

## The Center for International Economic Growth

January 24, 1991

### THE U.S.-JAPAN SEMICONDUCTOR AGREEMENT: KEEPING UP THE MANAGED TRADE AGENDA

#### INTRODUCTION

At the insistence of the United States, in 1986 Japan agreed to limit its exports of semiconductors, mainly the “dynamic random access memory” (DRAM) chips, to America. These chips are used in high-tech consumer electronics equipment like computers and video cassette recorders. The agreement expires this July 1, and the Bush Administration thus soon must decide whether to renew it. Doing so would make Washington a hypocrite in its free trade efforts to open markets abroad for American products. The 1986 chip agreement, after all, restricts trade, ostensibly to help some American segments of the semiconductor industry. The agreement in fact has harmed American computer manufacturers, who have found themselves paying higher prices for computer chips. This makes American computer manufacturers less competitive and drives up computer prices for all Americans.

Extending the semiconductor chip agreement is a prescription for weakening yet another American industry by making it less competitive through addiction to trade protection, thus undermining America’s competitive position in the international economy. As such, George Bush should not renew the semiconductor chip accord.

**Bowing to Pressure.** In the 1980s, the American semiconductor industry complained that it faced unfair competition from Japanese firms and needed temporary relief from Japanese imports to re-tool American production facilities. The U.S. government responded by threatening trade retaliation if Tokyo did not raise the price of Japanese, low-end DRAM chips in the American and foreign markets. Tokyo bowed to this pressure in August 1986.

Japan also agreed to try to guarantee the U.S. a specific share of the Japanese market in these products.

**Cost of Protection.** As in all forms of trade protection, one U.S. industry has been "helped" at the high expense of others. American computer manufacturers found themselves less competitive due to higher prices and even shortages of the low-end chips that they incorporate in their products.

- The Bush Administration and the Congress should assess the damage being inflicted on American computer manufacturers and on consumers by the current agreement. If the Administration and Congress genuinely wish America to be competitive in semiconductors and other industries, policy makers should create the macroeconomic environment for this. They, for example, could remove the disincentives created by the tax system on investment, savings, and innovation. What will not spur greater competitiveness are protectionist agreements, like that for computer chips, that shield American firms from real world market forces. As such, the Bush Administration should announce as early as possible that it will not renew the semiconductor chip agreement with Japan.

## THE SEMICONDUCTOR INDUSTRY

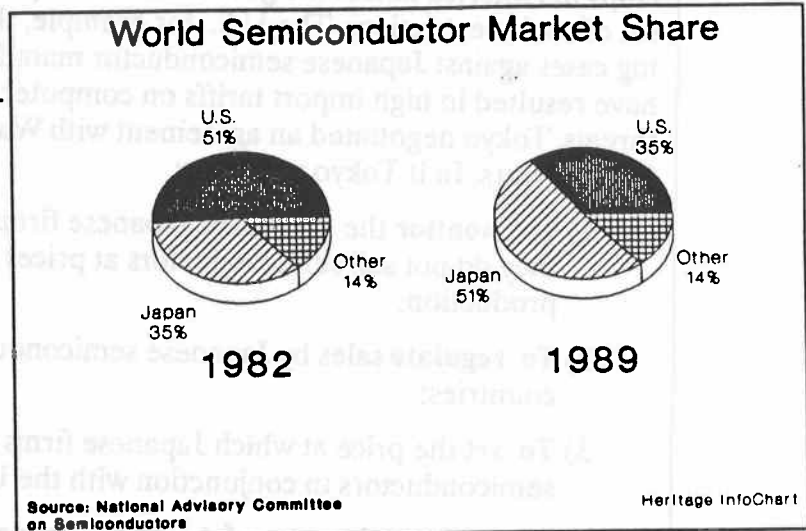
During the three decades following World War II, America was the leader in the commercial development and production of semiconductors. Semiconductors, which include early vacuum tubes, transistors, and today's microchips, have been critical components in most electronic products. Today's principal semiconductors are memory and logic chips. Memory chips store information created through mechanical computation; logic chips perform the actual computations that generate the information. These chips are separated into categories based on the amount of memory and computational capacity. A 256K chip, for example, can hold 256,000 bytes — or units — of information, while a 64K chip can hold only 64,000 bytes of information. A 1-meg chip holds 1,000,000 bytes of information while a 4-meg chip holds 4,000,000 bytes. These chips are used in appliances, automobiles, calculators, industrial equipment and machinery, personal computers, video games, and other products.

## THE U.S.-JAPAN AGREEMENT

In the early 1970s the U.S. held 60 percent of the world market in semiconductors, 95 percent of the American domestic market and 25 percent of the

Japanese market.<sup>1</sup> By 1982, the U.S. control had fallen to 51 percent of the world market in semiconductors; the Japanese had 35 percent, up from about 15 percent in the early 1970s. By 1989, the U.S. and Japanese positions were reversed, with American firms holding 35 percent of the world market and the Japanese 51 percent.<sup>2</sup>

This trend of the loss of U.S. market share of semiconductors led to political action in the middle of the 1980s. By 1985, U.S. manufacturers were importing record numbers of computer chips, especially the lower capacity Dynamic Random Access Memory (DRAM) and Erasable



Programmable Read Only Memory (EPROM) chips, from Japan to meet their production needs. In that year, Japanese firms accounted for 92 percent of the sales of the 256K chips in the U.S. market.<sup>3</sup> American semiconductor manufacturers, such as Intel Corporation and National Semiconductor Corporation, responded to increased imports by seeking U.S. government restraints on imports. They claimed that to become competitive, they had to be protected from foreign competition. The American firms maintained that their Japanese counterparts engaged in unfair business practices and perhaps were receiving help from the Japanese government. The American firms also claimed that the Japanese firms were "dumping" computer chips in the U.S. and other foreign markets, that is, selling them below the costs of production.

Beyond seeking to limit the sale in the U.S. of Japanese chips, the American producers sought guarantees of a specific share of the Japanese semiconductor market. The American firms, however, were unable to cite specific trade barriers that restricted the entry of U.S. computer chips into Japan. Still, they maintained that somehow the structure of the Japanese market or Japanese business practices unfairly limited sales of American manufactured products. This was a plausible claim since a myriad of informal

1 Michael L. Dertouzos, et al., "Made In America: Regaining the Productive Edge" (Cambridge, Mass.: MIT Press, 1989), p. 248-49.

2 See "Semiconductors: A Strategic Industry At Risk" A report to the President and Congress from the National Advisory Committee on Semiconductors, November 1989, Washington, D.C.

3 "Semiconductor Protectionism: Goodbye Mr. Chips," Citizens for a Sound Economy *Issue Alert*, No. 9, August 27, 1986, p. 2.

Japanese business practices and relationships make it very difficult for foreign products to compete in Japan.

**“Voluntary” Restrictions.** The U.S. government acted on these complaints in 1986 and threatened legal action against Japanese firms selling computer chips in America unless the government of Japan agreed “voluntarily” to a set of trade restrictions. The U.S., for example, threatened to file anti-dumping cases against Japanese semiconductor manufacturers. Such cases could have resulted in high import tariffs on computer chips. As a result of the U.S. threats, Tokyo negotiated an agreement with Washington in 1986 that runs for five years. In it Tokyo promises:

- 1) **To monitor** the exports of Japanese firms to ensure that they do not sell semiconductors at prices below the cost of production;
- 2) **To regulate** sales by Japanese semiconductor firms in third countries;
- 3) **To set the price** at which Japanese firms sell semiconductors in conjunction with the U.S. government;
- 4) **To promote** the sales of American-made memory chips in Japan in an effort to gain at least 10 percent of the Japanese market for the Americans. If needed, implies the agreement, the Japanese government will force its industry to limit production, thus creating a shortage that could be filled with U.S. chips.

The European Community (EC) argued that the semiconductor accord amounts to price fixing by governments and thus is illegal under the General Agreement on Tariffs and Trade (GATT). The EC in 1987 brought a case against the U.S. and Japan under GATT. In 1988 a GATT commission ruled in favor of the EC, finding that fixing prices of semiconductors for third countries violates the rules of international trade and thus should be stopped.<sup>4</sup>

The U.S.-Japanese agreement was changed to meet the letter, though not the spirit of the GATT decision. The U.S. Department of Commerce would set the prices for the Japanese semiconductors sold in the U.S., while the Japanese government would set the price of its firms' products in third countries, theoretically without U.S. government agreement. In fact, the Japanese understood that they should keep prices high if they did not want to suffer unspecified U.S. trade retaliation. If, for example, American computer manufacturers began purchasing significant quantities of chips that Japanese

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<sup>4</sup> "The Momentum of Managed Trade" *The Economist*, January 13, 1990, p. 19.

firms were marketing at bargain basement prices, say in the Republic of China on Taiwan, the U.S. would act accordingly.

American computer chip manufacturers have complained that the Japanese have not fully lived up to the agreement. They maintain, for example, that American firms still do not have a large enough share of the Japanese market. The Japanese government has responded that it did not agree to guarantee certain market shares by certain dates, but only to act as best it could to promote sales of American semiconductors. Not satisfied, last March the American Semiconductor Industry Association (SIA), a group of U.S. chip producers, called upon the United States Trade Representative (USTR) for trade retaliation against Japan. The USTR found no evidence to support SIA's claim and has taken no action against Japan.

## HARMING AMERICAN ENTERPRISES

The U.S.-Japan agreement in essence is a government-established and -enforced cartel, which attempts through trade restrictions, price setting, and even production controls, to force buyers to pay higher prices for the product. This sets an alarming precedent for world trade. As bad, it has harmed American computer manufacturers by forcing them to purchase higher-priced chips, thus raising their costs of production.

As a result of the agreement, Japanese DRAM chips cost American computer makers 30 percent to 40 percent more than they cost European computer makers. Example: the European minimum price for a 1-meg DRAM chip is \$3.90; the price in the U.S. is \$5.00. The 4-meg chip costs \$18 in Europe but \$30 in the U.S.<sup>5</sup> These higher prices last year led American computer manufacturers to ask the U.S. Department of Commerce to abandon the cartel arrangement with Japan.<sup>6</sup> Seven Japanese chip makers submitted similar requests to Commerce.<sup>7</sup> These cases are still pending.

American computer manufacturers, while still the world's best, are in tough competition for global markets. In 1980, American firms had 82 percent of the world market in computers while the Japanese had only 10 percent. Some projections suggest that by 1992, the American share will shrink to 38 percent and Japanese firms will increase their share to 42 percent.<sup>8</sup> When the U.S. government forces American computer firms to purchase overpriced semiconductors, it cripples their global competitiveness.

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<sup>5</sup> *The Japan Digest*, July 25, 1990, p. 1.

<sup>6</sup> "Commerce Department Takes First Step Toward Removing Price Floor for Japanese Chips," *Japan Digest*, October 3, 1990, p. 3.

<sup>7</sup> *Ibid.*

<sup>8</sup> "Computers and Other Targets," *New York Times*, May 5, 1990, p. A 34.



## DUBIOUS DUMPING CHARGES

American semiconductor manufacturers claim that Japanese firms “dump” their chips into the U.S. and other foreign markets, meaning, generally, sell the chips below the cost of production. Such a practice, however, is not inherently unfair. If an American firm, for example, has a large inventory of some product that it has difficulty selling, it is reasonable for it to cut its prices below the costs of production to dispose of such products and cut its losses. Some of the pricing decisions of Japanese semiconductor firms, in fact, were to meet the competition from lower-priced Korean chips.

The definition of dumping in U.S. trade laws often is unclear and arbitrary. These laws set criteria for determining what is called the “fair market value” of a product. In accordance with these criteria, the U.S. government calculates the costs of production in terms of these criteria in the home country of the foreign seller under investigation. If the product is being exported and sold abroad at a price cheaper than its domestic cost, as determined by the U.S. government, then it is being illegally dumped.

This process does not take into account all production costs. American businesses may record costs differently than Japanese firms. Energy costs, capital costs, labor and material costs are all very difficult to equate between different manufacturing bases in different countries. For example, in 1986, Japanese 256K chips were being sold for \$2.60 in the U.S. and \$1.70 in Japan.<sup>9</sup> That is hardly “dumping” even by U.S. government definitions. Genuine “fair market value” is the price that someone is willing to pay for a product. If a company invests large quantities of capital in a product that sells poorly, then “fair market value” is determined by the amount for which it can be sold.

## FAILURE TO SUPPLY THE JAPANESE MARKET

In response to calls from the U.S. government for a larger share of the Japanese semiconductor market, the Japanese government has required many Japanese firms to purchase American chips. Regarding these chips inappropriate for their needs, some Japanese companies obeyed their government and bought U.S. chips, but then left them unused in storage. The Electronic Industries Association of Japan (EIAJ) says that: the “level of U.S. semiconductor sales in Japan is not caused by Japanese trade barriers or resistance to imports by Japanese customers. It is a reflection of market factors, and is heavily influenced by U.S. (not Japanese) marketing, product develop-

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<sup>9</sup> Michael E. Porter, *The Competitive Advantage of Nations* (New York: The Free Press, 1990), p. 117.

ment and investment decisions."<sup>10</sup> The group points out that the U.S. semiconductor industry is competing in only about half the Japanese semiconductor market.

**Studying the Market.** To verify this, two Washington law firms published a study on behalf of EIAJ. Within this study they quoted a joint U.S.-Japanese industry report on American chip problems in the Japanese market. States the report:

...U.S. firms are currently able to supply only about 6 percent of the semiconductor demand in the Japanese consumer electronics sector which accounts for 36 percent of the total Japanese market. The Report concludes that even if all the necessary modifications were made to adapt other U.S. devices to this market, U.S. firms would only be able to supply about another 12 percent of this market. The Report also found that only a few U.S. suppliers currently produce the kinds of packaging for semiconductor devices which are suitable for this sector.<sup>11</sup>

Further, almost 50 percent of American semiconductor sales to Japan between 1987 and 1989 were in the declining markets of bi-polar digital and analog devices. These devices are out-dated and there is a very small market for them in the U.S. This is a serious problem, concludes Harvard Business School Professor Michael Porter. He writes:

In many industries, however, innovation is profitable but firms are deterred by short-term costs or organizational disruption of supplanting their current assets. American semiconductor firms, for example, were slow to abandon bipolar technology in favor of newer metal oxide semiconductor (MOS) technology, allowing the Japanese firms to gain position.<sup>12</sup>

The joint U.S.-Japan report suggests that the American semiconductor industry's claim that Japan has a closed market in computer chips is not true, and that calls for more government protection will not solve the problem.

## AMERICAN BUSINESS PRACTICES

The different investment and business strategies of American and Japanese companies have varying effects. Japanese companies tend to invest in mod-

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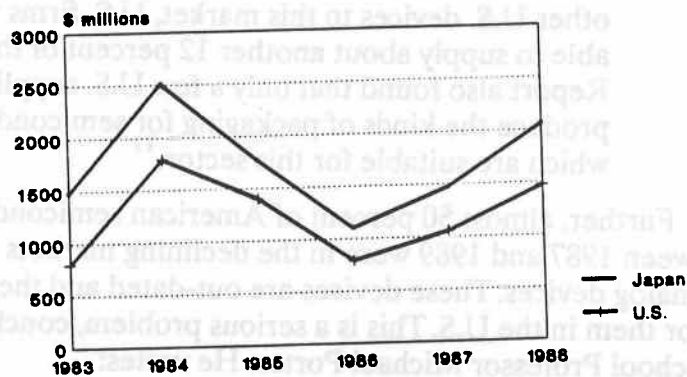
<sup>10</sup>William N. Walker and Stanton D. Anderson, "Memorandum in Opposition to SIAs Submission Under Super 301," by the law firms of Mudge Rose Guthrie Alexander & Ferdon; and Anderson, Hibe, Nautheim & Blair, Washington, D.C. 1990, p. 5.

<sup>11</sup>*Ibid.*

<sup>12</sup>Porter, p. 169.

ernization and expanded production over long periods of time. By contrast, the American firms tend to invest mainly when they anticipate upturns in market demand, and to defer investments when downturns are expected. In the late 1970s, for instance, a slump was anticipated for lower-end DRAMs and EPROMs. As a result, many American firms invested in other products like high-end computer chips. The Japanese, however, kept investing in low-end DRAMs during this period and thus better were able to increase production when the market again began to expand. The American firms had to catch up, putting them at a serious disadvantage in these product lines.

### Capital Spending for Chip Manufacturing 1983-1988



Source: Nomura Analyst Report, *Semiconductor Markets Entering Sustained Growth*, July 26, 1988.

Heritage InfoChart

As the graph indicates, Japanese firms continued to invest more than their American counterparts in low-end chips before and during the period in the mid- and late 1980s, when demand finally expanded. Their investments in technology-intensive production methods and state-of-the-art production facilities enabled them to gain a competitive edge in new generation products of the period, like DRAMs.

**Market Decision.** By contrast, in the late 1970s and early 1980s, when demand for low-end DRAMs declined, some American semiconductor firms decided to get out of the DRAM business, not because of Japanese competition, but to focus their resources elsewhere. For example, two years after dropping the production of low-end DRAMs, the American Intel Corporation made \$600 million in profits from selling other high-end chips.<sup>13</sup> These high-end microprocessing chips are still money makers for American producers.

When U.S. demand for DRAMs increased in the 1980s, Japanese firms filled the gap, not due to unfair trade practices, but due to earlier investment

<sup>13</sup>"The New Mr. Chips: Speaking for Silicon Valley's Upstarts," *Reason Magazine*, July 1990.



decisions. By delaying investment during slow growth periods in the market, U.S. firms had lost much of their competitive edge. Now, many of these American firms want the federal government to cover losses they might have suffered from not investing in DRAMs. It is ironic that if some of those companies had invested in DRAM production, they would have sacrificed the greater profits gained from producing the larger chips.

## THE STRUCTURE OF THE SEMICONDUCTOR INDUSTRY

Some American semiconductor firms argue that the Japanese government's supposed aggressive industrial policy is responsible for its superiority in computer chip production. But a closer look at the Japanese economy suggests that natural market forces, not government planning, were responsible. In some cases the difference in the structure of the semiconductor industries in Japan and the U.S. accounts for the difference in competitiveness in semiconductors.

In 1957, General Electric Company, Raytheon Company, RCA Corporation, Sylvania Company, and Westinghouse Electric Corporation were America's largest producers of semiconductors, which at that time consisted mainly of transistors. These firms produced transistors for their own consumer products such as radios and televisions as well as for sale to other firms. By the 1960s, many small American companies broke into the semiconductor market, led by Intel Corporation and Fairchild Corporation. Soon these companies took the semiconductor business away from the consumer electronics giants. The new firms produced only semiconductors, which they sold to companies to be incorporated into other products.

**U.S. Competitors.** Today, the American semiconductor industry is split into three levels of competitors. At the top are a few very large companies that make semiconductors as well as some end products such as calculators and cellular telephones. Those include Motorola Corporation and Texas Instruments Corporation. There are several medium size companies, including Intel Corporation and National Semiconductor Corporation, which produce a variety of semiconductors. At the bottom are scores of small firms that have gained a market niche by producing only one or a few high quality products at competitive prices.<sup>14</sup>

The Japanese semiconductor industry developed mainly as divisions of the large consumer electronics industry and, in contrast to the American industry, has remained this way. Thus, the Japanese industry is made up of a number of large producers such as Fujitsu, Ltd., Hitachi, Ltd., Mitsubishi Cor-

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<sup>14</sup>Many critics of the American industry complain the big producers spend more money and time lobbying Congress for import relief and suing each other than they do preparing for international competition. See for example, "A Chip Maker's Profit on Patents: Texas Instruments Angers Industry," *New York Times*, October 16, 1990, p. D1.

poration, NEC Corporation, and Toshiba Corporation. These firms manufacture semiconductors mainly for their own internal use in the various electronic products they manufacture.

**Different Positions.** A number of attributes of the American and Japanese industries suggests why they are in different competitive positions and reveal that unfair policies are not to blame. The larger Japanese integrated producers tend to be highly competitive in their own market as well as in foreign markets. Most are selling to themselves by supplying their consumer products division. They tend to be most competitive in low-end computer chips. Since most American firms produce only semiconductors, they do not have a guaranteed market for many of their products. They do, however, tend to have a comparative advantage in producing specialized, custom-made chips.

The Japanese market has been very competitive, with most companies competing directly with each other in end products. By contrast, only a few American semiconductor manufacturers produce end products as well. This suggests that the Japanese government did not play a key role in helping the industry develop. Harvard Business School's Michael Porter, in a study on competitiveness, notes that "among the strongest empirical findings from our research is the association between vigorous domestic rivalry and the creation and persistence of competitive advantage in an industry."<sup>15</sup>

**Domestic Rivalry.** For example, Japan has companies that compete with each other across an array of product areas. From 1982 to 1987 not only were there several large firms competing with each other, but there were several new "entrants" that increased domestic rivalry. By the end of 1987, nine Japanese producers were competing with each other in four different products areas.<sup>16</sup> Even though firms were allowed to coordinate efforts to raise venture capital, competition was maintained through rivalry in end product areas. Each company had to market aggressively such products as video cassette recorders and other consumer electronic products. This refutes the contention that Japan maintains a cartel in semiconductors. Normal market forces and competition were the primary factors resulting in the dominance of the low-end computer chip market by Japanese firms.

Japanese manufacturers, meanwhile, are facing increasing pressure from semiconductor producers in South Korea and Taiwan. This has made the Japanese industry better able to compete in international markets. This growth suggests that market forces rather than industrial policy have helped Japanese firms.

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<sup>15</sup>Michael Becker, "Semiconductor Protectionism: Goodbye Mr. Chips," *Citizens for a Sound Economy, Issue Alert* No. 9, August 27, 1986, p. 1.

<sup>16</sup>Electronic Industries Association of Japan, "Statement on SemiConductors" November 21, 1988 by Mudge Rose Guthrie Alexander and Ferdon, Washington, D.C., p. 16.

## THE GOVERNMENT PLANNING APPROACH

Some American semiconductor manufacturers and their supporters in government have argued that direct U.S. government assistance, in addition to trade restrictions on foreign competitors, is necessary if the U.S. industry is to remain competitive. They maintain that the free market has failed in the semiconductor industry and that the new emerging international economy requires government guidance.

To this end, a consortium of fourteen member computer chip companies was created in 1988 to increase the ability of the members to compete internationally. Called Sematech, 50 percent of its \$200 million annual budget comes from the federal government. This consortium was created to assist supposedly less competitive American companies. All but two of the fourteen Sematech members have annual revenues above \$1 billion.<sup>17</sup> Today Sematech continues to fund these companies. There have been recent moves to increase Sematech's annual \$200 million budget to \$800 million over a three-year period. The National Advisory Committee on Semiconductors and the Economic Policy Institute, a Washington research organization, for example, published a report in 1989 calling for such increases.<sup>18</sup>

Many American semiconductor manufacturers have endorsed a plan that goes well beyond Sematech. This plan would establish a U.S. government-funded multi-billion dollar investment corporation to bankroll companies entering the semiconductor business, as well as already established firms. As part of this, a Consumer Electronics Capital Corporation would provide low-cost capital to companies wishing to produce consumer electronics. Yet the federal government has no privileged knowledge concerning winners and losers in the market. And picking winners and losers is just what the federal government does when it funds a consortium like Sematech or under an expanded plan.<sup>19</sup>

**Freedom to Cooperate or Compete.** The free market offers a better approach. Cooperation between businesses in basic research and development might in various cases contribute to the companies' overall competitiveness. It might even be profitable for businesses to engage in joint production. Yet those are decisions best left to the businesses themselves in the market. They should be free to experiment with various approaches, to compete or cooperate as they see fit. There is no indication that any business, before the fact, has the undisputed correct approach to research, development, production, and sales of a product. If the best approach were so easily known, all companies would engage in it and prosper.

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17"Divided When the Chips are Down," *The Financial Times*, September 12, 1990, p. B 16.

18"Studies Ask Electronics Aid by U.S.," *New York Times*, November 21, 1989, p. D1.

19"Capital Plan for U.S. Electronics," *Financial Times*, November 9, 1989, p. 2.

In the case of Sematech, federal money gives its fourteen members an unfair advantage over smaller American competitors. Smaller firms, however, in the 1960s successfully challenged the giant U.S. consumer electronics companies for control of transistor production. Today, small firms produce profitable, high quality specialized computer chips. The market, not the government, would seem to be the best judge of which firms should be producing what product.

## NATIONAL SECURITY

Some advocates of managed trade and government subsidies argue that the semiconductor industry is "strategic," that is, vital to America's national security. Therefore, goes the argument, the industry merits federal funding to maintain its viability. This seems to assume that the American semiconductor industry would disappear completely if faced with international competition.

The fact is, many smaller versatile chip companies are competitive, as well as some larger ones. Newly opened markets would not cause them to shut down. Further, there is not necessarily a problem receiving supplies from other countries, even during times of war. Only in the most extreme situation in which the U.S. was cut off from its Pacific allies would this be a problem with low-end semiconductors. Even if the U.S. were cut off, however, there are options open to it, short of resorting to protectionism. Any strategic material that is not in abundance is stockpiled by the federal government. This stockpiled supply is used during periods of crisis to give industry enough time to gear up production. The U.S. strategic reserves in oil and other minerals are examples. Semiconductors, especially the low-end DRAMs, in the most extreme case — war — could be stockpiled in much the same way.

## ACHIEVING COMPETITIVENESS

Rather than by government planning or special handouts, the best way to promote a competitive American semiconductor industry would be to create a macro-economic environment in which it would be easier for U.S. companies to invest capital in research and development. Such an environment would result from changes in tax policy and anti-trust laws. The National Advisory Committee on Semiconductors, established by Congress in 1989 to devise a strategy for the industry, says that increased investment in the industry would be spurred by reducing the capital gains tax, changing the schedules for depreciation of equipment, and increasing the American savings rate by providing tax incentives for savings.<sup>20</sup>

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<sup>20</sup>"Tax Cuts Called Cure for Ill Chip Industry," *Washington Times*, September 10, 1990, p. D1.



**Antitrust Obstacles.** Several American chip manufacturers could profit by developing a competitive strategy similar to that of the Japanese. Rather than form strategic alliances with other chip manufacturers, they could seek joint ventures with consumer electronics producers such as Zenith Electronics Corporation. The problem is that U.S. antitrust laws make this difficult.

Rather, Washington policy makers often react to the short-term complaints of special interest groups without considering fully the consequences of their actions. This was the case with the original semiconductor agreement. Some American computer chip manufacturers realized short-term benefits, but manufacturers using these chips in their computers suffered.

To head off such a situation reoccurring, the Bush Administration might do well to order the Department of Commerce or the Federal Trade Commission to study the adverse effects of the semiconductor cartel on American computer manufacturers. More detailed data might well provide important ammunition in the fight for free trade and against protectionism, and prevent such counterproductive economic policies as the semiconductor cartel in the future.

## CONCLUSION

The 1986 U.S.-Japan semiconductor agreement is a legalized, government-supported international cartel in which prices are fixed and by which downstream industries, like American computer manufacturers, and consumers are hurt. The weak position five years ago of American producers of low-end semiconductors had very little to do with unfair trade or production practices by the Japanese. Rather, U.S. companies walked away from DRAM production, sometimes because of bad decisions, and other times because they correctly saw more profitable opportunities in high-end or custom chip production.

**Path to Addiction.** The U.S.-Japan semiconductor cartel has not made American producers more competitive. If it had, they would not be seeking further trade protection and government handouts. Now these producers are heading down the path well trod for two decades by American steel companies and for three decades by American textile and apparel companies. It is a path to addiction to ever greater government help and ever greater market restrictions leading to less competitive industries.

For the sake of a healthy American computer industry, the Bush Administration should not renew the agreement with Japan, and should not contribute to this addiction. And for the sake, too, of the Bush Administration's efforts, the Administration cannot act hypocritically and while talking of free trade, renew, perhaps even tighten a protectionist, price-fixing semiconductor cartel.



Rather, the Bush Administration should help American computer manufacturers in particular and world trade in general by announcing that the cartel will be allowed to expire in July. This will help break the self-destructive cycle of protectionism that has plagued the U.S. and the world, and promote instead a prosperous world economy.

**Bryan T. Johnson**  
Policy Analyst

## CONCLUSION

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