

# Letters

## Debunking the Japan Inc. Myth

Your *Journal* has done an excellent job of introducing Japan's economic organizations, the "zaikai," in its May/June 1985 issue. This is the first time, I believe, that such comprehensive treatment has been given to the subject in English.

For readers overseas, who may be convinced that "Japan Inc." is a monolithic alliance of business and government, it was doubtless comforting to know that the *zaikai* and the ruling Liberal-Democratic Party are not always in total agreement. Likewise, it was interesting to know of the *zaikai*'s private diplomacy, which allows a flexibility that is not always possible on a governmental level. As an example, you cite the *zaikai*'s ongoing relations with the Soviet Union in the face of an official chill.

Although you conclude your lead article by saying that "after all is said and done, the *zaikai* remains a nebulous institution which defies clear definition," your fine coverage has gone a long way toward correcting that situation.

Susan Scully  
Editor, Friday Page  
Mainichi Daily News  
Tokyo

## The Japanese Example

The success of Japanese products in the European and U.S. markets has led to extended discussions of trade balances. It is often noted that institutional trade barriers and non-tariff barriers still hinder free trade—not only in Japan but elsewhere.

Therefore, I read with satisfaction the (Jan./Feb. 1985) "Publisher's Note" by Mr. Amaya saying that Japan must do everything possible to remove any remaining non-tariff barriers. Japan is working to remove more and more of its trade barriers. This does not mean it is going to be easy for foreigners to enter the Japanese market, because Japanese industry is highly developed and very flexible, but tariff and non-tariff barriers will not be the problem. Japan is not without problems, but the Japanese prove to us daily that they are able to solve such problems, not cover them up. Gentlemen such as Mr. Amaya have emphasized Japan's determination to be worldwide competitor without trade barriers in its home market, even though this will entail many painful changes for Japan. This is indeed a most encouraging development.

Werner Nyffenegger  
Schindler Elevator  
Ebikon, Luzern  
Switzerland

## English Language Resource

I wish to compliment your editorial staff on their ability to find and publish insightful articles on Japan. Every issue contains at least one piece of information, one analysis, or one perspective on the Japanese economy which I cannot seem to find anywhere else in English.

I offer as an example of this Koji Matsu-moto's article "The Secret of Japanese Management Resulting in High Productivity" (Jan./Feb. 1982). This article, provided to us as part of our IIST study program, represents one of the keenest, most succinct explanations of Japanese productivity in print.

John Norton  
Director  
International Resource Center  
California, U.S.A.

Letters to the editor, with the writer's name and address, should be sent to: the Editor, Japan Economic Foundation, 11th Floor, Fukoku Seimei Bldg., 2-2 Uchisaiwai-cho 2-chome, Chiyoda-ku, Tokyo, 100 Japan. Letters may be edited for reasons of space and clarity.

# Publisher's Note

## Productive Trust

By Naohiro Amaya

It is possible to elaborate upon Thomas Carlyle's description of man as a tool-using animal by saying that man is a tool-improving animal. With repeated improvements, tools become increasingly complex, eventually evolving into machines—and as a machine takes on added functions its construction becomes more complex and there is a corresponding increase in the number of parts. Modern automobiles, for example, are said to have around 20,000 parts.

With better tools, man's productivity goes up and he is able to create surplus production. This in turn leads to a division of labor in which each person is free to concentrate on a single product because he can acquire everything else he may need through trade. As Adam Smith pointed out, the division of labor itself results in a markedly higher productivity. Rather than having one company produce all

20,000 automotive parts, it is more efficient to have 20,000 small businesses producing one type of part each.

An effective division of labor among 20,000 companies, however, requires that certain conditions be met. For example, the transport of raw materials and finished products must be extremely reliable. This requires a well-organized and smoothly operating infrastructure. The 20,000 parts manufacturers and the single assembler must coordinate their activities in a symphonic harmony, which means information must be transmitted quickly and accurately. The information revolution is making a major contribution here.

Still, the availability of modern information-processing equipment is not in itself sufficient to guarantee a smoothly operating infrastructure. In the final analysis, this depends on people, their own reliability and their trust in each other and the system. Lacking a completely automated production system—and we will be lacking this for many, many years—we still need cooperation among hundreds of thousands of people.

Assuming parts are delivered as they are

needed and no inventories are maintained, a strike by just one of the 20,000 automotive parts manufacturers would disrupt the whole system. In the extreme case, if just one worker among the hundreds of thousands develops "so-what-itis" and falls down on the job, the whole system falls down with him.

The only way to keep this from happening is to ensure that all of the companies and all of the people involved have faith that everyone else will do his part and that things will happen the way they are supposed to.

Japan's automobile industry and other major industries rely heavily on large numbers of small subcontractors. They can do this because of the strong bonds of trust that exist between the large corporation and its small sub-contractors. This trust makes the division of labor more effective, contributes to lower production costs, and ensures better product quality.

At the same time as people use machines to make things, people are themselves part of a production system. Yet this is a system driven by trust, and it is this trust which is the secret of Japan's success.



# CURRENT TOPICS

## Overseas Economic Measures Package

As the nation's trade surplus snowballs, the Japanese government is coming under increasing pressure from foreign countries to open up its home market. Amid the surging wave of criticism, the government is going full blast to implement market-opening measures and expand manufactures imports. At the top of the list is drawing up an "action program" designed to give foreign exporters freer access to the Japanese market.

Criticism of Japan's surplus gained momentum late last year when it became clear that the U.S. 1984 trade deficit would reach a record \$123.3 billion. Keen on using the so-called "Ron-Yasu" relationship to build up his political clout, Prime Minister Yasuhiro Nakasone promised President Ronald Reagan at their meeting early this year to personally take the initiative in opening up the Japanese market.

But U.S. hard-liners soon came to the fore, their ire apparently raised by the slow progress of ongoing talks on liberalizing the Japanese telecommunications equipment market and the problem of lifting or extending Japan's voluntary curbs on car exports to the U.S.

Late March through early April saw unprecedented action in Washington as both Houses of Congress handily passed a non-binding retaliation motion against Japan and the Senate Finance Committee supported the measure. European and Southeast Asian countries also unleashed a barrage of criticisms against Japan's huge trade surplus.

At one point it appeared certain that

Japan would come under blistering attack at the Bonn summit in May. This prospect sent the Tokyo government scurrying to devise determined market-opening and import promotion measures. On April 9, it unveiled a new package of overseas economic measures. The package incorporates a wide range of concrete liberalization measures and spells out policy goals, including medium-range policy on market liberalization. To ensure that these measures are executed in close cooperation with his ruling Liberal-Democratic Party, Prime Minister Nakasone established the "Government-Party Overseas Economic Policy Promotion Headquarters" on April 19. This set the stage for the LDP to launch an all-out drive to implement the economic package, with the prime minister himself heading the headquarters.

The first meeting of the headquarters on April 19 concentrated on drafting the "action program" promised in the overall economic package. It decided to have an action program drafting committee in each government agency at the vice ministerial level by the end of April, with the gist of the program to be worked out by July this year.

More decisions aimed at accelerating imports emerged from the meeting. Among them were Prime Minister Nakasone's personal "buy foreign" appeal to the nation and the International Trade and Industry Minister's campaign to persuade the private business sector to expand imports of manufactured goods.

With the Japanese government moving full steam to solve the economic friction, the serious international concern about Japan's trade surplus went unvoiced at the Bonn summit. And the anti-Japanese mood prevailing in the American Congress has also subsided, at least temporarily.

But the Bonn summitters did adopt an economic declaration confirming Japan's pledge "to achieve further progress in deregulating financial markets, promoting the international role of the yen, facilitating access to markets and encouraging growth in imports" along with the U.S. promise "to achieve a rapid and appreciable cut in public expenditures and thus a substantial reduction in the budget deficit" as key factors to the sustained, non-inflationary growth of the world economy.

Clearly the Japanese government has been assigned its homework, namely "market liberalization." It is now incumbent upon Japan to translate its market-opening measures into action with dispatch and verve.

## NCA Inaugurates Cargo Service to U.S.

A Nippon Cargo Airlines (NCA) jumbo jet took off from Narita for San Francisco on May 8, ushering in a new era of liberalization and bitter competition between Japanese and American airlines on the lucrative trans-Pacific route.

The inaugural flight followed the conclusion of Japan-U.S. civil aviation talks in Tokyo in late April, and ended once and for all Japan Air Lines' (JAL) monopoly on scheduled international freight transportation in Japan.

Fighting the new Pacific air war as a result of the agreement will be eight U.S. carriers, including the five now providing passenger or freight service to Japan, and possibly two more Japanese airlines besides JAL and NCA.

NCA, established by All Nippon Airways (ANA) and major Japanese shipping companies, filed with the U.S. government in February 1984 for a license to start cargo service, and immediately began preparing for an April 1, 1985 launch.

But Japan-U.S. aviation talks encountered rough sledding due to lingering trade frictions between the two countries, forcing NCA to wait until a final accord could be reached in the fifth round of negotiations.

While allowing NCA to fly into the U.S., the agreement requires Japan to lift restrictions on the size of aircraft used by Continental/Micronesian Airlines on its Japan-Micronesia route. It also allows three more American carriers to inaugurate service on three new routes to be opened between Japan and the U.S., and enables Federal Express, a small-lot cargo carrier, to begin trans-Pacific service in 1987.

The accord further permits two Japanese and U.S. carriers each to serve the Japan-Micronesia route. On the Japanese side, one carrier is allowed to serve the route in addition to JAL.

Japan's regular international service has long been monopolized by JAL, but the agreement opens the way for other carriers to use the three new routes. Yet Transportation Ministry officials say it doesn't necessarily follow that ANA and Toa-Domestic Airlines (TDA) will be able to fly these routes right away. The reason? Japan's own "aviation charter," which governs the activities of Japanese airlines, only allows JAL to operate scheduled international flights.

For the time being, NCA operates six flights a week between Narita-San Francisco-New York with two jumbo jets. It expects to earn ¥20 billion (\$80 million)

Government posters encouraging imports and free trade



私たちの毎日の暮らしにとって自由貿易をまもることが大切です。

今日、日本は製品輸入の拡大を必要とします。

とりかえを海外からの輸入の拡大です。

よりよい輸入の拡大です。





An NCA jumbo jet getting ready to fly new skies

in the first year, transporting 33,000 tons of export and import cargo.

JAL, Northwest Orient Airlines (NWA) and Flying Tiger already have trans-Pacific cargo flights. Aviation industry sources say NCA's entry will fuel competition on the route, and could gravely affect JAL's nearly 50% cargo share.

## Int'l Symposium on the Future of Chemistry and The Chemical Industry

An international symposium on chemistry and the chemical industry was held in Kyoto in mid-May under the auspices of the Japan Chemical Industry Association, the Chemistry Society of Japan and other groups. It was backed by the Ministry of International Trade and Industry (MITI).

Animated debate at the symposium, attended by 1,200 chemists and industry leaders from Japan and overseas, centered on ways to develop chemistry as the basis for future technology and to promote the chemical industry as the medium for putting it to industrial use.

While the industry has been badly buffeted by two oil crises, chemistry is again the focus of growing expectations for its potential in such new industrial fields as new materials, microelectronics and biotechnology.

At the Kyoto symposium, Minister of International Trade and Industry Keiji Murata cautioned that chemistry can no longer be pigeonholed within the existing framework of the chemical industry.

Noting that the industry is now groping for new avenues of development transcending its traditional roles, Murata said there is a growing need to think about chemistry and the chemical industry from many perspectives.

The three subthemes debated at the Kyoto symposium—the contributions of

chemistry and the chemical industry to mankind, the importance of chemistry in industrial technology, and the future of chemistry and the chemical industry—underscored the minister's words.

Among the lecturers were Sir George Porter, Nobel Chemistry Prize winner, Kenichi Fukui, professor emeritus of Kyoto University and also a Nobel Chemistry Prize winner, and other world-famous authorities on chemistry.

Heated debates evolved on many subjects on the agenda. Among the most interesting were Porter's assertion that silicon will someday replace carbon as a basic material, and E.I. du Pont de Nemours vice-chairman Richard Heckert's view that polymer chemistry also has a bright future.

Saudi Arabian Minister of Industry and Power Abdulaziz Abdullah Al-Zamil, who is also president of the Saudi Arabian Basic Industry Corporation, addressed the symposium on "The Industry of Saudi Arabia: A Wing of the Chemical Industry of the Future." Stressing the increasing importance of joint ventures and cooperation in production between advanced and developing countries, the president argued that "in future, petrochemical producers of advanced countries will be able to coexist with their counterparts in developing countries by specializing in products with higher value added."

In contrast, Exxon Chemical president Edwin C. Holmer painted a somewhat gloomy picture of future production, predicting that output of petrochemical products in Japan, the United States and Europe will grow at "only 1-2% annually, slower than the economic growth rate."

The symposium featured extensive discussions by both industrialists and scholars on the future of chemistry and the chemical industry. It closed with a four-point appeal calling for the expansion of basic research, strengthening of industry-academia ties, promotion of international exchange in science and technology, and development of competent personnel.

## Nuclear Fusion

Japanese scientists succeeded in the production of plasma using the JT-60 (JAERI Tokamak 60) reactor grade plasma test facility at the Japan Atomic Energy Research Institute's Naka, Ibaraki Prefecture nuclear fusion research center April 8. The successful experiment was a major step toward achieving nuclear fusion, hailed by many as a potential source of virtually unlimited energy.

The achievement was only the third worldwide, following similar tests with the United States' Tokamak Fusion Test Reactor (TFTR) and the European Community's Joint European Torus (JET). All three facilities are large-scale Tokamaks, which are expected to provide the shortest route to nuclear fusion.

JAERI began building the ¥230 billion (\$920 million) JT-60 in 1978. Now the institute is striving to become the first research team anywhere in the world to achieve reactor grade plasma conditions.

The JT-60 facility was built specifically to realize these conditions, which include a temperature of 100 million degrees centigrade, plasma density of 100 trillion per cubic centimeter, and containment time of one second.

While fusion theoretically occurs when deuterium is reacted with tritium under these conditions, the JAERI test facility does not use deuterium but hydrogen to produce its plasma. Another facility—this time an actual experimental fusion reactor—will have to be built to realize the D-T reaction.

JAERI scientists achieved the production of plasma April 8 by feeding a few milligrams of hydrogen into a doughnut-shaped vacuum containment put in a strong, 4.5 teslas magnetic field, and then charging it with a 150,000-ampere electric current. Plasma was produced with a confirmed temperature of 200,000 degrees centigrade, or about one-500th what is required for reactor grade plasma conditions. The plasma life was 0.08 seconds and the density 10 trillion per cubic centimeter.

JAERI hopes to raise the electric current to 1 million amperes by the end of June to increase the plasma temperature to 20 million degrees centigrade. The institute will also install additional heaters by the end of the year in a bid to achieve reactor grade plasma conditions by the autumn of 1987. Scientists working with TFTR and JET are also aiming for 1987, giving JAERI hope that it can be the first in the world to succeed.

But problems remain. One of the most important is how to prevent disruptions, the impact on reactor walls resulting from plasma's rapid reduction. Other challenges include extracting the heat that would be generated inside a reactor. Then there is the question of money. Even an experimental reactor will cost an estimated ¥400-600 billion (\$1.6-2.4 billion) to build.

The obstacles are formidable. But after April's encouraging JT-60 experiments, scientists are increasingly confident that the investment will be worth it.