Japan: a high score on economics, but not politics

by Richard Katz

If, two years ago, virtually every business and political leader in America was damning Japan for alleged export "dumping," today, the rallying cry is the reverse. Practically no week goes by without at least one major business or news magazine questioning, as did *Iron Age,* "What Can American Manufacturers Learn From the Japanese?"

U.S. government documents like the September 1980 "United States-Japan Trade Report" of the House of Representatives Trade Subcommittee, formerly a bastion of protectionism, now calmly reason: "It has become increasingly clear to us, and to many businessmen dealing with Japan, that our trade problems result less and less from Japanese import barriers, and more and more from domestic, American structural problems of competitiveness and quality. *There are clearly lessons to be learned from Japan* [emphasis added]."

Japan's industrial production in August was 2 percent above that for the year before—better than any other major industrial country. Even the most pessimistic of Japan's economists predict a mild, short-lived recession ending in the spring of 1981. It would take a major oil shortage or huge price hike or a significant decline of world trade to send Japan into serious recession.

Amidst the clamor over Japan's success story, few observers have understood with sufficient clarity what Japan does right, and where it goes wrong. Certain U.S. legislators and corporate executives insist that the secret of Japan's success lies in such features as accelerated depreciation tax codes or systems of government-private collaboration. These particular factors exist but the "secret" which allows them to work is much more straightforward: it is Japan's commitment to producing successive arrays of products with ever higher technological content. This policy is the sole reason Japan has survived the oil crisis.

On the other hand, Japan's *political*-economic strategy suffers a deficiency which could ultimately undo the economic miracle. Particularly since the accession of the late prime minister Masayoshi Ohira in late 1978, Japan has accepted political conditions which severely limit the possible expansion of world trade and thus its own potential market. Japan has accepted international austerity policies toward the developing countries and tolerated the U.S. imposing a conservationist reindustrialization policy upon itself. As a result, Japan's businessmen have resorted disproportionately to what they themselves know can only be a temporary tactic of relying on exports of consumer durables to the advanced sector countries. Should this strategy continue, Japan will run out of markets if it does not first provoke trade war.

Japan's high-technology strategy

The case of steel illustrates Japan's technological approach. In the United States, the Carter administration proposes to declare steel a "sunset" industry and let it rot. "It uses too much energy," they complain. Japan's steel industry faces a crisis just as serious as that here—poor markets at home and abroad mean Japan's steelmakers still sell less tonnage than before the 1973 oil crisis, and Japan's mills still operate at less than 75 percent of capacity.

Instead of proposing to scrap the industry, Japan's steelmakers invested heavily to produce steel with less

Computerized freight terminal in Tokyo.

energy and more efficiency. They invested even though they showed no profits for four years straight following 1973.

The key was conversion to the continuous casting process in which the steel pipes, plate, or tubing is made immediately from molten steel before it cools. This produces steel using 30 percent less energy per ton than conventional processes. At the same time, the steel makers shifted from basic kinds of steel requiring less skill to specialty steel employing more highly skilled labor and techniques. The two strategies enabled Japanese firms to increase labor productivity in steel by an astounding 40 percent over pre-oil-crisis levels—without speedup. And it returned the steel industry to a profit in 1979.

The case of steel is typical of the entire economy. Investing in *high-technology* forms of energy saving in energy-intensive industries was one of Japan's responses to the oil crisis. Most importantly, Japan transformed the entire structure of its economy away from industries using lower skilled labor and less advanced machinery to those using higher skills and technologies. Comparing 1973 to 1979 in Table 1, there is a drastic shift from basic manufactured goods like textiles to specialized machinery such as electronic goods, machine tools, autos, and computers.

American businessmen are quick to point out that Japan's rate of private investment in plant and equipment has been almost twice as high as that of the U.S.—as high as 20 percent of real GNP at the peak in 1973. The 1973 oil crisis hit investment hard, but Japan struggled to restore its high investment rates. This year, Japan's firms plan to raise investment 15 percent above 1979 after discounting for inflation, despite the emerging recession, opposite the response in most countries (Figures 1 & 2).

Those who refer simply to Japan's high investment rate miss the point that Japan's investment is geared to advancing Japan's overall technological status. As a result, since the 1973 oil crisis, Japan has been able to improve labor productivity 40 percent, including a very high 12 percent increase in 1979 alone—a year when U.S. productivity fell for the first time ever in a non-recession year.

U.S. comparisons are so dismal because American policy since 1973 has been to use the oil crisis to deindustrialize the U.S., as seen in Table 2.

In the 1980s, Japan will switch from being a net importer of technological know-how to a major technology powerhouse on its own. This includes emphasis

TABLE 1

Change in composition of U.S.-Japan trade 1973 vs. 1979

Commodity as percent of total U.S. imports from Japan

Commodity	1973	1979
Food (mostly fish)	3.0	0.8
Manufactured goods	25.0	19.0
Textiles	3.0	1.4
Steel	11.0	10.1
Rods and bars	2.0	2.0
Plates and sheets	6.0	4.5
Tubes, pipes, fittings, etc.	2.0	3.0
Metal Mfgs.	6.0	4.0
Machinery	25.0	30.0
Specialized	0.2	2.6
Machine tools	0.2	1.5
General industrial	n.a.	3.4
Office machinery	3.0	4.0
Telecommunications (e.g., TVs, stereos)	11.0	11.0
Electrical machinery	3.0	5.0
Transport machinery	21.0	37.0
Automobiles	14.0	26.0
Miscellaneous manufactures	18.0	9.0
Clothing	2.5	0.6

TABLE 2

Shift in composition of U.S. manufacturing industries, 1973-78

Sector	Shipments as % of total* 1973	Shipments as % of total* 1978	Energy intensity indicator† %
Food	13.5	14.3	4.1
Textiles	3.7	3.8	6.8
Paper	4.0	4.0	12.2
Chemicals	8.7	8.7	10.5
Petroleum and coal products	4.0	4.4	15.9
Rubber and plastics	3.2	3.1	4.6
Stone, clay, and glass	2.7	2.7	12.9
Primary metals	8.1	7.2	15.8
Machinery, not electrical	9.7	9.5	1.9
Electrical eqpt.	8.0	8.2	1.9
Transportation eqpt.	14.2	14.9	2.1
Other**	20.2	19.2	

*Inflation-adjusted data

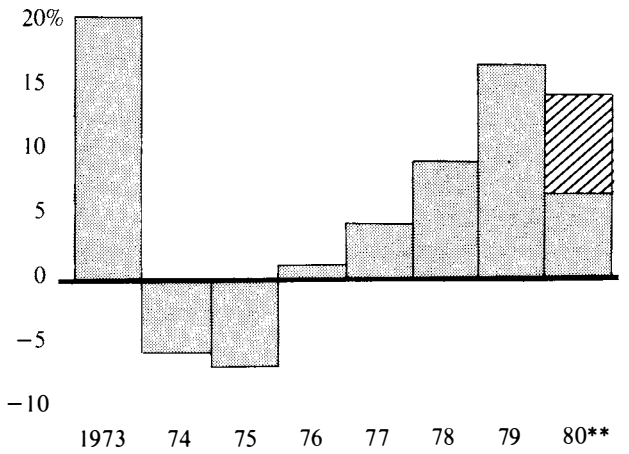
**Includes tobacco, apparel, lumber, furniture, printing, leather, fabricated metal products, instruments and miscellaneous

†Fuel and electricity costs as % total value added. Does not include feedstocks; thus, primary metals, chemicals and petroleum are relatively more energy-intensive than would appear from these figures.

Figure 1

Private investment in plant and equipment 1973-80*

Percentage change from previous year



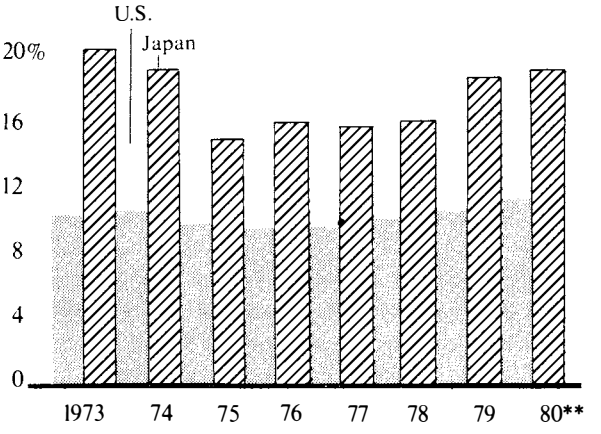
Source: Japan Economic Planning Agency

*1980 is annualized rate based on January-June figures

**actual percent change of January-June 1980 from January-June 1979 is 6.6 percent but corporations have now raised their capital investment plans and expect that their spending in the year ending March 1981 will be 15 percent above year before in constant 1970 yen. If carried out this would provide an approximate 12 percent increase in calendar 1980 over 1979.

Figure 2

Capital investment ratio: Japan vs. U.S.*



*Private investment in plant and equipment as percent of Gross National Product in constant 1970 yen (dollars) of U.S. and Japan.

**Japanese 1980 figures are annualized rate based on January-June actual figures. U.S. 1980 figures are annualized rate based on actual January-March figures.

Source: Japan Economic Planning Agency, U.S. Department of Commerce.

Figure 1 shows how hard Japan's economy was hit by the 1973-74 oil crisis. From a 20 percent private plant and equipment investment rate in 1972, investment fell sharply, then slowly recovered, raising 1979 growth to "economic miracle" levels. Growth so far in 1980 has been slow by Japanese standards, but corporations have revised their outlook and plan to achieve a 15 percent expansion in the plant and equipment investment. Figure 2 shows that even at its low point, Japan maintained a far higher ratio than the U.S. did of private capital investment to GNP.

on applying robotics to domestic industry such as autos, as well as exporting robots; numerical-controlled machine tools; computers, chips, and software; nuclear and fusion power; and such life sciences as genetic engineering. Japan's industrialists are using frontier technologies to keep basic industry up to date—nothing spectacular, just basic common sense.

Market share or market expansion

One criticism of current Japanese government policy regarding plant and equipment exports reveals the chief deficiency in Japan's current political-economic strategy. The criticism by an advisory committee to the Ministry of International Trade and Industry (MITI)—the ministry closest to business thinking—warned that Japan's plant and equipment exports in fiscal 1980 would fall 15 percent in current dollars from 1979's not overly inspiring level. At $12 billion, plant and equipment exports were only 11 percent of total exports, a far cry from the 20 to 25 percent share MITI had proclaimed as a goal some years back. The reasons for the drop were only secondarily the drop in world demand due to austerity measures; the principal reason, said the committee, was the fall in Japan's competitiveness due to stringent credit conditions. Had the plant and equipment share been higher, then Japan would have been under less pressure to grab ever higher market shares for autos and steel to meet skyrocketing import bills.

The stringent credit conditions applied by Japan in the last year and a half, not to mention the loss of up to $4 to $5 billion in potential plant sales to the Soviet Union under the post-Afghanistan embargo, resulted from a deal with Carter made by late prime minister Ohira during his May 1979 visit to Washington. Ohira agreed that Japan would 1) support Carter's full foreign policy, including the China card, an anti-Soviet diplomatic, economic, and military posture, and rearmament in Japan itself; and 2) not violate the Carter administration's *diktat* against industrialization of the developing countries. Ohira put a virtual prohibition on interna-

tional loans to the developing countries, damping Japan's crucial capital equipment exports to those nations.

In return, Carter agreed to ease up on the brutal levels of protectionism waged against Japan during the term of Ohira's predecessor, Takeo Fukuda, and to allow greater export by Japan of such consumer durables as autos. The contrast between the fall in physical quantity of exports during the Fukuda period and the mushrooming allowed following Ohira's rise is astounding (Figure 3). Under blackmail from Washington, Japan agreed to compete for shares of existing world markets rather than expand world trade by creating new industrial markets in the Third World.

This deal was renewed during the late September 1980 Washington visit of Masayoshi Ito, the foreign minister of the new Zenko Suzuki cabinet. Carter was notably lenient toward Japan on the auto issue, even going so far as to pressure the House of Representatives to tone down a resolution on the issue of Japanese auto exports here.

Under Fukuda, Japan had collaborated with France and West Germany in trying to expand overall world trade through granting low-interest credits to OPEC and non-oil developing countries for industrial capital development projects. By 1978, Japan hit a record $15 billion in international loans. During this time, Iraq was Japan's number-one capital equipment purchaser, as well as its second largest oil supplier.

Treasury Secretary Michael Blumenthal fired off an angry series of letters to Fukuda, denouncing this violation of International Monetary Fund austerity "conditionality." Blumenthal simultaneously drove up the value of the yen 75 percent from January 1979 to November 1978, crippling Japan's export competitiveness.

The most public expression of Carter administration motives came in the January 1979 "U.S.-Japan Trade Report" of the House trade subcommittee. The report stated: "We believe that the Japanese threat in these high-technology areas may soon become the most explosive issue between our two countries." The report then attacked Japan's transfer of industrial technology to the developing countries: "We foresee 'Japan Trade Crises' recurring with other developing countries—the so-called 'New Japans' of the Far East such as Taiwan, Korea, Hong Kong, and Singapore—and later other developing nations of the world."

The role of exports

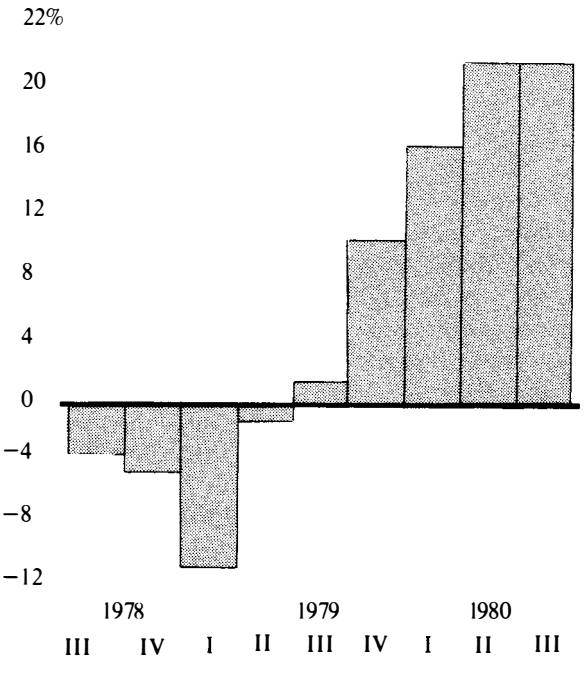
Japanese business tolerated the deal made by Ohira and still tolerates the continuation of the deal by Ohira's protégé Suzuki for fear of offending Washington, and of suffering the resumption of trade war.

Protectionism is a powerful lever over trade-dependent Japan. Resourceless Japan is totally dependent on imports not only for oil but also for all its raw materials. Japan's imports are not discretionary items, but absolute physical necessities for production. As a result, the ratio of physical imports to Gross National Product, both measured after discounting for inflation, has remained stable at about 12 percent of GNP throughout the 1970s. Whenever the price of oil and other commodities goes up, Japan has no choice but to pay it. Oil now swallows about 40 percent of Japan's import bill.

Japan has been able to raise its export prices on steel, autos, TVs, and other goods, and the value of the yen has risen, which brings in more money for exports and makes imports cheaper. However, the increases have not kept pace with import price hikes. Japan simply must send out increasing amounts of steel, cars, and TVs to pay for the same amount of oil, iron ore, and coal. By the spring of 1980, Japan had to send out more than 20 percent of its GNP in exports to get back only about 12¼ percent in imports. And despite this, the exports still were not enough to pay for all the imports; Japan ran a multibillion-dollar trade deficit in

Figure 3

Export volume, 1978-1980*

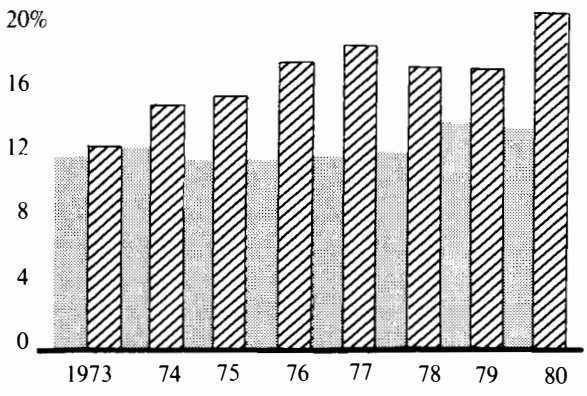


Drastic negative growth in Japan's physical exports (as oppposed to dollars earned) took place during the 1978-early 1979 period. A turnaround occurred in the second quarter of 1979, as Washington lifted its protectionist pressure in exchange for foreign policy support.

Figure 4

Exports and imports as a Percent of GNP

Constant 1970 yen



Source: Japan Economic Planning Agency
*1980 is annualized rate based on January-June figures

money terms (see Figures 4 and 5).

The difference between the import price hikes and the lesser export price increases was so great that *if* Japan's productivity had not increased and *if* Japan had not changed the export products to those of higher technological content, then in 1980, Japan would have had to send out 30 percent of its GNP rather than 20 percent to pay for the same level of imports. Given the level of domestic austerity a 30 percent export ratio would have required, and the protectionism Japan would have provoked abroad, this would have been an impossible level to achieve.

Even with the productivity and technology increases Japan did not meet the challenge, and is now suffering a mild recession as a result. Figure 4 shows the gap between physical export and import ratios narrowing in 1978 and 1979 as Japan's high-technology strategy overcomes the first oil crisis. The post-Khomeini price hike more than wiped out the gain. Because Japan could not meet the 60 to 70 percent overall import price hikes even with increased exports, the physical volume of Japan's imports actually fell about 4 percent in January-August 1980 from year-before levels. Therefore, some sector of production had to fall. Productivity kept the fall in the third quarter to an estimated 2 percent below peak production levels in the first quarter of 1980.

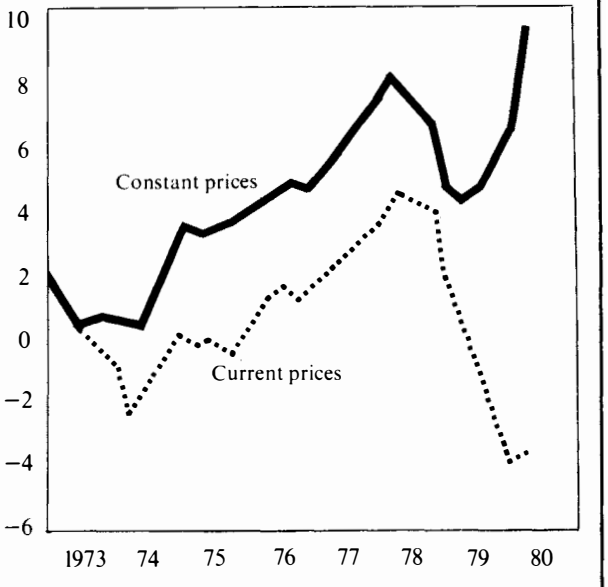
With Japan striving to maintain investment levels, even while giving away 7 percent of GNP to pay for imports (Figures 1, 2, and 4), the cuts in production came primarily out of government public works projects and secondarily out of personal consumption. For the first time since the 1974-75 recession, real wages fell in Japan, to about 2 percent less than 1979 levels—resulting in less domestic auto purchase, and a 5 percent decline in housing, but not the decimation suffered in the U.S.

Is this simply a temporary decline in production and personal consumption? Or is it a more deep-rooted problem such as the U.S. suffers? As long as Japan's productivity, technological advances, and export growth (in volume and price) outstrip import price hikes, Japan will quickly recover from this recession.

In the medium- to long-term, Japan's current capitulation to Carter presents a problem. It cannot go on

Figure 5

Japan's current account balance, 1973-1980*



Source: Japan Economic Planning Agency
*in constant 1970 yen compared to current yen. In trillion yen (at current rates about $5 billion.)

Despite a 75 percent rise in the value of the yen since 1980, which has cheapened imports and provided more income on exports, the price increase for oil and other imported resources far outstripped the price increments for Japanese exports. As seen in Figure 4, by the spring of 1980, Japan sent out one and a half times as much in manufactures as it took in in oil and other commodities, if trade is measured in constant yen at 1970 prices, which expresses physical volume. Figure 5 shows that in current yen, which measures the actual revenue paid and received by firms, Japan was taking in about $20 billion less than it paid out toward the end of 1979. In physical volume terms (constant yen) it sent out $50 billion worth of goods more than it took in. Japan had the worst of both worlds.

forever increasing market share in autos and similar products, as Japan's industrialists know full well. More importantly in the long term, how can Japan sell industrial robots to the U.S., for example, if the U.S. is ripping up its basic industry like auto and steel in favor of synfuels and an electronics-services economy? Since Reagan's advisers have the same approach as Carter on this question, the problem will not go away after November.

The Industrial Structure Council

One of the most important arenas in which the fight over Japan's future strategy is being fought out is the Industrial Structure Council of MITI. Made up of the top industrialists and most important officials of MITI, the council's deliberations are crucial to the process by which Japan launched the technological advancement described above. The council has issued three "long-term vision" reports—in 1963, 1971, and 1980—which could almost be described as ten-year plans.

At meetings of the council the participants ask questions like: how advanced should the economy be in five years, ten years, twenty or thirty years? How do we advance from an economy in which the trend-setting industries are textiles and export of toys and which is fueled by coal, to one five to ten years later dominated by steel and fueled by oil, to one still five to ten years further in which auto and chemicals lead the way, and then yet later to a nuclear-fueled economy exporting capital goods and computers and in which factories are manned by robots? Finally, how do we manage these successive metamorphoses so that Japan ends up as a fusion-powered economy and, as one MITI official predicted in 1970, supplies half the world's energy through mass production of fusion power reactors?

Once the businessmen and officials reach a consensus on where Japan should be five, ten, thirty years down the line, then they ask: How do we get there from here? Which industries, which paths of technology, what kinds of research are necessary to get there? Therefore, which frontier industries should get priority for bank credit, investment tax credits, government loans?

The best of Japanese industrialists and officials do not think primarily along the lines of what kind of technological gimmick is needed to achieve a certain growth rate. Rather, they decide what rates of growth and patterns of investment are needed to shift the economy from one technological mode to a series of successively higher ones.

Compare this to predominant American corporate thinking which so often thinks of technology as undirected "improvements" or of growth simply as "more." It also helps that Japan's leading industrialists, such as the 82-year-old doyen Toshio Doko, are professional engineers rather than Harvard Business graduates.

It is only within this context of thinking that the various formal features of Japanese economic structure, so often described by American business or congressional observers, work, e.g. accelerated investment depreciation tax codes directed toward frontier industries, close government-industry-banking collaboration, a motivated labor force. It should be noted on the last point—lest cultural factors be suspected—that when Quasar took over the delapidated Motorola plant in Chicago, they turned it into a model of productivity and quality using American workers.

The major difference between the 1971 and 1980 plans of the Industrial Structure Council indicate the strategic shortsightedness of Japan's political and business leadership. The 1971 report introduced as a goal the notion of what the Japanese call "knowledge-intensive industry," such as fusion power, industrial robots, computers. The crux of the 1971 report was the strategic assessment that Japan's own ability to advance, including overcoming chronic shortages of skilled labor, lay in a division of labor with the developing sector. This meant transferring technology to industrialize the developing countries—in the words of the U.S. House trade subcommittee, creating "New Japans." This was the policy followed to one degree or another until the demise of Fukuda in late of 1978.

The 1980 report labeled "Long-term Vision of MITI Policies in the 1980s," presumes on the other hand that the other advanced countries will suffer only 3 percent average annual growth throughout the 1980s due to the energy crunch. Somehow, by 1990 nuclear and coal will have been developed to revive higher growth. At that point, the report says, Japan's ability to compete will depend on whether it used the 1980s to develop primacy in advanced technologies like robotics, numerical-controlled machine tools, computers, and semiconductors. It is already number one in robotics and is challenging the U.S. in semiconductors. These, rather than autos or steel, will be the subjects of trade expansion.

The belief that Japan can somehow develop in isolation for 10 years illustrates Japan's classic dichotomy: sharp in business practice and brilliant on *domestic* economic planning and technological advancement, but unbelievably disoriented in the world of international politics and political economy. If other nations, particularly the United States, were to follow Japan's path of technological planning, the world economy would be experiencing an unprecedented boom. But if Japan believes it can advance technologically and find export markets while the rest of the world stagnates, then sooner or later it will find its economic boom out of gas, in more ways than one.