The High-Tech Trade War with Japan: Can Anyone Win?

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The United States is involved in a war – not an arms or an ideological war with some bitter communist enemy, but an economic war with a close and important democratic ally. The war is a trade war; the opponent is Japan. It is a war that the United States professes not to want[1] and Japan can ill afford. Yet it is a war that both countries seem determined to win. The intense competition for markets between these two allies threatens the political stability of the Far East region and the integrity of the world trading system.

The competition appears to be most concentrated in the high-technology fields. Japan, restricted in geographical size and in raw materials, apparently sees in high-tech fields an arena in which its comparative advantages in manufacturing productivity and availability of capital can compensate for its small size and scant raw materials.

Largely because of the loss of U.S. jobs that it represents, the growing trade deficit, particularly with Japan, has become an extremely sensitive subject with many Americans. A brief look at some recent trade figures helps to explain their concern.

In 1980, the U.S. trade deficit was $24.1 billion; by 1984, it had grown to $123.3 billion. For 1985, it is expected to reach $150 billion. Imported shoes now occupy nearly 80 percent of the U.S. market; imported machine tools, 39 percent; imported steel, 27 percent; and imported cars, 24 percent. In the home entertainment business, foreign competition captured 61 percent of the U.S. market in 1984.[2]

The Japanese are responsible for a large share of the U.S. trade deficit. Since 1981, Japanese purchases of American goods have modestly increased from $21.8 billion a year to $23.6 billion, while Japanese sales to the U.S. have soared from $39.9 billion to $60.4 billion.[3] Steel, automobiles, machine tools, and electronic consumer products are all industries in which the Japanese offer formidable competition to U.S. firms.

Competition in the High-Tech Industries

The U.S. - Japan trade imbalance problem has become particularly acute in the high-technology fields. Japan is gaining significant shares of the world market in industrial ceramics and composite materials and is substantially ahead in photovoltaics and the application of robotics. And in every major electronics market, U.S. imports are rising

1. See Ronald Reagan, "U.S. Trade Policy: Free and Fair Trade," speech to business and Congressional leaders and Cabinet officials, 23 September 1985, text contained in *Vital Speeches*, Vol. 52, No. 1, 15 October 1985.
2. Richard Alm, "Will Congress Push U.S. Into Global Trade War?," *U.S. News & World Report*, 29 July 1985, p. 51 and Warren Brown, "Imports Increasing Pressures on ITC, Congress for Relief," *Washington Post*, 15 September 1985, p. G2.
3. Lee Smith, "What the U.S. Can Sell Japan," *Fortune*, 13 May 1985, p. 92.

and exports falling. In 1984, the trade deficit with Japan in electronics surpassed our trade deficit in automobiles – accounting for $15.4 billion of our total adverse balance with Japan of $37 billion.

A fact that knowledgeable Americans find particularly galling about Japan's success is that much of it has resulted from a direct application of technology developed in the United States. The Japanese have shown themselves to be particularly adroit at applying technology developed elsewhere. As author Theodore White has observed:

> Today not a single radio is made in America, although Americans invented the modern radio; not a single black-and-white television set is made here, although America invented television. The few companies that assemble color television sets in the United States could not exist without imported parts made in Asia, although color television was originally developed in America. Almost all our video-cassette recorders are made in Japan; so are most hand-held calculators, watches, a huge share of our office machinery, and most high-fidelity audio equipment.[4]

The American semiconductor industry is being particularly hard hit. The Japanese seem intent upon wiping out our supremacy in this industry and are applying our own research and invention to do so. In fact, they may already have succeeded. Many industry experts believe that a semiconductor company has to be active in the memory business to remain viable; yet we seem to have already ceded almost all of the semiconductor memory business to the Japanese. Several U.S. companies have recently dropped out of the memory business entirely or have at least abandoned major portions of it. The problem has become so severe that many people – even some from the industry itself – believe that it is too large for individual companies to solve by themselves.

Consequences

The threatened loss of a robust, indigenous semiconductor industry within the U.S. is alarming for several reasons. First, because semiconductors are vital to the consumer, industrial, and military electronics industries, the U.S. needs a robust, indigenous semiconductor industrial base. Second, the increasing dominance of the semiconductor industry has meant that the United States' supercomputer industry is becoming increasingly dependent upon Japan for critical components. Frequently, U.S. supercomputer firms find themselves forced to buy integrated circuits from the very Japanese firms who are also their competitors in the supercomputer market. Supercomputers have truly become a critical national resource and for the U.S. to be dependent, even indirectly, upon another country for a critical resource is a source of vulnerability not unlike our oil dependency a decade ago. Third, since Japanese component suppliers are also the same companies that build computers, control over components could give their companies a significant edge in the worldwide computer market. And finally, importing critical computer components increases the danger of subversion.

The consequences of the general trade deficit are also disturbing. During 1985, the United States became a debtor nation for the first time since World War I. Sometime this year, the U.S. will replace Brazil as the world's largest debtor. In addition, the trade deficit is exacting an enormous toll on American industry. It has put a tight lid on economic growth and contributed to unemployment. MIT economist Lester Thurow

4. Theodore H. White, "The Danger from Japan," *The New York Times Magazine*, 28 July 1985, p. 40.

estimates that "if America had been running a balance in its balance of trade instead of $123 billion deficit, 3 million Americans who were not working in 1984 would have been working."[5]

Further, the trade deficit shows no signs of soon abating. According to most estimates, the annual trade shortfall will continue at about $140 billion to $150 billion for the rest of the decade. The result, according to some economists, is likely to be a recession.

The American economy is in a very literal sense running on borrowed money. Unless something is done to balance the nation's trade accounts, the U.S. could owe foreigners about $1 trillion by 1990. The interest payments alone on a foreign debt of that size could run as high as $100 billion annually. It is a simple mathematical fact of life that no country can forever run such huge trade deficits. The foreign lending necessary to finance them will end as foreigners come to feel that they have enough of their liquid assets invested in an ever more deeply indebted United States of America. When the lending stops, the dollar will surely fall. Since 12 percent of the GNP is imported, a depressed dollar generates a substantial amount of inflation. A 30 to 40 percent fall in the value of the dollar (the amount that would be necessary to achieve a trade balance) would generate about 4 percentage points of inflation.[6] The consequence of all this could be a major degradation in our standard of living and our national power. MIT's Thurow has written:

> If present trends continue, our standard of living will fall behind that of the world's new industrial leaders, and we will join the ranks of countries such as Egypt, Greece, Rome, Spain and England – nations that once led the world economically and politically but no longer do.[7]

It is not surprising, then, that there is mounting pressure on the Congress and the Administration to take some concerted action to address the current imbalance.

How Did It Get This Way?

There seem to be three basic reasons why Japanese merchants appear to be besting their U.S. competitors in the continual battle for markets. First, the unique relationship that exists between Japan's government and industry plus several economic and ingrained cultural factors combine to provide Japanese firms with some distinct systemic advantages. These systemic advantages include a dollar that has been highly overvalued with respect to the yen; an extremely favorable capital market, which has made investment capital available and cheap; a strong cultural bias toward domestic products; vigorous government support orchestrated by the Ministry of International Trade and Industry (MITI); and a corporate structure dominated by large, vertically integrated companies. Second, there are several areas in which the United States – the government through its overly restrictive policies and industry through its shortsightedness – seems to be shooting itself in the foot. U.S. shortcomings include a lack of understanding of the Japanese market; antitrust impediments to cooperative research and development; and a

5. Lester C. Thurow, *The Zero-Sum Solution: Building a World-Class American Economy*, (New York: Simon and Schuster, 1985), p. 30.
6. Ibid., pp. 23, 24.
7. Lester C. Thurow, "A World-Class Economy: Getting Back into the Ring," *Technology Review*, August/September 1985, p. 27.

fixation on short-term profits, which has resulted in an unwillingness to invest in risky, long-term R&D ventures. Finally, there is considerable evidence that many Japanese companies, often in apparent collusion with their government, regularly engage in morally offensive business practices. These practices include targeting specific industries, predatory pricing policies that dump Japanese products into foreign markets below their cost in order to capture market share, and outright industrial espionage.

Unfair Trade Cases

U.S. industry, feeling unfairly shut out of Japanese markets and subjected to predatory pricing at home, has sought relief through unfair trade practices suits. For example, three separate unfair trade cases have been initiated by the U.S. semiconductor industry against Japanese companies since June 1985. The first case, filed by the U.S. Semiconductor Industry Association (SIA) seeks presidential intervention aimed at opening Japan markets to U.S. firms and curtailing Japanese dumping in the U.S. market.[8] The second case was initiated by Micron Technology Inc., a small Boise, Idaho, company and accuses a group of Japanese companies of selling 64K DRAM chips in the U.S. at less than fair value.[9] In the third case, three U.S. semiconductor manufacturers – Intel Corporation, National Semiconductor Corporation, and Advanced Micro Devices – charge a group of Japanese companies of illegally selling erasable read-only memory (EPROM) chips in the U.S. below their manufacturing cost and ask the U.S. government to impose duties on Japanese-produced EPROMs.[10] All three cases seem to be receiving favorable consideration as they work their way through the U.S. government bureaucracy.

However, the most significant action against unfair Japanese trading practices was taken recently by the government. On 6 December, Commerce Secretary Malcolm Baldrige announced that, for the first time, the Commerce Department itself would initiate an investigation to determine whether Japan's semiconductor industry has been dumping 256K computer memory chips in the United States. Until now, Commerce Department investigations have been launched only after industry formally complains.[11]

This case is quite significant, not only because it represents the first instance of government-initiated action, but also because it could well lead to a precedent-setting penalty. If Commerce concludes that chips have been sold below production cost, i.e., dumped, it plans to levy a surcharge on future generations of Japanese-developed memory chips. Thus the penalties could be applied to the planned one-megabit chip, which would deal a significant blow to Japanese attempts to capture this important future market.[12]

The possibility that penalties might be applied to future products has caused considerable consternation among Japanese semiconductor suppliers and not a little controversy among administration officials. Within days of Baldrige's announcement, some White House aides were disavowing it, saying that Secretary Baldrige had

8. Alan Wm. Wolf, R. Michael Gadbaw, Thomas R. Howell and Timothy J. Richards, *Japanese Market Barriers in Microelectronics*, Semiconductor Industry Association, San Jose, California, 14 June 1985, p. ii.
9. Michael W. Miller, "Big U.S. Semiconductor Makers Expected to Sue Over 'Dumping' of Japanese Chips," *Wall Street Journal*, 30 September 1985, p. 42.
10. Michael W. Miller, "Three U.S. Firms File Trade Complaint Against Japan Semiconductor Makers," *Wall Street Journal*, 1 October 1985, p. 5.
11. Michael Schrage, "U.S. to Probe Japanese Chip Makers," *Washington Post*, 7 December 1985, p. C1.
12. Ibid., pp. C1, C8.

overstepped his authority in making the announcement. The White House reportedly had been subjected to heavy lobbying on the part of lawyers representing the Japanese semiconductor industry who sought to narrow the scope of possible penalties. Within a few more days, however, the White House had reversed itself and dropped its objections to the Baldrige plan.[13]

Protectionist Legislation

Congress, too, has reacted to the trade onslaught. Besieged by constituents seeking job protection, members of Congress have introduced more than 300 trade measures during this session. Two hundred of them are little more than press releases, intended for consumption in the sponsor's home district. Approximately 100, however, are bona fide protectionist bills. Most seek to protect industries or products so tiny or undeserving that they could not survive unless as part of larger legislation. The few remaining important bills fall into four broad categories: import restriction by quotas, import restriction by tariffs, access to markets, and ones dealing with unfair trading practices.[14] The various bills take aim at imports of textiles, telecommunications equipment, shoes, lumber, and copper.

In spite of a strong inclination on the part of the Congress to enact protectionist legislation, most seem to believe that protectionist policies directed at our allies would be very ill advised. A 1983 panel of the National Research Council noted:

> Nowhere is our national welfare more interwoven with that of our allies than in the fields of science cooperation and high-technology trade. The costs and risks of protectionist policies and market fragmentation are probably greater than in almost any other economic field except energy.[15]

Others believe that such policies would not work and, in fact, are likely to backfire. They point out that protectionism would raise consumer prices and thus fuel inflation; it would reduce American demand for foreign currency, pushing up the price of the dollar and worsening the trade imbalance; and it would invite retaliation.[16]

Japanese Concessions

From their actions it is clear that the Japanese are concerned about how they are perceived in this country. They have hired some of the most influential lobbyists and public relations firms in Washington. Japanese semiconductor companies, for example, have sent their top executives to the United States in a media blitz to counter the SIA and portray Japan as a victim of America's protectionist tendencies. With great fanfare, Hitachi Ltd. and other Japanese companies have kicked off major "Buy American" campaigns.

13. Stuart Auerbach, "White House Backs Off Baldrige Plan," *Washington Post*, 14 December 1985, p. B1 and Stuart Auerbach, "White House in the Chips Again," *Washington Post*, 17 December 1985, p. E3.
14. "All's fair in love – and trade?," part of "American Survey," *The Economist*, 28 September 1985, p. 24.
15. National Research Council, Office of International Affairs, *International Competition in Advanced Technology: Decisions for America*, A Consensus Statement Prepared by the Panel on Advanced Technology Competition and the Industrialized Allies (Washington, DC: National Academy Press, 1983), p. 8.
16. Martin Feldstein, "American Economic Policy and the World Economy," *Foreign Affairs*, Summer 1985, p. 997.

The Japanese insist that America's trading problems have nothing to do with Japan. They dismiss all accusations of protectionism as a "red herring" designed to obscure the shortcomings of U.S. industry. Japan's Electronic Industries Association even presents statistics purporting to show that the market for semiconductor sales in Japan is more open than in the U.S.[17]

Nevertheless, while protesting their innocence, Japanese companies have made some concessions. On 16 December 1985, Hitachi Ltd. announced plans to manufacture videocassette recorders at their facility in Anaheim, California. Hitachi officials concede that the move is partly an effort to alleviate trade tensions. According to Yasushi Sayama, general manager of Hitachi, "We have decided to invest more heavily in the United States as part of the solution to the trade imbalance."[18]

The Japanese government, too, has made several conciliatory moves. In late July, Prime Minister Yasuhiru Nakasone announced that over the next three years tariffs on 1,853 items will be reduced – from 28 percent to 22.4 percent on bananas and avocados, for example, and from 5.7 percent to nothing on telephone switchboards. He indicated that standards for electronic equipment will be simplified, allowing U.S. manufacturers of such equipment to certify that their products function as advertised, instead of having to wait for the Japanese government to inspect each one.[19]

Finally, in the latest round of trade talks between the United States and Japan, after being accused of intransigence, Japan offered concessions in radio-operated communications equipment. That includes car telephones, telephone pagers, two-way radios, and other devices that operate over radio waves. Although U.S. sources said important disagreements remain, the U.S. is hoping for success in the radio talks.

So far the radio talks have been the only ones in which there has been much progress, but there is hope that the new spirit will carry over into other areas like semiconductors. One of the items being discussed is setting minimum prices on Japanese semiconductor exports, to prevent price-cutting in the U.S. Japan has also reportedly offered to guarantee certain levels of sales within their country to U.S. semiconductor companies.[20]

Defense Expenditures

A second source of tension between the United States and Japan has been Japan's limited expenditures for defense. By national consensus, Japan's defense budget is restricted to 1 percent of their GNP or about $13 billion currently. From the perspective of the U.S., which spends 7 percent of GNP on defense, Japan is getting a cheap ride at American expense. Although many Japanese agree and would willingly spend more, most would not. Polls show that only 14 percent of the Japanese people want a larger military force. Most think that the present size is about right.[21]

According to Yale Political Science Professor, Mike Mochizuki, the political realists in Japan have adopted the U.S.- Japan alliance as the centerpiece of their national security strategy. He writes:

17. Michael Schrage, "Semiconductor Industry Toughens Stance Against Japan," *Washington Post*, 22 September 1985, p. F2.
18. Quoted in David E. Sanger, "Hitachi to Produce VCR's in U.S.," *New York Times*, 17 December 1985, p. D5.
19. Lee Smith, "Japan Wants to Make Friends," *Fortune*, 2 September 1985, p. 84.
20. E. S. Browning, "Japan Proposes to Ease Restraints on Imported American Radio Gear," *Wall Street Journal*, 25 November 1985, p. 33.
21. Smith, "Japan," pp. 87, 88.

> Although most of these strategists recognize America's relative decline as a global power, they conclude that the only realistic option is to strengthen the Western alliance, not to abandon it, and for Japan to shoulder more of the burden of maintaining world order. Some speak of a "division of labor" whereby the United States would contribute to the military component of international security and Japan to the economic, a plan which would be more consistent with Japan's present constitutional framework and sensitive to the domestic constraints against a substantial rearmament.[22]

Not surprisingly, as Mochizuki adds, "American policymakers . . . have not been enthusiastic about such a formula."[23] However, neither do they seem to be advancing constructive alternatives.

The Importance of U.S. - Japan Relations

In spite of the serious issues that divide them, the United States and Japan are enormously important to each other and their interests are remarkably closely aligned.

On the economic front, both benefit from a liberal economic order - a world that is open to trade and capital movement. Worsening economic relations between Japan and the United States could well lead to growing mutual restraints on trade, planned and accidental disincentives for investment by one country in the other, and a general lack of cooperation in economic matters. This would be to neither country's advantage. Consumers in both countries want products from the other, and each country needs the other as an important market. Japan particularly needs the U.S. market to assure its continued economic growth. Not only would a deterioration of economic relations between the U.S. and Japan cause each country to suffer directly economically, but it would have a devastating impact on world trade rules and the world monetary system. The combined economic weight of the two countries is simply too large to have little or no effect. As David MacEachon, President of the Japan Society in New York, notes:

- Together they account for one-third of total world production and nearly half of the output of the non-communist nations.
- They provide the two largest sources of investment capital in the world.
- In several vital industries they are the world's two largest producers. Between them they share leadership in semiconductors, computers, steel, automobiles, earth-moving equipment, and many other types of machinery.
- Together they import half of the oil imported by the advanced industrialized nations of the Organization of Economic Cooperation and Development (OECD) and consume about one-third of the world's annual production of other raw materials.[24]

22. Mike M. Mochizuki, "Japan's Search for Strategy," *International Security*, Vol. 8, No. 3, Winter 1983-84, p. 160.
23. Ibid.
24. David MacEachron, "The United States and Japan: The Bilateral Potential," *Foreign Affairs*, Winter 1982/83, pp. 401, 402.

On the political side, the two countries again share many common interests. Both favor open democratic societies over autocratic regimes with their inherent propensity to violence and sudden policy changes, and both desire an end to Soviet expansionism and a continuation of the evolution in the People's Republic of China toward modernization. Any weakening of the close diplomatic cooperation between the United States and Japan, brought on by trade or defense spending tensions, would be serious for both countries. If one could be played off against the other, both would be more vulnerable to manipulation by the Soviet Union, the People's Republic of China, and other nations as well. MacEachon writes:

> If Japan should feel alienated from the United States, it is impossible to say what direction Japanese foreign policy would take, but every conceivable course, from accommodation with the Soviet Union to a massive rearming, including production of nuclear weapons, would be highly disadvantageous to the United States.[25]

Of particular interest to the U.S., any weakening in the security relations between the two countries would put in jeopardy American bases and supply lines, which are essential for the American forces in the western Pacific. U.S. forces in Korea, for example, would be much less secure.

What Can Be Done?

The United States and Japan need each other and the world needs both of them – perhaps more now than ever before. Yet both countries seem to be succumbing to the all too common tendency of allowing economic interests to dictate the nature of their bilateral relationship. Both seem unable or unwilling to sublimate their short-term economic interests to their longer term political or national security interests nor to the global interests of the world at large.

In obvious recognition of their mutual self-interest, both countries have exercised laudable restraint. So far, each has avoided actions that would seriously degrade their relationship. But they need to do more than merely avoid catastrophe. They both need to take constructive action aimed at bridging their differences.

The Japanese need to further open their markets to U.S. products. Their sanctimonious denial of all guilt simply does not wash. And their government needs to restrain some of their overzealous companies from engaging in blatant price manipulation. Competitive pricing is one thing; outright dumping is another.

For its part, the U.S. has to find a way to solve some of its own competitiveness problems, independent of Japanese action. Among other things, the U.S. government and industry must work together on strategy and plans to insure that U.S. industries remain competitive in the world marketplace. Government leadership and collaboration is needed to ensure a national perspective. Unfortunately, no forum now exists for this kind of government-industry cooperation. It may be necessary to create one. It would help too if a greater number of U.S. merchants and civil servants had a better understanding of the Japanese language and culture.

Both countries need to work hard to resolve the issues that now divide them and they need to step up to their joint role as leaders of the international community. The U.S. is

25. Ibid., pp. 404, 405.

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used to such a role; Japan is not. Adjustment will be required on the part of both countries. MacEachron writes:

> These two nations, so drastically different in history, culture, geographic size and location, outlook and temperament, have been thrust together in an unlikely partnership. They must simultaneously reorder their bilateral arrangements while improving their skills of international leadership. The United States must learn to rely more on the power of persuasion and become more sensitive to the legitimate interests of others. Japan must give up its small-nation mentality. Moreover, each nation can help the other in this, and in cooperation they can help guide the world through one of its most dangerous and exciting eras.[26]

Neither country can afford to do less.

~~(FOUO)~~ Since March 1985, Mr. Jelen has been assigned to the Office of the Chief Scientist. His previous assignments include [redacted] Mr. Jelen holds a bachelor's degree in Electrical Engineering from The Catholic University of America and an MS in Technology of Management from The American University and is a Distinguished Graduate of the Industrial College of the Armed Forces. He is certified as an Engineer and a Signals Analyst. While a Research Fellow in the Program on Information Resources Policy at Harvard University, Mr. Jelen wrote *Information Security: An Elusive Goal*, published by Harvard University, Cambridge, Massachusetts, June 1985. He is also the author of "Space System Vulnerabilities and Countermeasures," chapter 4 of *National Interests and the Military Use of Space*, William J. Durch, editor (Cambridge, Massachusetts: Ballinger, 1984).

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26. Ibid., p. 400.

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