Semiconductor Agreement, the U.S. share of the Japanese market has held at slightly above 8.0 percent. The estimate of lost sales -- \$165 million -- is annualized from the period beginning when the Agreement was signed in September 1986. This estimate is based on the following three assumptions: (1) U.S. market share continues to be flat at 8.4 percent (U.S. share has not been significantly higher than this since the first quarter of 1985); (2) the size of the Japanese semiconductor market grows at an annualized rate of 10 percent in dollar terms in 1987 (1986 growth was 22.5 percent and forecasts predict growth in the 10-15 percent range in dollar terms in 1987). However, even if there is zero growth in the Japanese semiconductor market in 1987, the estimate of lost sales totals \$158 million; and (3) the "Expected Market Share" growth is "gradual and steady" over time, as provided in the agreement.

The "Expected Market Share" growth is assumed to be linear and 0.605 percent per quarter based on the goal of reaching at least 20 percent in five years. This expected growth is compared to the actual (extrapolated) U.S. share to calculate the estimated lost semiconductor sales. Since the USG is committed to improving foreign market access in Japan on a non-discriminatory manner and this agreement does not require a Japanese preference for U.S. products, non-U.S. sales are subtracted from the estimate of lost sales. Non-U.S. semiconductor sales in Japan made-up 0.5 percent of total foreign sales in Japan in 1986 (down from 1.2 percent in 1985). Thus, we have reduced the estimated lost sales figure by 1.0 percent to \$166.32 million to capture only lost U.S. sales. This 1.0 percent reduction is 100 percent higher than the actual 1986 non-U.S. share in Japan. In addition, this figure has been rounded down to \$165 million to provide even greater leeway.

¹ U.S. sales based on WSTS

² Includes estimate of December sales based on continuation of October and November trend

³ Based on the assumption that U.S. market share remains constant at 8.4 percent.

⁴ WSTS data that conforms closely with official MITI statistics.

⁵ Assumes 10 percent annual growth rate in the Japanese semiconductor market in 1987; 1986 growth in dollar terms was 22.5 percent.

⁶ The Agreement calls for "gradual and steady" improvement of access with the expectation that foreign capital-affiliated companies' sales will grow to "at least slightly above 20 percent of the Japanese market in Five years" (1991).

⁷ Excludes estimate for the month of September to provide a one-year (annualized) timeframe (09/01/86 through 08/31/87).

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Producer Surplus and its Application to the Semiconductor Agreement.

I. Producer Surplus Defined

Producer surplus is a measure of the value of sales opportunities based on observation of market behavior. Change in producer surplus is a measure of the effect of policies or demand shifts on suppliers. In the simplest case (an upward sloping supply curve and a homogeneous product) producer surplus is the area above the supply curve and below the price line. If one of the quantities is not directly observable, it may be estimated from the known quantity, the price change (as a proportion of the observed price), and an estimate of the price elasticity (an estimated relationship between changes in price and changes in quantity).

Analysis of producer surplus changes in the case of semiconductor sales to third markets is more complex, but the principle is unchanged. Supply curves tend to be nearly flat for exports to a specific market and the Agreement requires price/quantity combinations not on the firm supply curves. Supply elasticities are not relevant because producer surplus under the agreement (if implemented in full) is a quasi-rent resulting from Japanese firms pricing above their supply curves. Because general shortages are not observed at current prices, current prices must be consistent with the market demand. The relevant changes in quantity are determined by the elasticity of demand, as a result of these complications. The relevant loss in producer surplus is the revenue loss that would have occurred if the higher prices specified in the agreement and the lower sales levels those prices imply had prevailed.

II. Why the Concept of Producer Surplus is Important

Producer surplus is preferable to comparisons of quantities because a firm may maintain or even increase the quantity sold as a result of a drop in the equilibrium price. This is particularly likely when supply curves are flat and non market driven restrictions on price are considered. The firm may be worse off as a result of the drop in prices, but this may not be detected through examination of quantities or revenues.

III. What Producer Surplus Isn't

Profits - Although there should be a relationship between producer surplus and prices, this isn't necessarily the case. Profits are determined by accounting conventions; a shift to more or less conservative accounting methods may have a large impact on reported profits.

National Welfare - Producer surplus changes in one industry do

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not occur in isolation. In general, trade policy action that increases producer surplus in one industry lowers national economic welfare by creating more than offsetting losses government revenue, consumer surplus, and producer surplus in other industries.

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3.

Calculating Change in Producer Surplus for less than FMV sales of DRAMS and EPROMs in Third Country Markets

Basic Data: DOC data

Value of MOS Memory sales by U.S. firms	345 million
Proportion of MOS Memory in DRAMS	40%
Proportion of MOS Memory in EPROMs	21%

Calculated Short Run (Quarterly) Price Elasticities of Demand

DRAMS**	-1.0
(16K and higher)	
EPROMs**	-1.0
(32K and higher)	

Calculations

Value of Third Country Market sales of DRAMS by US-owned producers (\$345 m. * 0.40)	= \$138.00 m.
Value of Third Country Market sales of EPROMs by US-owned producers (\$345 m. * 0.21)	= \$72.45

Price change to restore FMV pricing for DRAMS and EPROMs	+74.4%
--	--------

Implied quantity change for DRAMS $\ln (Q+dQ)/Q = e*\ln (P+dP)/P$	-42.70%
Implied quantity change for EPROMs $\ln (Q+dQ)/Q = e*\ln (P+dP)/P$	-42.70%

Producer Surplus (i.e. Rent) Loss for DRAMS (138*(1.0 - 0.427)*(.744))	58.8
Producer Surplus (i.e. Rent) Loss for EPROMs (72.45*(1.0 - 0.427)*(.744))	30.9

Net Loss in Quasi-Rent to U.S. Semiconductor Firms	<u>\$89 million</u>
--	---------------------

** The elasticities used in this calculation are assumed. Estimates of loss of producers surplus are sensitive to elasticity assumptions. Some estimates suggest elasticities may be larger than unity and producer surplus loss smaller. For example, an assumed elasticity of about -2.0 would result in a total producer surplus of about \$55 million.

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Attachment C

U.S. LOSSES FROM CONTINUED DUMPING IN THIRD COUNTRIES

The Department of Commerce believes that the estimate of U.S. losses due to third country dumping by Japan is conservative for at least three reasons:

- 1) These figures are based on lost sales in the MOS memory market. This is the market for which we have hard evidence of Japanese dumping. However, we believe that the Japanese are dumping nonmemory products into both the U.S. and third countries based on allegations by domestic semiconductor manufacturers. Had the agreement not been signed, it is likely that the industry would have initiated antidumping cases on other nonmemory products.
- 2) The market size figures used in this analysis measure in-market consumption. While these figures are the most up-to-date and concrete market information available, they underestimate the actual size of the market especially in Asia where a large share of the market activity is for transshipment to another country, not for consumption in that market.
- 3) Given that the relative competitiveness of the two countries' industries has not changed over the past year, we have assumed that each country's market share should remain constant. This assumption, however, does not take into account the appreciation of the yen over the past year. Rather than a constant market share over the past year, one would expect that Japan's market share in third countries would have declined.

U.S. Loss

Before calculating the loss from continued Japanese dumping in third countries based on changes in Japan's revenue market share, two questions must be answered: 1) Does the change in Japan's revenue based market share accurately reflect the loss in revenue to U.S. companies and 2) once the loss is calculated, what part of it can be attributed to Japanese dumping?

Calculating the U.S. loss from Japanese dumping in third countries on the basis of Japan's increase in revenue market share severely underestimates the total loss to U.S. companies in third country markets. Since revenue is determined by the price times the quantity sold, selling at less than fair value underestimates the value of the goods sold and the actual loss to the U.S. companies from losing these sales. To correctly calculate the actual loss, Japan's market share increase should be adjusted by a multiplier that reflects the amount of Japanese dumping in third countries.

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To reflect the differences in costs between sales in the U.S. and third countries, we have reduced the U.S. FMV by the amount of any U.S. selling and movement expenses. We think this underestimates the actual fair value of sales in third countries as some additional selling and movement expenses would occur in any third country sale.

Japanese sales in third countries averaged 57.34 percent of the adjusted FMV. To reflect the actual increase in Japan's market share, this increase should be multiplied by the inverse of the above percentage (1.74). The new market share would then be multiplied by the value of the market to get the total loss to the U.S.

For example, a U.S. producer loses a sale of 5000 chips because of Japanese dumping. The value of the lost sale should be based on a fair value for that product rather than the artificially low Japanese price. Therefore, if the FMV is \$1.00/unit and the Japanese sold at \$0.55/unit, the loss to the U.S. producer should be \$5000 not \$2750. By multiplying \$2750 by the inverse of the percentage that \$0.55 is of \$1.00, one can determine the actual loss (\$5000).

$$\$2750 \times 1/.55 \text{ (i.e. 1.82)} = \$5000$$

Any sales loss due to an increase in Japan's revenue based market share requires an adjustment since the sales figure would be derived by multiplying quantity by an artificially low price. Therefore, we have adjusted Japan's market share to account for dumping in third countries.

In general, two factors determine the success of a sale, quality and price.

Quality: The quality of U.S. memory devices is equal to that of the Japanese as demonstrated during ITC's injury hearings. Although a 1979 Hewlett-Packard study showed that Japanese DRAM chips were ten times less likely to fail than U.S. chips, by January 1982, the same testing program revealed that the quality of the two countries' chips were equal. This was due to a massive effort on the part of the U.S. semiconductor industry to improve the quality of its chips; the failure rate of U.S. semiconductors in 1985 had dropped to 6 percent of what it had been in 1981.

Price: From an examination of bid information on over \$3.5 million worth of sales in third countries during December, we found that U.S. companies were competitive with the adjusted FMVs and were bidding at prices below the FMV 99 percent of the time. While U.S. companies may not have won every one of these sales, had the Japanese companies bid at, or even near, their adjusted FMV it is likely that the U.S. would have won a large share of these.

Therefore, we believe that the sales loss can be attributed reasonably to Japanese dumping in these markets.

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THIRD COUNTRY DUMPING

MOS Memory

\$ MILLION

	1986 MOS MEMORY MARKET*		85-86 CHANGE IN JAPANESE MARKET SHARE**		ADJUST FOR 3RD COUNTRY DUMPING***		LOST SALES
Europe	\$822	X	(+8%	X	1.74)	=	\$114.4
Other 3rd Countries	\$222	X	(+6%	X	1.74)	=	\$ 23.2
TOTAL LOST SALES							\$137.6

* Consumption figures. While these figures are the most up-to-date and concrete market information available, they underestimate the actual size of the market especially in Asia where a large share of the market activity is for transshipment to another country, not for consumption in that market. Category includes DRAMs, ROMs, (both EPROMs and EEPROMs) and SRAMs. Used by interagency agreement. Source: Dataquest.

** Source: Dataquest

*** Japanese sales in third countries during the fourth quarter of 1986 averaged 57.34 percent of the foreign market values (FMVs) determined in the context of the suspension agreements on DRAMs and EPROMs with reductions for U.S. sales related expenses. To reflect the actual sales loss to U.S. companies, the Japanese increase in market share has been adjusted to reflect fair values using as the multiplier 1.74, i.e., the inverse of 57.34 percent.

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ATTACHMENT D

PROS AND CONS OF ANALYSES OF TRADE DAMAGE IN THIRD COUNTRY MARKETS

PRODUCER SURPLUS APPROACH

Pro:

- o More accurately reflects agreement, which is cast in terms of price levels rather than market shares.
- o All elements (including product categories and elasticities) are based on actual evidence.

Con:

- o Appears to constrain the U.S. to its present small share (i.e., its present demand curve) of the world DRAM market. The movement along a demand curve assumed by this approach ignores the fact that as the U.S. (re)gained sales to markets denied to them by Japanese dumping, the demand curve for U.S. products would shift outward.
- o Only estimates producer loss for DRAMs and EPROMs. While dumping cases have not been filed on other MOS memory products, this approach disregards Japanese pricing on SRAMs, for example, which have shown 20 percent price declines in the months subsequent to the signing of the Agreement.
- o Model incorporates a number of assumptions; such models are only as good as the data and assumptions they are based.

LOST SALES APPROACH

Pro:

- o Based on view that no credible economic reason aside from dumping exists to explain the growth of Japanese market share during the past year. Given the relative competitiveness between the two industries and the appreciation of the yen, one would expect the Japanese market share to decline or at best stay constant. These assumptions are not based on an insistence that U.S. market share remain fixed.
- o Estimates losses for the entire range of MOS memory products, an area with both a documented history and continued allegations of Japanese dumping.
- o Reflects actual experience as well as economic theory. Aims to account for what happened in the marketplace.

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Con:

- o Appears to assume that U.S. and Japanese market shares must remain fixed.
- o Appears to assume upward sloping demand curves, thereby contradicting credible evidence that higher prices reduce demand. Specifically, assumes that 74percent price increase does not decrease demand, and that an increase in sales to 1985 level is warranted despite the price increase.
- o No evidence of dumping for three of five major product categories chosen, that account for roughly 39% of total.

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Attachment E

JAPAN SEMICONDUCTOR AGREEMENT

RECOMMENDED RETALIATION CANDIDATES

<u>TSUSA</u>	<u>PRODUCT</u>	<u>1986 IMPORTS¹</u>	<u>IMPORT/ CONSUMP²</u>	<u>JAP'S IMP SHARE³</u>
676304x	Peripherals -- Displays	\$ 376.2	35%	35%
6763069	Laser Printers	348.3	25%	87%
6763055	Hard Disc Drives	187.8	19%	78%
7244565	Computer Tape	82.0	21%	5%
6849258	Color TV 18"-19"	39.9	na	9%
6785061	Radio-tape player comb.	31.7	na	27%
6785066	Phono-tape player comb.	20.5	na	29%
70790	Optical Fiber	7.6	na	10%
TOTAL:		<u>\$1094.0</u>		

OTHER POTENTIAL CANDIDATES

<u>TSUSA</u>	<u>PRODUCT</u>	<u>1986 IMPORTS¹</u>
67615	Central Proc. Units	\$ 570.0
68220,5	Small Electric Motors	69.5
TOTAL:		<u>\$ 639.5</u>

¹1986 Imports for consumption from Japan, c.i.f., millions of \$

²Total imports as share of U.S. consumption, 1985 (DOC estimate)

³Japan's share of total U.S. imports, 1986

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PRODUCTS RECOMMENDED FOR RETALIATION

Computer Peripherals -- Displays

TSUSA: 676.3041, 676.3043, 676.3046

1986 Imports from Japan: \$376.2 million

- o Imports from Japan are concentrated in color displays (676.3043), which accounts for \$297.3 million of the total. Japan's U.S. market share for all displays is about 11%. The Japanese market share for color displays is probably higher.
- o As color displays become more popular, production runs have become longer, and prices have fallen. Japanese producers (most notably NEC) specialize in large volume production. Restricting Japanese supply would have some consumer effect, but it would probably mean that prices would not fall so fast, or merely stabilize.
- o South Korea and Taiwan are new entrants into the color display market. The domestic market is also becoming more competitive as demand for the product grows. Such factors are likely to exert a further downward effect on prices in the future.
- o Japan is the sole foreign supplier of professional quality (PGA) color displays; however, IBM produces PGA displays domestically.
- o NEC, Toshiba, Mitsubishi, and Fujitsu are all major producers of displays.

Laser Printers

TSUSA: 676.3069

1986 Imports from Japan: \$348.3 million

- o Until about two years ago, Japan did not export laser printers to the U.S. However, they did export the "engines" (optical components) of laser printers for U.S. manufacturers (Hewlett-Packard, Apple, others), who add the software, logic chips, and case. Lately, some Japanese companies having been getting better at producing the sophisticated software and logic chips, and have started exporting finished printers to the U.S. Japan's share of the market is still relatively low. (Note: Laser printer engines and finished printers fall under completely different TSUSAs).
- o Oki (Canon) and Ricoh are the major exporters of laser printers. Hitachi also produces them.

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Hard Disc Drives

TSUSA: 676.3055

1986 Imports from Japan: \$187.8 million

- o Japan's U.S. market share of hard disc drives is still relatively low (12-15%) and alternate domestic sources are plentiful. The UK and FRG also supply a small portion of the U.S. market.
- o Fujitsu, Hitachi, and NEC are the largest Japanese exporters to the U.S.

Computer Tape

TSUSA: 7244565

1986 Imports from Japan: \$82.0 million (est.)

- o Japan's market share is small (1-2% of U.S. market), and alternate suppliers, both domestic and foreign, are numerous.
- o Do not yet have information on Japanese companies exporting computer tape, but it is likely that at least some of the companies covered by the semiconductor agreement do export.

Color TVs -- 18"-19"

TSUSA: 684.9258

1986 Imports from Japan: \$39.9 million

- o Japan's share of total U.S. imports is about 9.5%. Taiwan and South Korea together account for about three-fourths of U.S. imports in this category.
- o Matsushita (Panasonic), Mitsubishi, Hitachi, and NEC all export color TVs to the U.S.

Radio Tape-Player Combinations

TSUSA: 678.5061

1986 Imports from Japan: \$31.7 million

- o Plenty of alternate suppliers exist: Taiwan and South Korea are capturing larger market shares (together they account for 55% of imports).
- o Japanese imports of this product are actually declining, as imports from Asian NICs increase. Imports have fallen from a high of \$53.4 million in 1984 to \$31.7 million for 1986.
- o Hitachi, Mitsubishi, and Matsushita all produce these products.

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Radio-phonograph-tape-player Combinations

TSUSA: 678.5066

1986 Imports from Japan: \$20.5 million

- o Good alternate sources of supply exist in Taiwan and Korea (Taiwan alone accounts for 56% of imports). Imports from Japan declined from \$36.6 million in 1985 to \$20.5 million in 1986.
- o Hitachi, Mitsubishi, and Matsushita produce these products.

Optical Fiber

TSUSA: 707.90

1986 Imports from Japan: \$7.6 million

- o Japan's U.S. market share is miniscule (in the 1% area). Alternate suppliers are plentiful.
- o Hitachi and NEC are large producers of optical fiber.

OTHER POSSIBLE CANDIDATES

Central Processing Units

TSUSA: 676.15

1986 Imports from Japan: \$570 million (est)

- o Japan's market share in smaller CPU's -- especially lap-tops -- is very large, and restrictions of them would result in significant market disruption. Commerce analysts estimate that these smaller units (below \$750/unit) account for about half of total Japanese imports in this category.
- o For larger CPU's (\$750 and above), domestic sources are plentiful and competitive. Any potential retaliation should aim only at these larger products.
- o Agencies object to retaliation against supercomputers, which fall in this category. They would have to be carved out (on the basis of price, perhaps) from potential retaliation.
- o Hitachi, Fujitsu, Mitsubishi, NEC, and Oki produce CPUs.

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Small Electric Motors

TSUSA: 68220, 68225

1986 Imports from Japan: \$69.4 million

- o These are electric motors of 1/40 horsepower or less, which are used in a variety of electric and electronic products.
- o Japan's U.S. market share for these products is low (5-10%) and alternate sources are numerous, both domestically and abroad (e.g., Singapore, Hong Kong, Taiwan).
- o Hitachi, Mitsubishi, and Toshiba are the largest Japanese exporters to the U.S.

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