

Chapter V

Human Development in the Case of Small and Medium Sized Enterprises

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The 1996 Manila Summit advanced the work on economic and technical cooperation extensively. In addition to a Joint Statement, the Eighth Ministerial Meeting made the Declaration of a Framework of Principles for Economic Cooperation and Development.¹ The declaration intended to give a human face to development. The declaration included the following four characteristics: economic and technical cooperation in APEC (Asia-Pacific Economic Cooperation) must be result-oriented; cooperation can be implemented by combining government actions with private activities; and the cooperation must create shared benefits among APEC economies, based on voluntary contributions and complementary capabilities of the economies; the cooperation focuses on a widening scope of joint activities, most of which have cross-cutting implications. The four characteristics indicate that the economic and technical cooperation in APEC would be most effective when combining public and private actions along with cooperation among APEC members. Thus, the two key areas

¹ The declaration emphasized six themes- developing human capital; fostering safe and efficient capital markets; strengthening economic infrastructures; harnessing technologies of the future; promoting environmentally sustainable growth; and encouraging the promotion of small and medium enterprises. These themes are connected with the basic concepts of increasing in job opportunities, growth, and sustainable and equitable development.

for APEC's economic and technical cooperation are the vitality of private flows and the promotion of multilateral economic cooperation. Time has come for working out a new model of economic and technical cooperation.

This chapter identifies the new economic and technical cooperation under APEC and reflects on the traditional model of development cooperation. The chapter is organized into four sections. Section 1 reviews the framework of economic and technical cooperation in reference to the case of Japan. Section 2 looks at performances and problems of traditional development cooperation for official flows by comparing Japan and the US. Section 3 discusses the roles of a new economic and technical cooperation under APEC. Utilizing the vitality of private flows becomes a critical part of the new economic and technical cooperation and ensures that the cooperation is consistent with a market mechanism and promotes efficient allocation of resources within the region. Private flows are composed of private capital cooperation and private technical cooperation. Here, I will discuss Build Operation Transfer (BOT) or Build Own Operate (BOO) as a scheme for private capital cooperation. I will also focus on the promotion of technology development/transfer as an issue related to private technical cooperation. Lastly, section 4 will seek a new direction of development cooperation based on the findings in the previous sections.

1. A Framework of Economic Cooperation- the Case of Japan

Official flows, especially Official Development Assistance (ODA) which is part of official flows, might remind many people of providing some recipient countries with grants related to basic human needs. That is partly true of official flows but not all true. One goal of official flows is to help the recipient countries establish their economic basis and achieve sustainable economic development. It implies that the recipients can facilitate the viability of private flows as well as rely upon official flows. The relationship between foreign assistance and development is not straightforward. Private resources which are not designated as foreign assistance can be significantly useful to

Table 1: Framework for Japanese Economic Cooperation

Official Flows

1. Official Development Assistance (ODA)

1)Capital Assistance

- *Loans on Bilateral Basis {OECF, Other Government Institutions}
- *Grants on Bilateral Basis {JICA, MOFA, Other Government Institutions}
- *Contributions to Multilateral Institutions {MOFA, Other Government Institutions}

2)Technical Assistance

- *Acceptance of Students {Ministry of Education, Agency for Culture Affairs, etc.}
- *Acceptance of Trainees {JICA, AOTS, JPC, OISCA}
- *Dispatch of Experts {JICA, JODC, JPC, OISCA, Japan Foundation}
- *Dispatch of Japan Overseas Cooperation Volunteers {JICA}
- *Supply of Equipment {JICA, etc.}
- *Research and Development {JICA, IDCJ, IDE, etc.}
- *Survey and Consultation {JICA, IDCJ, ECFA, etc.}

2. Other Official Flows (OOF)

- 1)Export Credits {Export Import Bank of Japan}
- 2)Direct Investment and Others {OECF, Export-Import Bank of Japan}
- 3)Finances to Multilateral Institutions {Bank of Japan, Export-Import Bank of Japan}

Private Flows

1. Private Capital Assistance

- 1)Export Credits {Commercial Banks, Guarantee by Export-Import Bank of Japan}
- 2)Direct Investment {JODC, Small Business Finance Corporation, etc.}
- 3)Finances to Multilateral Institutions
- 4)Bilateral Securities and Claims

2. Private Technical Assistance {Companies, NGOs, Private Organizations, etc.}

Grants from Voluntary Agencies {Companies, NGOs, Private Organizations, etc.}

(Source): AOTS²

² Acronyms in the table: OECF: Overseas Economic Cooperation Funds, JICA: Japan International Cooperation Agency, MOFA: Ministry of Foreign Affairs, AOTS: Association for Overseas Technical Scholarship; JPC: Japan Productivity Center; OISCA: Organization for Industrial Spiritual and Cultural

development.

The range of Japanese economic cooperation is broad. Table 1 shows a framework of economic cooperation. The economic cooperation includes official flows, private flows, and grants from voluntary organizations. Official flows are defined as the resources from the governments and official agencies of donor countries. Official flows are classified into two elements: ODA; and Other Official Flows (OOF). According to guidelines of the Development Assistance Committee (DAC), ODA can be distinguished from OOF in the following criteria: it must be accepted by government agencies; it must promote economic development and welfare as its major goals; and it must have a grant element of more than 25%. ODA can also be divided into two components: financial assistance; and technical assistance. Conventional development theory assumes shortages of physical resources such as infrastructure and a lack of human resources such as skilled laborers cause economic retardation of some developing countries. Both components of ODA can contribute to the economic development of these types of recipient countries. Financial assistance can supplement domestic capital resources in recipient economies while technical assistance can improve the level of knowledge, skills, and productivity in them.

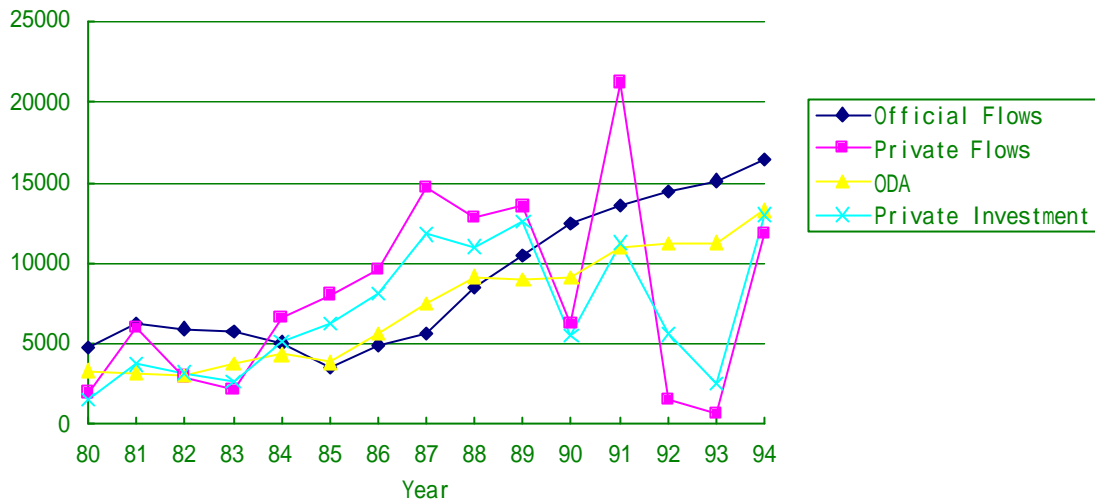
Private flows are composed of export credits, direct investment, finances to multilateral institutions, and bilateral securities and claims. As shown in Figure 1, the yearly volume of private flows fluctuates greatly and varies much more than official flows. Commercial private flows are non-concessional. Therefore, they are largely affected by factors such as macroeconomic policy and social capacity building in recipients. The original purpose of the flows was to make profits for recipients rather than to promote economic development in them (even if the resources eventually might contribute to the promotion of economic development). However, private flows from Japanese economic cooperation are vital to the economic development in developing countries.³

Advancement; JODC: Japan Overseas Development Corporation; IDCJ: International Development Center of Japan; IDE: Institute of Developing Economies; ECFA: Engineering Consulting Firms Association, Japan

³ In the US, the term “development assistance” is used with the same meaning as that of “economic

Figure 1: Flows of Financial Resources from Japan to Developing Countries

(Million Dollars)



(Source): Ministry of Foreign Affairs of Japan, ODA White Paper

According to the formal DAC definition, grants from non-profit organizations do not qualify as aid. The advantages of NGO resources are as follows: the resources are not affected by political power; the volume of resources is generally so small that they can react immediately and flexibly to recipients' needs; and NGO resources tend to be allocated to poorer communities.⁴ In Japan, they still occupy a small proportion of economic cooperation. The ratio of the resources to whole flows of economic cooperation is only 0.7%. In terms of volume, however, resources in 1994 (\$212.5 million) was around five times as much as the resources in 1984 (\$40.7 million).

2. Traditional Development Cooperation by Official Flows

cooperation". US economic cooperation does not include private flows. On the other hand, Japanese economic cooperation includes private sectors' activities which seek profits, as shown in Table 1.

⁴ Browne, S., *Foreign Aid in Practice*, Pinter Reference London, pp.82-83.

Official flows are composed of ODA and OOF, as described in the framework of Japanese economic cooperation in the previous section. In this section, I will review Japan's economic cooperation performance by focusing upon the ODA of official flows. Then, I will clarify the role Japan has played with its foreign aid, and compare it with the United States' development assistance.

2.1. Brief History of Japanese ODA

Japan's aid initiative emerged in the 1950s as a means of promoting economic cooperation with Asia. The geographical distribution of the aid to Asia has remained substantial due to Japan's concern for Asian development, the region's stability, and the protection of Japan's economic interests. However, the characteristics of the aid have changed in terms of the policy, the quantitative, and the qualitative aspects. According to a 1988 study by Hirata, et al, Japan's ODA can be divided into six periods. The

Table 2: Periodical Classifications of the Japanese ODA

<p>1)The First Period (1954-1957)</p> <p><u>Aid Policy:</u> wartime reparation through participation and cooperation in the internationally supported Colombo Plan</p> <p><u>Aid Region:</u> South and Southeast Asia</p> <p><u>Affairs Related to Aid:</u></p> <p>*Wartime reparation was made in the form of exporting services and capital goods.</p> <p>*Aid other than the reparation program was very small.</p> <hr/> <p>2)The Second Period (1958-the early 1960s)</p> <p><u>Aid Policy:</u> mutually beneficial economic cooperation with recipients</p> <p><u>Aid Region:</u> South and Southeast Asia (Burma, Philippines, Indonesia, Vietnam)</p> <p><u>Affairs Related to Aid:</u></p> <p>*In 1958, the first yen loans started for India as a part of a World Bank consortium.</p> <p>*In 1961, the Overseas Economic Cooperation Fund (OECF) was established as an executing agency for yen loans.</p> <p>*In 1962, the Overseas Technical Cooperation Agency (OCTA) was established, with some technical assistance-related organizations being integrated.</p> <p>*Yen loans were generally tied with Japanese business</p>
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*Interest rates on yen loans were quite low within the range from 5.5% to 6.25%.

3)The Third Period (the second part of 1960s-1972)

Aid Policy: economic aid intensified in East and Southeast Asia

Aid Region: East and Southeast Asia

Affairs Related to Aid:

*Yen loans rapidly increased relative to grants, which meant aid focused on quantitative growth rather than a qualitative aspect.

*In 1966, the Asian Development Bank formed, and Japan granted \$200 million dollars to it.

*Because of a large surplus in Japan's account, pressure on Japan heightened to increase ODA volume.

*Pressure from the international community required Japan to improve the quality of the aid.

4)The Fourth Period (1973-1977)

Aid Policy: reinforcement of economic interdependence intended for natural resource security

Aid Region: East and Southeast Asia, South Asia, Africa, Latin America, Middle East

Affairs Related to Aid:

*The First Oil Crisis greatly decreased the volume of foreign aid.

*Areas of foreign aid were diversified and included Africa and the Middle East.

*In 1974, OCTA was reorganized as the Japan International Cooperation Agency (JICA).

*OECF was in charge of all yen loans.

5)The Fifth Period (1978-1988)

Aid Policy: expansion of aid in terms of both quality and quantity

Aid Region: East and Southeast Asia, South Asia, Africa, Latin America

Affairs Related to Aid:

*By 1988 (\$7,454 million), Japan's ODA volumes increased more than five times over the 1978 level (\$1,424 million).

*In terms of quality, the foreign aid improved greatly. The tied aid declined from 56.6% in 1973-75 to 11.4% in 1987-1988. The grants ratio to the loans rose from 25.2% in 1973-77 to 44.0% in 1986-88. The grant element of ODA went up from 50.6% in 1973-77 to 70.1% in 1986-88.

*OECF started yen loans for social development-related projects.

*In the 1980s, a series of events such as the Iran Revolution, Vietnam's invasion of Kampuchea, and the Soviet Union's invasion of Afghanistan caused an increased emphasis on the political and security sides of economic cooperation.

divisions are based upon differences in the aid policy and changes in quantities or qualities of

the ODA. Table 2 summarizes different periods of Japan's ODA.⁵

Table 3: Comparison of ODA Performances in Japan, US, and DAC Members

	Japan		US		DAC	
(Year)	<u>1980</u>	<u>1994</u>	<u>1980</u>	<u>1994</u>	<u>1980</u>	<u>1994</u>
Quantitative Aspects						
ODA Volumes (\$Million)	3304	13240	7138	9930	26776	59160
% of GNP	0.32	0.28	0.27	0.14	0.37	0.30
% of DAC Members	12.3	22.4	26.7	16.8	100	100
Qualitative Aspects						
% of ODA to LLDCs (Least Less-Developed Countries)	17.5	18.1	15.0	25.6	20.2	24.2
Grant Element of ODA	74.3	78.9	90.5	99.3	90.1	90.8
Grant Element of ODA to LLDCs	80.5	93.8	91.0	99.9	96.7	98.3
Grants Share of ODA	40.0	46.6	72.6	98.2	75.6	77.1
Tying Status of ODA						
Untied	27.6	83.9	36.3	37.4	44.0	55.5
Partially Tied	28.3	2.2	37.4	21.1	10.5	8.7
Tied	43.1	13.9	49.3	41.5	45.5	35.8

(Source): DAC Report 1996

Now, Japan's ODA is in its sixth period. It increased steadily over the six periods (except for the First Oil Crisis period). In 1989, Japan's ODA reached \$9 billion and at last became the top donor in the world. Even through the 1990s Japan has kept its position

⁵ The following books provided reference for Table 2:

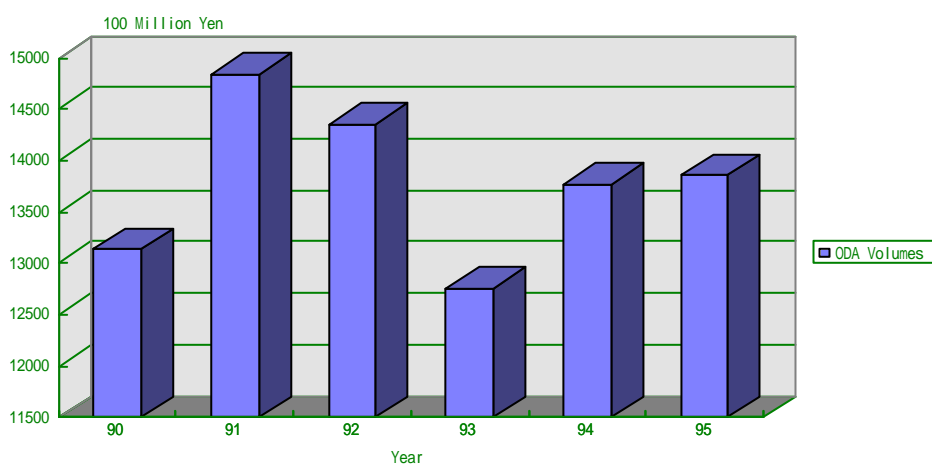
Imai, K., Okamoto, Y., Hirata A., and Yokota, K., *Nihon no Seifu Kaihatsu Enjyo no Tenkai (Development of Japanese Official Development Assistance)*, in Yamazawa, I. and Hirata, A. ed., *Nihon America Yoroppa no Kaihatsu-Kyoryoku-Seisaku (Development Cooperation: Policies of Japan, the United States, and Europe)*, The Institute of Developing Economies, 1992, pp. 23-41.

Yanagihara, T. and Emig, A., *An Overview of Japan's Foreign Aid*, in Islam, S. ed., *Yen for Development: Japanese Foreign Aid and the Politics of Burden Sharing*, The Council on Foreign Relations, Inc., 1991, pp. 37-42.

as the top donor. At the same time, Japanese ODA has improved its aid quality which some international communities have criticized. Table 3 shows the improvement of Japanese ODA in terms of both quality and quantity. In the quantitative aspects, the share of Japanese ODA to DAC members greatly increased from 12.3% in 1980 to 22.4% in 1994. In the qualitative aspects, Japanese untied aid significantly increased from 27.6% in 1980 to 83.9% in 1994.

However, we can see slow a rise in the ODA growth rate since the 1990s, as shown in Figure 2. The ODA volume has decreased noticeably during the past few years because of the country's tightening fiscal policy. The growth rates of ODA were 4.8%, 4.0%, and 3.5% respectively in 1994, 1995, and 1996. The 1997 rate is expected to be the lowest at 2.1%. Increasing fiscal deficits in Japan used to have little affect on Japan's ODA, but Japan's ODA is no longer a "sacred area." Currently ODA quality is emphasized rather than ODA quantity. It's important to note how official flows can effectively support recipients' economic development.

Figure 2: Volumes of Japanese ODA in the 1990s



(Source): ODA White Paper

Yasutomo, D., *The Manner of Giving*, Lexington Books, 1986, pp.6-10.

2.2. Characteristics of Japan's ODA in Comparison with US Foreign Aid

Different historical backgrounds and concepts toward development cooperation between Japan and the US have created different approaches. The differences indicate that each country has some advantages and disadvantages in its own country regarding development assistance. For the purpose of enhancing Japan's role in economic cooperation, it is significant to clarify the characteristics of Japan's economic cooperation and to compare it with other donors. In this regard, Stallings pointed out some differences in the approach of development assistance between Japan and the US.⁶

Firstly, a difference exists in the concept of development. Japanese development assistance still puts more emphasis on economic growth rather than on basic human needs. A comparison of bilateral ODA commitments from 1994 shows Japan allocated 42.1% of its whole ODA budget to economic infrastructure while the US allocated only 15.5% of its ODA budget to economic infrastructure.⁷ The Japanese approach assumes an economy's problems such as poverty, repression of democracy, and extortion of well-being will automatically be resolved after its economic growth reaches a certain level. On the other hand, the US defines development in a broader sense since the US has maintained a tightened financial policy for the past decade. The US approach stresses democratization related to political motives, basic human needs, and institutional building. Therefore, Japan's financial assistance still remains significant for large-scale economic infrastructure projects in spite of strong budget pressures.

Secondly, Japan tends to allocate its official flows to international organizations more than the US. The 1996 DAC Report shows that \$3,681 million in Japanese official flows went to

⁶ Stallings, B., *1990 Nendai no Tenkai- Nitibe no Paradaimu (Development in the 1990s- Paradigm of Japan and U.S.)*, in Ichikawa, H. ed., *Posuto Reisen Jidai no Kaihatsu Kyoryoku to Nichibe Kyouryoku (Development Assistance and U.S. and Japanese Cooperation in Post Cold War Era)*, International Development Journal Company, 1995, pp.31-50.

⁷ Michel, J., *DAC Report 1996*, OECD, 1996, pp.AA45-46.

international organizations while \$2,643 million in US official flows went to international organizations.⁸ Some reasons explain Japan's inclination to contribute to international organizations so much. Firstly, Japan's development institutions are understaffed because of huge ODA volumes. Secondly, Japan's enhanced commitment to international organizations helps the international community find more untied loans. Thirdly, financial contributions through international organizations enable Japan to avoid troublesome areas such as settings of conditionality. In terms of efficiency, allocating a large volume of Japan's official resources to international organizations might be the correct strategy. It is likely that international organizations which have abundant human resources carry out development assistance more efficiently than Japanese development institutions which face shortages of human resources.

Thirdly, the US and Japan have different approaches toward relationships with recipients. The US has taken strong initiative on project identification and project formation. The United States Agency for International Development (USAID) has made decisions about project priority but with little policy dialogue with recipients. The US approach threatens to make the overall development agenda donor-driven. On the other hand, Japan has carried out its ODA projects based upon the recipients' requests. Japan has entrusted recipients to make project identification and project formation.⁹ The Japanese recipient-driven approach threatens to open a gap between the development agenda formulated during the policy dialogue and the realities in the field-level. That includes the following problems: the lack of transparency and accountability for the use of public flows; and, the concentration of decision-making at the center which ignores the opinion of local entities. In this regard, the balanced partnership in which the development activities are performed by the recipients under Japan's monitorial actions is an important step towards enhancing the scrutiny of Japan's foreign aid and the recipients' perspective in the aid effectiveness.

⁸ Ibid., pp.A30 and A36.

⁹ According to Bissell, the reason Japan has failed to make positive policy dialogue with recipients is that Japan is fearful of antipathy from recipients. (Bissell, R., *Kaihatsu ni okeru Minkan no Yakuwari (Role of Private Sector in Development)*, in Ichikawa, H. ed., International Development Journal Company, 1995, p.94.)

The fourth difference in development assistance between both countries is the presence of Non-Governmental Organizations (NGOs) between both countries. In 1995, Japan allocated to its NGOs only 19,523 million yen, which shared 0.6% of the whole ODA budget assigned for technical assistance.¹⁰ On the other hand, the US allocated 25% of its development assistance budget to NGOs.¹¹ The 1992 ratio of US NGOs' self-financing to ODA volumes was 28.4% in comparison with 1.7% in Japanese NGOs.¹² Thus, the Japanese NGOs are much smaller than the US counterparts in terms of both the quantity and quality. It will take a long time before the Japanese NGOs make a significant presence in development cooperation like the US NGOs.

The differences regarding development assistance between Japan and the US indicate that each country has its comparative advantage in promoting mutual learning and compatibility of individual aid programs. With some global problems emerging which can not be solved only with bilateral development cooperation, Japan is facing a real challenge in learning the merits of other donor agencies and improving the quality of official resources. Beyond the concern of bilateral development cooperation, Japan needs to have greater interest in how the bilateral and multilateral development cooperation fit together in terms of rationality, coherence, and coverage. Japan has begun to seek construction of a new era of ODA which is what the international community seeks for the twenty first century.¹³ Now that the international

¹⁰ Ministry of Foreign Affairs, *Wagakuni no Seifu Kaihatsu Enjyo- ODA Hakusho (Official Development Assistance in Japan- ODA White Paper)*, Association for Promotion of International Cooperation, 1996, p.133 and p.201.

¹¹ USAID, Office of Private Voluntary Cooperation, *Voluntary Foreign Aid Programs 1992*, Washington, DC: USAID, 1992, p.82.

¹² OECF, *Kaigai Keizai Kyouryoku Binran 1995 (Handbook of Overseas Economic Cooperation 1995)*, OECF, 1995, pp.104-105.

¹³ In 1995, the Ministry of Foreign Affairs made some proposals toward construction of a new era of Japanese ODA. (Ministry of Foreign Affairs, *Chikyu Shakai to Wagakuni no Yakuwari Bukai Chukan Houkokusho (Interim Report on Global Society and Japan's Role)*, June 1995, pp.1-3.) The major proposals were as follows; enhance policy dialogue with recipients; support Japanese NGOs' activities;

community's expectations toward Japan have heightened, Japanese official flows, including ODA, must be utilized more effectively than before.

3. Economic and Technical Cooperation under APEC

In section 2, I discussed the roles and scopes of traditional development cooperation by taking up the case of Japan's ODA. In this section, I will focus on two subject areas - infrastructure development and technology development/transfer, which were assigned as critical themes in the Declaration of a Framework for Economic Cooperation and Development at the Manila Meeting.

3.1. Infrastructure Development in APEC Region

3.1.1. Infrastructure Investment Needs in APEC

At the Manila Summit, infrastructure development was one of the major agendas for promoting economic and technical cooperation in the APEC region. The APEC economies have committed themselves to promoting infrastructure development because of the following factors: infrastructure underdevelopment threatens to become a critical bottleneck to continuing economic growth; infrastructure underdevelopment causes input prices to become more expensive than otherwise; social infrastructure underdevelopment threatens to bring about disparities in living standards in the region; and internal imbalances in the level of infrastructure services cause income differentials within economies.¹⁴

intensify transparency on project implementation; promote new areas such as women in development, environment, institutional building, plague, and democratization. Thus, Japan's ODA approach is becoming more similar to the US approach while it still emphasizes the economic growth in recipients.

¹⁴The Economic committee, *The State of Economic and Technical Cooperation in APEC*, APEC Secretariat, November 1996, p.37.

East Asian countries have consistently increased their infrastructure investment.¹⁵ The ratio of total investments to GDP rose from 3.6% in the 1970s to around 4.6% in the 1980s and to about 5.0-5.5% in 1993. In terms of absolute volume, we have seen a significant rise in infrastructure investment. Infrastructure investment in the region rose from \$38 billion in 1990 to around \$53 billion in 1992. The total volume of investment is estimated to have surpassed \$70 billion in 1993. These economies are still predicted to require massive infrastructure investments in areas such as power and transportation which are closely related to economic growth. Table 4 indicates the 1995-2004 infrastructure needs, by sector, of four ASEAN economies. The World Bank estimates that East Asian countries will require infrastructure investment ranging from \$1.2 trillion to \$1.5 trillion, which is equal to about 7% of GDP or about 2% more of GDP than the 1995 level.¹⁶

Table 4: Infrastructure Investment Needs by Sector 1995-2004

	Power		Telecommunication		Transportation		Water, Sanitation		Total	
	\$US (billion)	%GDP	\$US (billion)	%GDP	\$US (billion)	%GDP	\$US (billion)	%GDP	\$US (billion)	%GDP
Indonesia	82	2.9%	23	0.8%	62	2.2%	25	0.9%	192	6.8%
Malaysia	17	1.7%	6	0.6%	22	2.1%	4	0.4%	50	4.8%
Philippines	19	2.7%	7	1.0%	18	2.5%	4	0.4%	48	6.8%
Thailand	49	2.4%	29	1.4%	57	2.8%	10	0.5%	145	7.2%

(Source): The World Bank, *Infrastructure Development in East Asia and Pacific-*

Towards a New Public-Private Partnership, p.4.

Reasons for requiring a large amount of infrastructure investments are as follows: the rapid economic growth in the region; funds necessary to make up for past under-investment in most countries; provides measures to deal with the predicted rapid urbanization in the next

¹⁵ East Asian countries here refer to the low and middle income countries of the area: China, Indonesia, Korea, Malaysia, Philippines, Thailand, Vietnam.

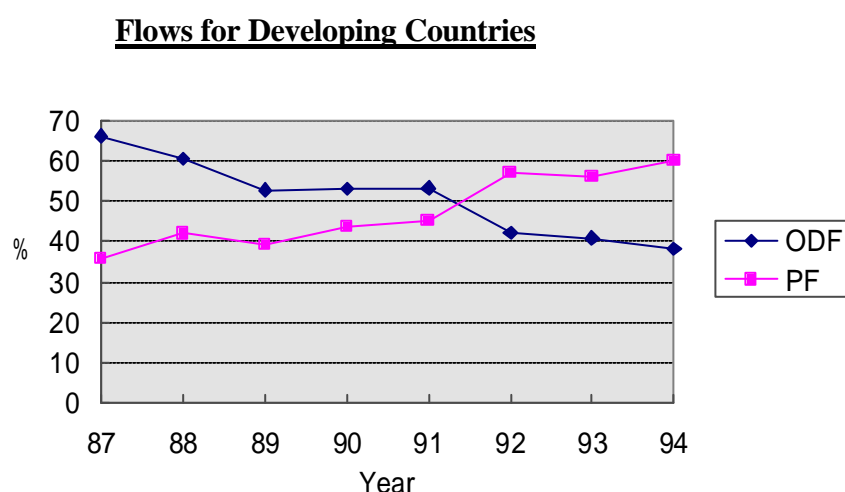
¹⁶ The World Bank, *Infrastructure Development in East Asia and Pacific- Towards a New Public-Private Partnership*, November 1995, p.3.

generation; the increasing trade and expansion of globalization in the region; and increased infrastructure services provide better quality and more services to the public and the business community.¹⁷ Needless to say, official flows are not enough to cover all of the expenses of required investments because of domestic preoccupation and budgetary pressures in donors. Therefore, the government expects the private sector to play a more significant role in economic and technical cooperation in developing countries.

3.1.2. Roles of Private Sector Financing

In the 1995 Development Partnership Policy Statement, the Organization for Economic and Cooperation Development (OECD) Council at the Ministerial Level proclaimed that the OECD would commit itself to mobilize as many public flows as possible and to promote private flows to support the self-help efforts of developing economies. Figure 3 shows the proportion of public flows (Official Development Flows: ODF) and private flows (PF) to total net resource flows for developing countries.¹⁸

Figure 3: Proportion of Public Flows and Private Flows to Total Net Resource



¹⁷ *ibid.*, p.i.

¹⁸ ODF is composed of ODA and OOF. On the other hand, PF includes all private flows except for export credits.

(Source): DAC Report 1990, 1995, and 1996

Until the last half of the 1980s, public flows were a mainstream of development financing to developing countries. However, private flows have surpassed public flows since 1992. In fact, private flows have nearly doubled in real terms since 1992, and they have been drawn largely by the most dynamic countries and sectors of the developing economies.¹⁹ Private flows' role in achieving economic development has begun to change. Private flows used to provide only additional resources, but now they provide major resources for some developing economies.

An increasing demand for infrastructure projects has made it necessary to create some new schemes to develop public-private partnership. In some developing economies in APEC, the private sector has actively participated in infrastructure projects under the schemes called Build Operation Transfer (BOT) or Build Own Operate (BOO) since the 1990s. In either scheme, the private sector first works on the recipient's construction and operation of infrastructure projects, and the private sector assumes the risks of projects. Then, it transfers the projects to the recipients' government after the projects are put on track.

Table 5: Characteristics of the BOT in Some APEC Economies

	BOT Law	Motivation for Introduction of	Incentive Instruments for BOT
	Guidelines	BOT	
Indonesia	×	1 Financial shortage 2 Foreign debt 3 Increased demand for infrastructure	1 Unclear incentive policies (case by case)
	×	4 Lack in management capability	
Malaysia	×	1 Need for allocating public flows to social development	1 Provision of Lands in building super high-ways
		2 Increased demand for infrastructure	2 Partly government's shoulder in constructing infrastructure development
		1 Financial shortage	1 Provision of lands

¹⁹ Michel H. James, *DAC Report 1996*, OECD, 1996, p.63.

Philippines		2 Foreign debt 3 Use of the vitality of private sector	2 Government guarantee of the prices for infrastructure services 3 Tax exemptions
Thailand		1 Financial shortage 2 Increased demand for infrastructure	1 Tax exemptions (applied to whole foreign investment)

(Source): Ministry of Construction of Japan, *International Development Journal*, August 1996, p.55.

As seen in table 5, host economies' governments have attracted private flows by providing BOT laws and incentive instruments related to BOT. In 1991, the Philippines' government introduced the private participation scheme for the power sector. By the end of 1994, more than twelve projects were operational, and more than twenty other projects were signed. The private sector is expected to undertake as much as 80% of the national generating capacity by 1998, compared to no projects in 1991.²⁰

Private sector participation in providing infrastructure projects has some benefits. Firstly, private sector involvement can raise additional financial resources. As a result, more of the official flows, which otherwise would have been spent on the building of infrastructure, can be allocated to other projects such as social and human development projects. Secondly, private sector participation can develop managerial and technological capacities which are crucial to evaluating quality and cost effectiveness of the projects. Thirdly, private resources based on the market mechanism are expected to achieve efficient operation of infrastructure. Due to the private sector's experience and involvement in the competitive global market, they are generally considered more adept at evaluating market needs and handling risks.²¹

3.1.3. Tasks for Directing Private Flows to Infrastructure Development

Taking into consideration the pressures on public finances and the advantages of private

²⁰ *ibid.*, p.1.

²¹ *ibid.*, pp.6-7.

resources described earlier, private sector participation in infrastructure building is essential to complementing financial resources. Private flows' recent prominence in infrastructure development is expected to continue. However, some tasks need attention to facilitate the roles of private resources. A working group established under the Ministry of Construction of Japan made a survey about the BOT-related problems in some APEC economies.²² The problems can be summarized as follows: the private sector actions conflict with the development plans of host countries; the disparities of infrastructure services by region; the lack of concern about environmental problems; and the public's failure to pay the costs of infrastructure services; the insufficient administrative capabilities of the public sector in host countries; the unclear legal and regulatory framework; and the inconsistency and ambiguity of government decisions.

A public-private dialogue, which we call the Roundtable on Best Practices in Infrastructure Development, was held in Seattle in July 1996 in order to improve the problems related to BOT and to increase the effectiveness of the infrastructure development. The public-private dialogue presented four policy objectives for infrastructure development: mitigation of infrastructure risk; creation of a supportive policy environment for infrastructure development; beneficial elements of institutional structures and regulatory regimes conducive to infrastructure development; and the importance of effective communication between the public and private sectors.²³ The specific measures for achieving each policy objective can be summarized as follows:²⁴

● **Infrastructure risk mitigation**

- 1) Process transparency is essential to attracting private infrastructure investment. Financing and insurance cost decrease with greater transparency.
- 2) Precise feasibility studies must be provided so that both public and private sectors can find downside risks and potential profits.

²² Ministry of Construction of Japan, *International Development Journal*, August 1996, p.55.

²³ APEC Economic Committee, *APEC Roundtable on Best Practices in Infrastructure Development*, APEC Secretariat, July 1996, p.1.

²⁴ *ibid.*, pp.4-9 and APEC Finance Ministers Meeting, *Joint Ministerial Statement*, March 1996, pp.6-7.

- 3) Government has to shoulder the high cost of feasibility studies.
- 4) Government has to guarantee costs due to inflation and currency devaluation.
- 5) Government should not excessively distort market mechanism so as not to cause macroeconomic and financial risks.²⁵

● **Supportive policy environment**

- 1) Government has to be aware of the transformation of its role from a monopoly provider to privatizing and restructuring state-owned enterprises.
- 2) Government has to make a strong commitment to infrastructure development by creating a comprehensive master plan.
- 3) Government has to maintain sound and stable macroeconomic fundamentals regarding prices, exchange rates, and real interest rates.
- 4) Financial institutions have to promote the development of the domestic capital market for mobilizing more domestic savings and foreign investments.

● **Efficient institutional structures and regulatory regimes**

- 1) Government has to provide legislative and regulatory frameworks such as a sound and practicable investment law, a rational tax system, an effective and trustworthy legal and judicial system, and a secure and timely dispute resolution mechanism.
- 2) Government has to establish internal coordination and consistency concerning regulations and rules of infrastructure projects.
- 3) Government has to take into account important concerns such as land ownership laws to make projects feasible and intellectual property rights to facilitate foreign investors.

²⁵ Banking regulations that require allocating fixed portions of assets to particular sectors can cause a misallocation of credits. Inappropriate loan-loss regulations, and insufficient supervision can bring about increases in non-performing loans. Thus, rapid growth in financial assets beyond the capacity of financial institutions can create a bubble economy in which banks are jeopardized to illiquidity and insolvency.

● **Effective communication between the public and private sectors**

- 1) Government has to establish a dispute mediation mechanism for facilitating communication among governments, private investors, and communities.
- 2) Modern communication techniques such as the Internet need to be used as well as mass communications in order to ensure credible and timely communication.
- 3) Government has to persuade the public to accept the need for infrastructure projects by clarifying the benefits such as increased job opportunities and technological progress.

3.2. Technology Development/Transfer in APEC Region

3.2.1. Background on Technology Development Needs in APEC

Many studies have shown that technology is an important element in the process of modernization, and a device for accomplishing high productivity and strong competitiveness in the market, and it is closely related to economic development.²⁶ Dr. Paul Krugman concluded that the economic stagnation in Asia in the 1990s has been caused by the production style depending excessively upon factor endowments such as capital and labor.²⁷ His study indicates that factor endowments can not ensure a competitive edge any more. Therefore, technology is considered to be the engine of economic development.

²⁶ A study by Dr. Chrys Dougherty and Dale W. Jorgenson showed that consideration should be given to improving the quality of capital by improving embodied technology. Total factor productivity contributes a small portion to growth. The study indicates that it's difficult to measure technology's contributions to growth because it's difficult to separate from that of traditional factor endowments such as capital and labor.

(*International Comparison of the Sources of Economic Growth*, American Economic Review, May 1996. Vol.86, No.2, pp.25-29).

²⁷ See Krugman, P., *The Myth of Asian Miracle*, Foreign Affairs, November & December, 1994.

APEC members have a wide differential in their technological capacities. Trying to decrease the differential, the APEC Ministerial Meeting strongly emphasized the importance of developing technology under a Framework of Principles for Economic Cooperation and Development. The APEC Eminent Person Group also commented that the flow of new technology stimulates economic development, intensifies scientific and technological capabilities, stimulates trade and investment liberalization, and alleviates disparities among APEC economies.²⁸

APEC's work on technology development has been constructed as follows: Industrial Science and Technology Working Group (IST-WG) makes policy dialogue regarding science and technology and encourages diffusion of technology among members; In collaboration with Human Resource Development Working Group (HRD-WG), IST-WG develops technological capacities of members to both utilize and innovate new technology which can contribute to supporting human resource development work in science, education, and researcher exchanges; Committee on Trade and Investment (CTI) promotes enforcement and transparency of intellectual property rights to step up technology transfers in the economies. Thus, it can be said that the issue of technological development/transfer is cross-cutting because it includes various points of intersection among APEC's economic and technical cooperation activities.

An Action Program for Industrial Science and Technology, proposed in the 1995 Osaka Summit, was incorporated into the Osaka Action Agenda. The vision is to create an Asia-Pacific region built on developing and applying industrial science and technology to improve quality of life while safeguarding the natural environment. Eight goals were presented in the action program. The following goal was the most important to be met: the policy should achieve enhanced links between government agencies, the private/business sector including Small and Medium Scale Enterprises (SMEs), and academic institutions engaged in collaborative industrial science and technological research and development. The goal emphasizes mutual cooperation not only beyond national borders but also among sectors.

²⁸ Eminent Persons Group, *Implementing the APEC Vision* (Singapore, APEC Secretariat, 1995), p.43.

Priority was given to the following three activities: 1) enhancing the flows of technological information and technology; 2) improving researcher exchanges and HRD; 3) and facilitating joint research projects on industrial science and technology. APEC's economic and technical cooperation includes these activities in its projects.

3.2.2. Tasks for Promoting Technology Development/Transfer in APEC- in Reference to a Case Study

When we reflect on APEC working groups' activities regarding the technology development/transfer, the new economic and technical cooperation under APEC's framework has three characteristics distinguished from conventional technical assistance like ODA. The three characteristics are: 1) more significant private-sector orientation; 2) the enhancement of development-related software; 3) the diversity of development participants.²⁹ Private sector orientation can be found in all actors in development cooperation, including donors, recipients, and beneficiaries. Besides governments and international organizations, private companies and NGOs are strengthening their presence in development cooperation. Secondly, the development's software functions refer to the provision of management training, the enhancement of technological information, and the promotion of technological research. The APEC's emphasis on software aspects is different from the conventional development cooperation of building large-scale economic infrastructures. Lastly, the diversity of development participants makes it possible for two or more donors, NGOs, and/or international agencies to join the same project. The diverse strength and capabilities of different actors can establish a strong cooperative framework in APEC.

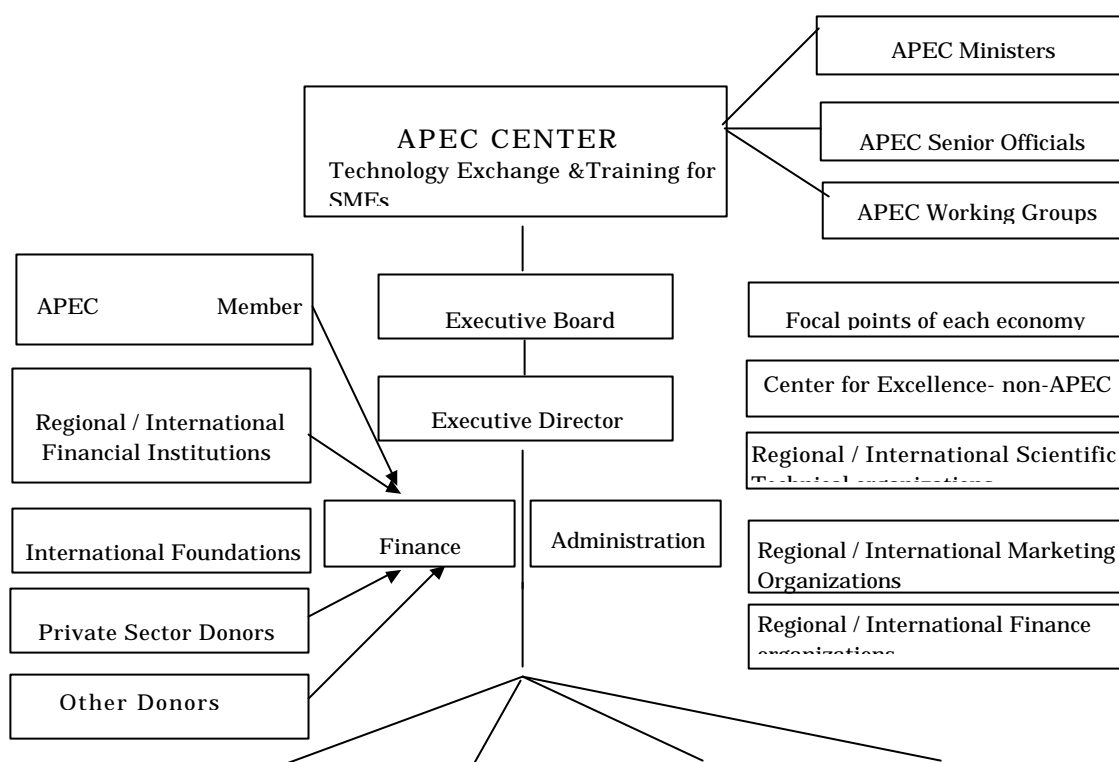
Reflecting the characteristics of APEC's development cooperation, the APEC Center for Technology Exchange and Training for Small and Medium Enterprises (ACTETSME) was launched on September 7, 1996. ACTETSME originated from a proposal by the Philippine

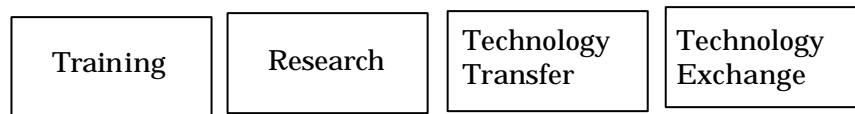
²⁹ Planning Department, Japan International Cooperation Agency, APEC Partner for Progress (PFP) Research Report (Part I), March 1995, pp.9-11.

government at the APEC Leaders Pledge in Seattle. The functions of the center are cross-cutting issues in the context of work on human resource development, finance, science and technology, the promotion of small and medium enterprises, and trade and investment. A goal of the center is to bolster the impact of global competition and intensify the role of SMEs in a liberalized business environment. To achieve this goal, ACTETSME expects to play a role as a center for facilitating information flow and exchange among APEC economies' focal points. Some technological gaps in the APEC region are difficult to fill using only institutions and support agencies within a country. ACTETSME can contribute to filling these gaps through intensified networking among the APEC members.

Specific activities of ACTETSME include the following: information networking which provides SMEs with information about commercial technologies, credit programs for SMEs, raw material sources, foreign markets, and business exchanges; circulating training opportunities for technical know-how, skills, and management; syndicating technology transfer projects including research and development (R&D) and design/product development; and legal assistance based on intra-regional cooperation and business internationalization.

Figure 4: Institutional Structure of ACTETSME





(Source): SERDEF

The organizational structure of ACTETSME is shown in Figure 4. Since September of 1996, when the ACTETSME started, the Small Enterprises Research and Development Foundation (SERDEF) has served as an agency of ACTETSME. In 1976, a group of business leaders, educators, and development managers, organized SERDEF as a non-profit organization to try to improve and expand SMEs. The executing office will transfer to the Philippine Network of Small and Medium Enterprises (PhilSME)³⁰ in March of 1997 and then finally to the APEC International Governing Board in 1998. The focal points of each APEC economy can provide information related to SMEs. The focal points have various kinds of characteristics based on each economy's specialization, priorities, and national programs. The Government of the Philippines shouldered all of the costs for building ACTETSME. The Department of Science and Technology of the Philippines shouldered 38 million pesos of the construction, and the Department of Trade and Industry (DTI) funded 5.4 million pesos of the facility costs such as equipment and furniture. The University of the Philippines provided the land.³¹ The Trade and Investment Liberalization Fund, known as the Murayama Fund from the Japanese government, provided the center with US\$62,000.³² The DTI is presently funding the interim operation of the center with SERDEF.

It has been only half a year since ACTETSME opened in September 1996, and a few

³⁰ PhilSME is composed of six members representing a cross section of firms from the micro, small, medium, and large enterprise sector- Federation of Filipino-Chinese Chambers of Commerce and Industry, Philippine Business for Social Progress, Philippine Exporters Confederation, Philippines Chamber of Commerce and Industry, Philippine Chamber of Cooperatives, and SERDEF.

³¹ Hearing from Ms. Maria Fina C. Yonzaon, Director at Bureau of Small and Medium Business Development, DTI.

³² APEC 96 News Bureau, *SME Projects Given Go-Signal*, Press Release No.175, September 5 1996.

activities in the center have not started operations yet.³³ Therefore, it is impossible to evaluate the project's effectiveness in the technology development/transfer in SMEs. However, I can present some key tasks that promote supporting the project in the future. To formulate the tasks, I will refer to fact-findings through a field research which I conducted in November 1996. The tasks are as follows:

1) The project has to strengthen the network among APEC member's focal points which are the first line source in identifying technology needs and training opportunities

SMEs in the APEC region have different characteristics in terms of definitions, capabilities, business environments, and roles in their societies. Therefore, it is very difficult to make a consistent regional strategy without information relevant to other economies' SMEs. That threatens to cause demand-supply mismatching. Focal points must communicate with one another about information concerning the SME's technology needs and technological capabilities, training programs, institutions, and regulatory arrangements of its own economy.

2) ACTETSME has to be supplemented by both capital and technical assistance from a traditional development cooperation such as ODA.

The Government of the Philippines has shouldered the project costs. According to a DTI officer, the financial situation of the project is not bright because of the private sectors' reluctance to make financial contributions. The supportive technology infrastructures such as research institutes, which are expected to support ACTETSME, have not been well-arranged. ACTETSME needs official flows in the forms of finances, facilities, and human resources before ACTETSME can become a financially self-reliant center based on the concept of a market mechanism in which the beneficiaries would share the costs as well as the benefits. This would be consistent with one of the guiding principles of APEC's economic and technical

³³ SERDEF's major activities include: the surveys on the needs of SMEs in APEC region, especially the Philippines SMEs; the network making among focal points; and the coordination of some workshops related to the promotion of SMEs.

cooperation, the constructive and genuine partnership between the public sector and private sector.

3) ACTETSME has to concern itself with protecting firms' specific technologies while acting as a referral center at the firm level with negotiations possible between SMEs.

Crucial differences in security issues (such as industrial property rights, confidentiality of business, and privacy) exist among APEC economies in terms of their systems and enforcement capabilities. Technology transfer interrelates with security issues such as industrial property rights, confidentiality of business, and privacy. Intellectual property protection has an important effect on the amount and kinds of technology transfer given to a technology recipient country.³⁴ Therefore, it is difficult to achieve technology transfers without a reciprocal benefit to the donor. Legal instruments become a critical determinant in facilitating technology inflows from other economies.

4) In the long term ACTETSME needs to expand beneficiaries.

One project objective looks to strengthen the ability of SMEs to compete in export markets by improving their technological capabilities and trade potentials. A lot of SMEs in the APEC region's developing economies are not ready to be competitive in the international market. In a Workshop in Information Networking for SMEs in September of 1996 in Manila, most economists estimated that 5% of SMEs in the APEC region will benefit from the ACTETSME. However, we expect the number of beneficiaries will increase by eventually strengthening the volume and diversity of services.

5) ACTETSME has to evaluate and provide resources, expertise, and information on technologies most needed by SMEs.

Technology transfer in APEC has generally followed a flying-geese pattern in which the

³⁴ The Economic Committee, 1996 *APEC Economic Outlook*, APEC Secretariat, 1996, p.99.

developed economies (Japan, US, Australia, and Canada) have the highest technology, followed by the NIEs, then ASEAN, and finally China.³⁵ The pattern of technology transfer can upgrade the industries of the developing countries, in accordance with the change in their comparative advantage. However, the developing countries will pay for adjustment costs if they introduce technology which does not fit with factor endowments of production in them. In this regard, ACTETSME has to encourage beneficiaries to adapt by functioning as an international network for various participants in technology development/transfer . This also contributes to the increases in beneficiaries of the center.

6) Effective institutional frameworks supporting human resource development (HRD) has to be well-established.

Stiglitz presented in a debate over the East Asian miracle that massive investment in human capital was one of the important factors leading to East Asian economies have filled the technological gap rapidly.³⁶ Sometimes, companies can not adequately respond to technology transfers through either in-house or external sources because of their lack of knowledge and skills. Technology would be useless without skilled and educated human capital which utilize it and adjust as necessary for local conditions. Well-educated human resources, especially scientists, engineers, managers, and skillful laborers are indispensable to the effective use of physical facilities in technological operation and acquisition. Education is important and necessary to raise labor productivity and acquire skills to keep up with technological changes.

7) Technology flows have to be promoted within the context of trade and investment liberalization.

Foreign investment and purchases of imported capital goods are significant technology development/transfer modes. Foreign firms can bring capital, technological know-how and

³⁵ APEC Ad Hoc Group on Economic Trends and Issues, *APEC Economies: Recent Development and Outlook*, APEC Secretariat, November 1994, pp.16-17.

³⁶ *Ibid.*, p.99.

resources into the recipient countries. The firm's technology or technological level mainly determines its productivity which, in turn, is a major determinant of the competitiveness and profitability of the product. Both the international market and the domestic market environments, such as the tariff and non-tariff factors, greatly influence the technology or technological level of foreign firms. Trade and investment liberalization can speed technology adoption and diffusion. Thus, APEC's technology development/transfer has to complement the objective of achieving free trade and investment in the region.

4. Direction of New Development Cooperation

Two basic elements of development cooperation are financial and technical cooperation. Financial cooperation is provided to make up for recipients' shortage in funds needed for investment. On the other hand, technical cooperation is offered in view of appropriate technology development/transfer. At the same time, the developing economies need to make efforts to increase domestic savings and improve education. Investment and technology development/transfer are closely related to economic growth. Economic growth will promote international trade and, in turn, lead to the vitalization of trade and investment in and outside the region. The unique framework of APEC's development cooperation which incorporates free trade and investment activities can encourage trade and investment both inside and outside the region. This is a simple example of the graduated development structure (vis-à-vis the donor-recipient structure of the conventional development assistance example) under APEC's development cooperation and is shown in Figure 5.³⁷

Figure 5: A Paradigm for Development Structure under APEC's Development Cooperation

³⁷ Planning Department, Japan International Cooperation Agency, op. cit., pp5-7.

(Source): Planning Department, Japan International Cooperation Agency, p7.

An APEC model of development cooperation seems to be promising in view of the guiding principles, However, is the development paradigm practical under APEC's development cooperation when we take into account some problems existing in the region?³⁸ How can traditional development assistance complement APEC's development if the answer is not yes?

Firstly, I am wondering if technology transfer, which would lead to the development advances, can be facilitated under the present development cooperation framework. Generally speaking, private companies provide a major source of technology transfer. Private companies usually behave in accordance with profit-seeking principles. Therefore, they might hesitate to provide their companies' technology secrets to their potential rivals. Creating opportunities for mutually beneficial exchange between the companies with mutually high technologies might be possible based on a perception of mutual benefit. However, that is difficult between companies with different technological levels even if an intermediary agency like ACTETSME functions as a facilitator.

³⁸ The main common issues existing in the region are: a lack of institutions and personnel to manage a dynamic economy; environmental destruction; and a widening gap between the rich and poor. (ibid., p7.)

Secondly, inflows of private capital cooperation tend to concentrate on some limited economies, areas, and sectors, and, in turn, make a distorted development structure. This is contrary to APEC's guiding principles of equitable development and reducing disparities. Private flows are seldom allocated for social infrastructure projects related to health and education, environmental protection projects, and projects located in rural areas, which are considered to have a low rate of return. This is where conventional development assistance plays its role through extending ODA loans or using trade insurance, and publicly guaranteeing private infrastructure funds.

Thirdly, shifting resources to more productive uses, following trade and investment liberalization, may bring about adjustment costs, especially in the developing economies. Economically, liberalization policies spur the economic welfare of economies in various ways.³⁹ However, a lot of SMEs in the developing countries receive few benefits from the liberalization because they are not competitive enough to go into the international market. They do not have capabilities to relocate their resources to new industries and other places quickly. They will find themselves without the skills required for new industries. The technology exchange and training center under APEC's development cooperation, such as ACTETSME, is targeting only export-oriented SMEs, which still do not occupy large shares in the developing economies. Taking into consideration the fact that SMEs make up 90 % of all enterprises and contribute 32%-84% of employment in each APEC economy, liberalization is predicted to involve massive adjustment costs, especially for labor markets.⁴⁰ Development cooperation should to play a significant role in reducing the frictional costs associated with job transition in the developing economies of APEC. In addition, each developing economy needs to prepare some safety nets for the sake of equity.

Lastly, APEC's general approach emphasizes diversity and the different situations of

³⁹ The ways are: economies can produce efficiently; they benefit from economies of scale; their access to international markets encourages efficiency and growth through competitive pressure; their exposure to international markets brings about the flow of information; trade expands the menu of goods and services to producers and consumers. (The Economic Committee, *1996 APEC Economic Outlook*, p.102.)

⁴⁰ APEC Secretariat, *Selected APEC Documents 1995*, APEC Secretariat, December 1995, p.196.

members, and it focuses on developing participants' strengths. APEC has sustained the process of voluntary cooperation through the consensual approach. However, the trend toward more diverse participants and the emergence of more complicated agendas require creating clearer rules for developing pluralism in the region.

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Acronyms

ACTETSME: APEC Center for Technology Exchange and Training for Small and
Medium Enterprises

AOTS: Association for Overseas Technical Scholarship

APEC: Asia-Pacific Economic Cooperation

ASEAN: Association of South-East Asian Nations

BOO: Build Own Operate

BOT: Build Operation Transfer

CTI: Committee on Trade and Investment

DAC: Development Assistance Committee

DTI: Department of Trade and Industry

ECFA: Engineering Consulting Firms Association, Japan

GDP: Growth Domestic Products

HRD-WG: Human Resource Development Working Group

IDCJ: International Development Center of Japan

IDE: Institute of Developing Economies

IST-WG: Industrial Science and Technology Working Group

JICA: Japan International Cooperation Agency

JODC: Japan Overseas Development Corporation

JPC: Japan Productivity Center

MOFA: Ministry of Foreign Affairs

NGOs: Non-Governmental Organizations

NICs: Newly Industrializing Countries

OCTA: Overseas Technical Cooperation Agency

ODA: Official Development Assistance

ODF: Official Development Flows

OECD: Organization for Economic Cooperation and Development

OEFC: Overseas Economic Cooperation Funds

OISCA: Organization for Industrial Spiritual and Cultural Advancement

OOF: Other Official Flows

PF: Private Flows

R&D: Research and Development

SERDEF: Small Enterprises Research and Development Foundation

SME: Small and Medium Scale Enterprise

USAID: The United States Agency for International Development