

Economic Cooperation Through Know-how Transfer

By Hisanori Goto

Japan became the world's largest donor nation in 1989, with its official development assistance (ODA) for that year totaling \$8,958 million. Although the amount was a little smaller than that for the preceding year, it exceeded that of the United States for the first time.

Looking back, I am deeply moved by such an achievement. When Japan was struggling to recover from the ravages of World War II, it received assistance from the U.S. and loans from the World Bank. While receiving foreign assistance, the nation had begun to extend its helping hand to developing countries on a limited scale.

Now that Japan has become a huge economic power and attained an enormous presence as an aid donor, what do other industrialized nations and developing countries think of this? While keeping this question in mind, Japan needs to direct its efforts to (1) promoting cooperation with other countries in the conduct of its assistance policy, and (2) enhancing the public's understanding of Japanese assistance.

In the following, I will explain the direction of Japanese assistance in the 1990s with reference to the May 1990 White Paper on Economic Cooperation. The term "economic cooperation" used in this article means a broad range of cooperation with developing countries, including ODA. ODA and private sector activities, notably direct investment and imports of products from developing countries, play a very large role in supporting economic and social development in the Third World. Japan's economic cooperation refers to ODA, direct investment and imports from developing countries.

Basic idea of cooperation

The basic question that underscores economic cooperation is why such cooperation is provided. The question relates

to the basic idea of economic cooperation, which may be discussed in terms of various factors such as philosophy, motivation, purpose and methodology. Two universal ideas are established with respect to economic cooperation. One is humanitarian considerations; the other is recognition of interdependence. Japan has, of course, extended economic cooperation under these principles. The first basic idea is an international application of the social welfare ideal that the rich should help the poor. The second principle is based on the idea that a nation's prosperity depends on the prosperity and stability of other nations.

Developed nations provide economic cooperation on the basis of these internationally accepted principles, although such cooperation also reflects the particular situation in which they find themselves, such as historical and economic relations with recipient countries and the donor nation's political position. Thus Japan's economic cooperation reflects its own situation, such as its heavy dependence on foreign oil, which has prompted the nation to emphasize the importance of "resources security" since the oil crises of the 1970s.

Opinion is growing that Japan should establish its own principles for the promotion of economic cooperation, now that it has become the world's largest donor nation. It is open to argument, however, whether it is appropriate to lay down such principles a priori, since they are by nature the product of historical evolution. Nevertheless, in light of Japan's present international position, economic cooperation in the 1990s should be considered from the following two points of view:

First, Japan, a nation committed to peace, should contribute to the well-being of the international community to an extent commensurate with its economic status, which ranks its GNP as the world's second-largest after that of the U.S. Economic cooperation is not the only area in which Japan should make

such a contribution, but it is certainly one of the most important fields in which the nation should fulfill its international responsibilities as a peace-loving member of the international community.

Second, Japan should promote outward-looking cooperation in the Asia-Pacific region. This region, sometimes described as the "locomotive power of the world economy," is expected to play a large role in global economic development. On the other hand, it is beset by various problems such as trade imbalances. Concrete moves are already under way toward regional cooperation, such as the creation of the Asia-Pacific Economic Cooperation group (APEC). It is essential to such cooperation that developing economies in this part of the world continue to grow steadily in the years ahead. It is desirable, therefore, that Japan support their efforts in this direction through economic cooperation.

Two basic ways

There are two basic ways for Japan to promote economic cooperation under the principles described above. One is to support economic growth in developing countries through development of domestic industries. The other is to provide immediate and direct support for the efforts of developing countries to address basic human problems such as poverty and starvation.

The importance of providing direct support for these efforts cannot be emphasized too greatly. Support in the form of ODA is not sufficient, however, to help them achieve economic growth and "graduate" from developing country status. For this purpose it is absolutely necessary to develop domestic industries. Japan is strongly aware of the importance of industrial development to economic growth, because its dramatic postwar economic achievements would have been impossible without the development of viable domestic industries. For develop-

ing countries, industrial development is the royal road to their "graduation." It is from this point of view that Japan continues to promote comprehensive and trilateral economic cooperation with assistance, investment and import trade combined.

From the standpoint of industrial development, it is essential that economic cooperation be promoted in the form of investment in industrial infrastructure and other fields. The importance of project assistance needs to be reaffirmed. It is also important to encourage self-help efforts on the part of the developing countries involved. Bearing in mind the fact that assistance in the form of loans is a useful means of ensuring greater efficiency in the implementation of industrial development projects in many developing countries, Japan should continue to cooperate with the recipient nations with emphasis placed on their self-help efforts. In the process, Japan should take into account the recipient countries' economic conditions and the characteristics of their projects.

From quantity to quality

With Japan's ODA reaching the highest level in the world, the quality of Japanese assistance has become a major topic of discussion here and abroad. I define the quality of assistance in terms of its effectiveness and efficiency vis-à-vis social and economic development in the developing countries. And I think this is how it should be defined. The quality of assistance is measured by a number of indicators, such as the grant ratio, the grant element and the ratio of loans that are untied.

(1) Grant ratio

The grant ratio indicates outright grants and technical assistance as a percentage of ODA. Japan's grant ratio is the lowest among member nations of the Development Assistance Committee (DAC).^{*} In order to improve the effectiveness of economic cooperation it is necessary to select appropriate "tools" by taking into account the project to be supported, the economic situation in the re-

ipient country and other relevant factors. In the allocation of ODA, Japan gives priority to Asian countries with which it has closer relations—geographically, historically and economically.

In many cases, assistance to these countries takes the form of yen loans, because such easy-term credits are more appropriate, considering the characteristics of the fields in which development is called for, the economic situation in the recipient nations and other factors peculiar to those countries. This is why Japan's grant ratio is the lowest among DAC member countries. Assuming that the present pattern of ODA allocation and the general economic condition of developing countries will remain basically unchanged for the time being, an improvement in the grant ratio will not lead directly to an improvement in the efficiency of assistance.

It is important for Japan to effectively extend outright grants to countries which need such assistance and to countries and projects for which grants are suitable. In extending such aid, Japan should pay due attention to how developing countries are going to use the funds and how they are distributed.

(2) Grant element

Japan's grant element is also the lowest among DAC members. Since the grant element includes both grants (in which the grant element is given as 100) and loans (the grant element is lower than 100), it reflects the low level of grant ratio. The grant element can be raised in two ways—by increasing the grant ratio and improving the loan conditions. From the point of view of improving efficiency, however, grants and loans need to be considered separately, because each has a different role to play in economic cooperation.

Japan has provided yen loans at various interest rates to promote efficient assistance. Rates are set in consideration of the economic condition of each recipient country because of the importance attached to self-help efforts. Improving the conditions of yen loans means a reduction in the debt repayment burden of the recipient country. When the burden has

reached an excessively high level not commensurate with the economic condition of that country, it can be reduced to a more appropriate level through the setting of a lower interest rate. The efficiency of such assistance thus can be improved.

(3) Ratio of untied loans

In the case of other Western industrial nations, bilateral loans are usually "tied," meaning that only companies from the donor country are allowed to bid on contracts. In Japan's case, the general ratio of untied loans reached 77.4% on an exchange of notes basis in fiscal 1988, the highest among major donor nations. The general ratios of untied loans for other major donor nations were 26.1% for the U.S., 39% for France, 59.4% for Britain and 49.9% for West Germany. Japan has been moving toward generally making bilateral loans untied, which means that all countries, including both developed and developing countries, are allowed to participate in bidding. The remaining 22.6% were "LDC-untied loans" in which only businesses of less developed countries and Japan can make bids. In this case, however, countries that are not eligible for bidding (OECD nations other than Japan) are allowed to conclude procurement contracts not exceeding 50% of the total contract value.

As for outright grants, contracts are concluded only between Japan and the recipient countries concerned, although part of such cooperation, such as nonprofessional grants to the nations of the sub-Saharan region and other LLDCs (least less-developed countries) are untied.

^{*} When a comparison is made between the grant ratio and grant element of Japan and those of other DAC member countries, the following point needs to be noted: In financial cooperation, European donor countries usually provide "associated financing," which combines grants and export credits; in this case, only the grant portion is treated as ODA. In Japan's case, however, yen loans are made in the form of low-interest financing and included entirely in the ODA. The grant ratio and the grant element thus carry greater weight in the ODA of European countries than in that of Japan.

However, procurement from areas other than Japan is sometimes allowed.

General untied loans enable the recipient nation to broaden the scope of its options, purchase materials and equipment at the lowest possible prices, and further promote that country's development. This form of aid, therefore, is highly likely to improve the efficiency of assistance. But it is not free from problems. For example, making assistance generally untied could make it difficult for Japan to maintain its "monumentality" in financial assistance. Another problem is that for Japan to unilaterally make its assistance untied, at a time when loans from other developed nations are still largely tied to their own businesses, may very well create a certain unfairness.

Transfer of soft resources

The White Paper on Economic Cooperation said that the transfer of "software," such as technology, management know-how and policy-making know-how, is highly effective in promoting economic and social development in developing countries, and called on Japan to make positive efforts to promote the transfer of such soft resources. While pointing to the extreme importance of building economic and social infrastructures, the report considers the development of such infrastructures more effective through the transfer of software.

In my opinion, if Japan is to improve the quality of its economic cooperation in the 1990s, software-oriented cooperation must be promoted. The question is how best to promote the transfer of software.

(1) Transfer of technology and management know-how

Means of transfer and impediments to transfer

Technology and management know-how is transferred through 1) technological trade such as exports and imports of technology, and granting licenses, 2) local business activities through direct investment, and 3) sending experts and receiving trainees.

1) Impediments to transfer through technological trade (Fig. 1)

Fig. 1 Problems in Technological Transfers for Businesses in Developing Countries (one division of scale denotes 5%)

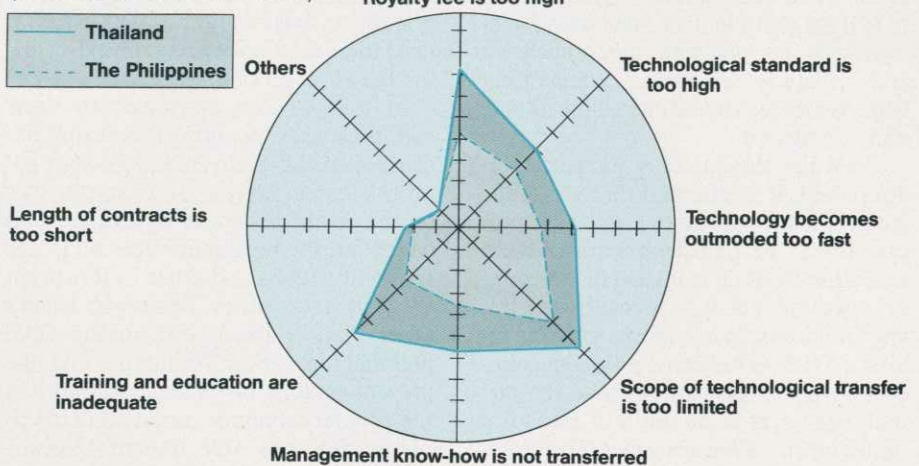
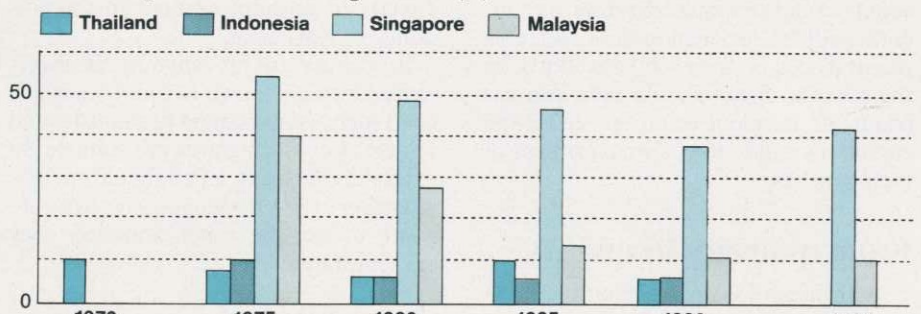
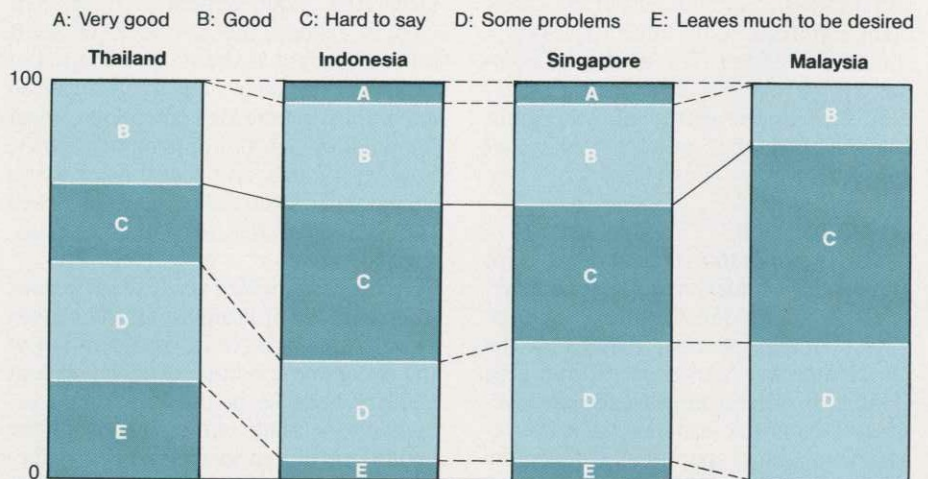


Fig. 2 The Separation Rate at High Levels (%)



Notes: 1. Separation rate = the number of workers quitting during the year/the average number of workers on payroll during the year × 100 (%)
2. Zero figures are due to absence of data and do not mean zero percent.

Fig. 3 Local Side's Evaluation of Promotion of Local Employees to Managerial Posts (%)



Sources: Japan Association of Corporate Executives; Japan-ASEAN Managerial Council (Oct. 1988); Questionnaires to business executives of ASEAN countries

In many cases, transfer does not take place smoothly because of various impediments in developing countries, such as inadequate protection of intellectual property and lack of receptivity to technology due to shortages of technical personnel with science and engineering degrees.

2) Impediments to transfer through direct investment (Fig. 2 and Fig. 3)

The economic activities of enterprises expanding into developing countries are still subject to various regulations, although much progress has been made recently toward deregulation. In addition, transfer is hampered by frequent job changes on the part of local employees (high staff turnover) and the extremely small numbers of local nationals in managerial positions.

3) Impediments to transfer through sending specialists and receiving trainees

The shortage of specialists and training capacity, and uncertainties over the treatment of specialists after their return home are among the major impediments.

Japan's role

The technological dependence on Japan of developing countries, particularly those in the Asia-Pacific region, and their needs for technology transfer from Japan are expected to increase rapidly (Fig. 4). Efforts to facilitate the transfer of technol-

ogy and management know-how should be made by both Japan and developing countries. Specifically, the following steps need to be taken:

1) Japan should continue to play the leading role in technological development, promote efforts to establish international rules for technological trade during the Uruguay Round of multilateral trade negotiations, and develop midcareer engineers through the establishment of a "training center for industrial technology" proposed at a meeting of the APEC Ministerial Council.

2) In addition, a better system of risk coverage should be established to promote direct investment; the capacity to identify projects should be improved; and investment restrictions in developing countries should be lifted. At the same time, locally established enterprises should make further efforts to improve their employment practices.

3) Japan's capacity to receive trainees should be improved, and greater efforts should be made to train more specialists and improve their treatment.

(2) Transfer of policy know-how

Means of transfer and impediments to transfer

Japan is conducting "policy dialogues" with the governments of developing

countries which support development led by the private sector. Such dialogues are aimed at promoting the transfer of know-how on industrial policy. Policy dialogues with the governments of the Philippines and Malaysia have already produced results. However, there are a number of impediments, such as a shortage of development experts both in Japan and developing countries and the fact that industrial policy know-how has yet to be fully developed and presented systematically.

Japan's role

Japan does not have any specialized agency (university or research institution) for training development specialists, because it made a late start as a donor country. It is necessary, therefore, to create an agency to train specialists capable of teaching the know-how, opinions and research results accumulated by Japan, and to make serious efforts to develop aid specialists at home and abroad.

It is also important to clarify the relationship between Japan's industrial policy and the market-oriented development policy advocated by the World Bank and the IMF, and subsequently adopted by many developing countries. In so doing Japan should make greater efforts to structure its industrial policy know-how so that it is more easily transferable to developing countries.

Soft resources consist of various elements, such as technology and management know-how, and policy know-how. In particular, management know-how and policy know-how are affected greatly by factors endemic to the donor country, such as its culture, geography and history. A good example is biotechnology, which has produced better seeds through genetic engineering. This example points to the importance of developing countries adapting Japanese management know-how to their own environments and thereby developing even better management know-how and policy know-how.

Fig. 4 Main Asian Countries' R&D Expenditures and Their Imports of Technology from Japan

(\$ million)

	R&D expenditures*	Value of imports of technology from Japan**	Value of imports of technology from Japan which were incorporated into capital goods***
South Korea	1,728	190	423
Taiwan	623	85	362
Singapore	100	46	228
Thailand	128	51	82
Indonesia	188	59	93
The Philippines	61	14	39

Notes: * Latest data from statistics of countries concerned

** 1987 fiscal year

*** 1987 calendar year

Sources: Statistics of countries concerned and those of Japan's Management and Coordination Agency

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