CHAPTER 3

EFFECTS OF CAVITE EPZ DEVELOPMENT AND INVESTMENT PROMOTION STUDY

3. Effects of Cavite EPZ Development and Investment Promotion Study

3.1. Background and Objective of the Study and General Outline of Recommended Measures

3.1.1. Background

The Aquino government, which was inaugurated in 1986, implemented its Medium-Term Development Plan (1987-92) by giving priority to export promotion in order to improve the balance of payments. It called for two strategies: one was to emphasize promotion of non-traditional export industries, while promoting industries that effectively utilize local resources, such as furniture and food processing; and another to promote foreign investment for developing export-oriented electric/electronics and machinery industries that have high levels of technology, together with promotion of domestic industries.

As part of these strategies, the Government decided to implement an expansion project of CEPZ which had already been in the first phase of development by the Export Processing Zone Agency (EPZA) and accelerate the promotion of investment in CEPZ. In 1989, the Government requested the Japanese Government to provide financial assistance for the implementation of the CEPZ expansion project while providing technical assistance for the formulation of the basic project concept and investment promotion measures for that project.

In response to the request, JICA conducted the Cavite EPZ Development and Investment Promotion Study (the "CEQZ Study"). At the same time, OECF simultaneously conducted a SAPROF study to review and finalize the feasibility study on the CEPZ expansion project (the "CEPZ Feasibility Study") which had been prepared by EPZA. Those two studies were conducted in close coordination. The CEPZ Feasibility Study was proceeded on the basis of an interim report pertaining to the CEPZ Study that includes the development target of the CEPZ, priority industries selected for the promotion of investment in the CEPZ, and projection of investment demands for the CEPZ.

The main objectives of the CEPZ Study were defined as follows:

1) To identify and define the development goal of the CEPZ expansion project and priority industries to be promoted for investment in the CEPZ;
2) To assess and analyze potential demands for investment in the CEPZ by local and Japanese industries;
3) To formulate investment promotion measures; and

4) To formulate appropriate measures for fostering industries which have effective linkages to the CEPZ's locators.

3.1.2. Conclusion and Recommendations of the CEPZ Development Study

The CEPZ Study, as its conclusion, indicated the development goal (together with projection for land requirements) for the CEPZ expansion project and priority industries to be located in the CEPZ; the measures to promote investment in the Philippines, particularly the CEPZ; and the measures to foster industries that have effective linkages with the CEPZ's locators. Outline of the indicated conclusions is enumerated below.

(1) Development goal for the CEPZ expansion project

a. Site development targets (industrial land only)

- First phase development: 39.6ha (already started at the time of the study)
- Land available to subsequent (second – fifth) development: 134.4ha
- Total land area: 175.0ha

b. Priority industries to be promoted for location in the CEPZ

- Electric and electronic equipment
- Automotive parts
- Metalworking
- Precision machinery
- Plastic molding and processing
- Textile and garment
- Computer software

Among those industries, an emphasis is made to promote non-polluting, energy saving, export-oriented (including supply to export industries) and high-tech industries.

(2) Promotion of investment in the Philippines and the CEPZ

The following recommendations were presented as the measures for promoting industrial investment in the Philippines and the CEPZ in particular:

a. Foreign investment promotion measures for BOI and EPZA;

b. Recommendations on the development, expansion and upgrading of infrastructure in and around the CEPZ and also on the establishment of Common Service Facilities within the CEPZ; and

c. Recommendations on improvement of the CEPZ management system and on improvement and upgrading of facilities, procedures and services in the CEPZ.

The recommendations included the following issues:

a. Foreign investment promotion measures for BOI and EPZA

1) The strengthening of institutional capabilities of BOI and EPZA (functions to support investment promotion activities);
2) Intensification of foreign investment promotion activities; and
3) The establishment of international communication networks to seek foreign investors.

b. Development, expansion and upgrading of infrastructure in and around the Cavite EPZ and the establishment of Common Service Facilities within the CEPZ

1) Extension of a coastal highway (Bacoor and Noveleta) and construction of a Noveleta – CEPZ section;
2) Expansion of telecommunication system;
3) Assuring of stable power supply; and
4) Supply of adequate industrial water.

c. Improvement of the CEPZ management system and improvement and upgrading of facilities, procedures and services within the CEPZ

1) Improvement of the management system
   - Increase in CEPZ's staffing;
   - Streamlining of export and import procedures; and
   - Establishment of close communication with locators.
2) Improvement and upgrading of facilities, procedures and services within the EPZ
   - Setting up of housing facilities to accommodate locators' employees;
   - Establishment of a technical training center;
   - SME support measures;
   - Enhancement of assistance for the recruitment of employees; and
   - Promotion of the establishment of Common Service Facilities on a commercial basis.

(3) Recommendations on the measures for fostering industries that have effective linkage to the CEPZ's locators

To foster industries that are functionally linked to the CEPZ's locators, the following measures were recommended:

1) Promotion of indirect export (supply to export industries);
2) Assistance for fostering subcontract suppliers, such as the provision of institutional finance for modernization of equipment, exemption of import duties, transfer of appropriate processing technology (including production management and quality management systems), tax incentives for the import of raw materials (including the return of import duties), the establishment of a bulk purchase system, and award of excellent suppliers;
3) Establishment of an intermediary function for subcontract arrangements; and
4) Technical assistance for quality improvement of local suppliers to be subcontracted.

(4) Programs to be implemented for foreign investment promotion

To attract foreign investment in the EPZ, the following two programs were proposed:

BOI and EPZA foreign investment promotion programs

1) Establishment of investment promotion offices abroad, particularly in Japan, South Korea, Taiwan and Hong Kong;
2) Strengthening of BOI and EPZA headquarters' functions, particularly overall coordination and support functions, as enumerated below;
   a. Overall coordination and supervision of promotional activities carried out at the investment promotion offices set up abroad;
   b. Coordination with related government agencies and bodies in industrial promotion as well as coordination and communication with relevant foreign organizations within the Philippines;
   c. Collection and provision of information as required for investment promotional activities at the aforesaid promotion offices abroad, planning of and preparation for investment seminars, selection and sending of speakers, and other support services;
   d. Provision of information on policy issues and other high level issues in response to inquiry from the investment promotion offices abroad; and
   e. Assistance, guidance and other services to potential investors visiting the Philippines.
3) Main activities for investment promotion at the investment promotion offices abroad

a. Publicizing and disseminating information on comparative advantages, investment climate and industrial infrastructure in the Philippines;
b. Identification of potential investors; and
c. Follow-up communication and information and consulting services for potential investors identified.

EPZA's promotion programs

1) Delineation of priority industries to be promoted for location of production units in CEPZ;
2) Securing of cooperation from domestic industrial associations; and
3) Main promotion activities, including:
   a. Public relations
   b. Follow-up/marketing activities
   c. Information service
   d. Consultation
   e. Monitoring

3.2 Current State of PEZA and the Cavite PEZ

3.2.1. Current State of PEZA

(1) Background of the creation of PEZA

In the Philippines, the development of a free trade zone (FTZ) was started in 1969. Then in September 1972, Presidential Decree No.66 was issued to initiate the development of Export Processing Zone (EPZ) as a public-sector project. The EPZ is a specially developed industrial estate to accommodate foreign and domestic manufacturers specialized in export. The development of EPZ aims at promoting investment, particularly foreign investment, exports and the creation of employment opportunities. Manufacturing establishments located in the EPZ are required to export all of their products, while provided with several incentives, including free duty import of production equipment and raw materials, tax and other fiscal incentives, and other privileges.

To plan, develop and manage the EPZ, the Export Processing Zone Authority (EPZA) was established under the Department of Trade and Industry (DTI) and developed the following four EPZs:

- Bataan EPZ (Mariveles, Bataan)
- Baguio City EPZ
- Mactan EPZ (Cebu)

- Cavite EPZ (Rosario, Cavite)

In the previous two Medium-Term Development Plans (1985-92 and 1993-98 respectively), policy priority was given to the following three areas: (1) industrial development and promotion focusing on the promotion of investment and export; (2) regional dispersion of industries and stimulation of industrial clustering at potential growth centers; and (3) introduction of private investment to infrastructure development. To accomplish these goals, the Government adopted strategy of encouraging extensive development of the economic zone by private developers and investment in those developed economic zones. As the legal framework to support the promotion of economic zone development, Special Economic Zone Act of 1995 – EO No.7916 was enacted in July 1994, and the Philippine Economic Zone Authority (PEZA) was created in February 1995 as a government agency responsible for the promotion of development of the Special Economic Zone (ECOZONE) and the promotion of investment in ECOZONE by locators, as well as management and administration of ECOZONE. At the same time, EPZA was absorbed by PEZA and the four EPZs managed by EPZA were transferred to PEZA accordingly.

(2) Objective of the Special Economic Zone Act

The objective of this Act is to pursue industrial, economic and social development in a sustainable and balanced manner by promoting the development of ECOZONES in strategic areas having adequate growth potential under the government's leadership and by attracting foreign capital investment effectively, aiming at creating employment opportunities for the people (especially those in rural areas) and thereby raising productivity, income and standards of living. More specifically, the following objectives were set:

1) To establish the legal framework and mechanisms for the integration, coordination, planning, and monitoring of special Economic Zones, Industrial Estates/Parks and Export Processing Zones to be developed throughout the country;
2) To transform selected areas in the country into highly developed agro-industrial, industrial, commercial, tourist, banking, investment, and financial centers;
3) To promote the flow of investors into special economic zones which would generate employment opportunities and establish backward and forward linkages among industries in and around the economic zones;
4) To stimulate the repatriation of Filipino capital by providing attractive climate and incentives for business activities;

5) To promote financial and industrial cooperation between the Philippines and industrialized countries through technology-intensive industries that will modernize the country's industrial sector and improve productivity levels by utilizing new technological and managerial know-how; and
6) To vest the special economic zones on certain area with the status of a separate customs territory.

(3) Development concept and current status of ECOZONES

ECOZONE is defined as selected areas with highly developed or which have the potential to be developed into agro-industrial, industrial, tourist/recreational, commercial, banking, investment and financial centers. An ECOZONE is generally classified into the following three types:

a. Industrial estate (IE) – Refers to a tract of land subdivided and developed according to a comprehensive plan under a unified continuous management and with provisions for basic infrastructure and utilities, with common service facilities for the use of the community of industry.
b. Export processing zone (EPZ) – a specialized industrial estate located physically and/or administratively outside customs territory, predominantly oriented to export production. Enterprises located in the EPZ are allowed to import capital equipment and raw materials free from duties, taxes and other import restrictions.
c. Free trade zone – an isolated policed area adjacent to a part of entry (as a seaport) and/or airport where imported goods may be unloaded for immediate transshipment or stores, repacked, sorted, mixed, or otherwise multipulated without being subject to import duties. However, movement of these imported goods from the free-trade area to a non-free-trade area in the country shall be subject to import duties.

Enterprises within the zone are granted preferential tax treatment and immigration laws are more lenient.

(4) General profiles of PEZA

As mentioned earlier, PEZA is a government agency established under the Act of 1995, and is responsible for promotion of the development of ECOZONES, promotion of investment therein, and management and administration of the zones. Although PEZA is attached to DTI, it is an autonomous body corporate having specific functions and authority. The PEZA Board appointed pursuant to the provisions of the Special Economic Zone Act set the general policies that are executed by the Director General

appointed by the President under the Act. PEZA's organization, and key functions and authority of the PEZA Board are summarized below.

Composition of PEZA Board

- Chairman: Secretary of DTI
- Vice Chairman: Director General of PEZA
- Board Members: Undersecretaries of DOF, DOLE, DOI, DOENR, DOA, DOPWH, DOST, DOE; Deputy Director General of NEDA; One representative from the labor sector; one representative from the investors/business sector in the ECOZONE; total 11 persons

Organization of PEZA

- Director General (appointed by the President: to be the rank of department undersecretary)
- 3 Deputy Directors General (each for policy and planning, administration and operation)
- Headquarters: located in Metro Manila
- ECOZONE Administration Offices: located in each ECOZONE, where an Administrator and other staff are stationed.
- Total staff: approximately 600 (No increase in the number of staff compared to the time of EPZA, whereas the work volumes are substantially increased. Minimization of the staff number is the PEZA' s management policy.)

Functions and Powers of PEZA Board

a. Set the general policies on the establishment and operations of the ECOZONES.
b. Review proposals for the establishment of ECOZONES and endorse to the President the establishment of the ECOZONES. (The ECOZONES are described in a proclamation to be issued by the President.)
c. Regulate and undertake the establishment, operation and maintenance of utilities, other services and infrastructure in the ECOZONES, and fix rates, charges and fees for those utilities and other services.
d. Approve the annual budget of the PEZA and the ECOZONE development plans.
e. Issue rules and regulations to implement the provisions of the Act.
f. Exercise its powers and functions as provided for in the Act.
g. Render annual reports to the President and the Congress.

General Powers and Functions of PEZA

a. To operate, administer, manage and develop according to the principles and provisions set forth in the Act.

b. To register, regulate and supervise the enterprises in.
c. To coordinate with local government units and exercise general supervision over the development, plans, activities and operations of the ECOZONES.
d. In coordination with local government units concerned and appropriate agencies, to construct, acquire, own, lease, operate and maintain adequate facilities and infrastructure, such as light and power systems, water supply and distribution systems, telecommunication and transportation, buildings, structures, warehouses, roads, bridges, ports and other facilities.
e. To create, operate and/or contract to operate such agencies and functional units or offices of the authority.
f. To undertake legal activities under the Act.
g. To coordinate the formulation and preparation of the development plans of the different entities mentioned above.
h. To coordinate with NEDA, DTI, DOST and the local government units and appropriate government agencies for policy and program formulation and implementation.
i. To monitor and evaluate the development and requirements of entities in subsection (a) and recommend to the local government units or other appropriate authorities the location, incentives, basic services, utilities and infrastructure required or to be made available for said entities.

As enumerated above, PEZA's role, function and authority have expanded significantly compared to those of EPZA.

Formerly, EPZA's responsibility was limited to the planning and implementation of projects for the development of EPZ with public finance, as well as management and administration of thus developed EPZs.

Now, PEZA is responsible for the promotion of ECOZONE development projects throughout the country, including general coordination and supervision of ECOZONE development projects to be undertaken by the private developers and local government units. Hence its activities has substantially expanded by covering all areas throughout the country and also scale of development. In addition, PEZA has authority to approve construction of industrial estates out of ECOZONES, which authority was transferred from BOI.

Previously, BOI controlled investment promotion activities in the Philippines, including investment in the EPZ, and EPZA was only responsible for efforts to promote investment in the EPZ under BOI. Today, PEZA is directly responsible for investment

promotion in the ECOZONE, while BOI is engaged in investment promotion activities for other areas. Thus, PEZA is fully empowered to promote investment in the ECOZONE.

Similarly, responsibility for registration of ECOZONE locators and the granting of investment incentives to them was transferred from BOI to PEZA, while BOI deals with companies investing in other areas.

3.2.2. Development Status of the ECOZONES and Export of Industrial Products from ECOZONES

(1) Development status of the ECOZONES

Under EPZA, only four EPZs were developed as public projects (see 3.2.1(1)). They were operated and managed by EPZA and were transferred to PEZA's responsibility, including the CEPZ.

After the establishment of PEZA, the development of ECOZONES led by private investment (both foreign and domestic capital) was encouraged. As of 1995 when PEZA was established, 12 industrial estates were developed in addition to the four EPZs, totaling 3,183ha of land area.

Since then, 122 ECOZONE development projects (total area of 21,275.6ha) were approved up to the end of 1999 and 61 projects were completed and are currently in service. Private developers undertook majority of the projects, and only few projects were developed by local government units. Thus, none of them was carried out as public investment. A recently approved ECOZONE development plan includes the development of two IT parks.

Table 3-1 shows the number of ECOZONE development projects and the total amount of investment (approval basis) for the development between 1995 and the end of 1999.

Table 3-1 Recent Trends in ECOZONE Projects (Approval Basis)

	1995	1996	1997	1998	1999	'95 – '99
New Projects approved	6	27	31	28	14	106
Total	22	49	80	108	122	
Value of Investment (billion pesos)	3	43	106	33	119	303

(Note) The total number of ECOZONE development projects includes 16 projects that were already completed.
(Source: PEZA)

As is apparent in the above table, the amount of investment in ECOZONE development under PEZA grew rapidly up to 1997. After a temporary setback in 1998 due to the Asian economic crisis, it grew again and exceeded the 1997 level. Geographically, 56 projects (including the CEZ) are located in Cavite or Laguna, of which 29 are already in operation.

Table 3-2 shows the breakdown of ECOZONE investment by country between 1995 and 1999.

Table 3-2 Breakdown of ECOZONE Investment by Origin of Investors (1995 – 1999)

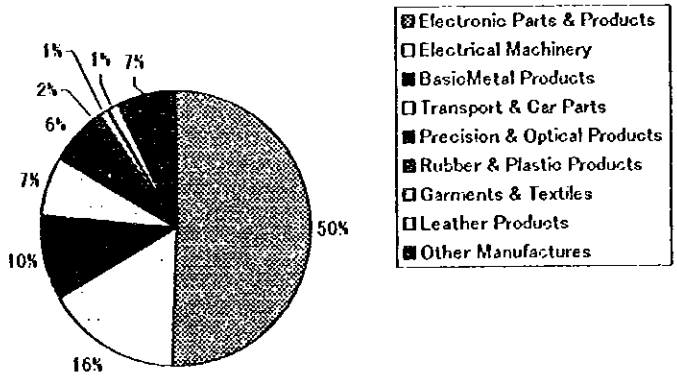
Country	Philippine	Japan	Malaysia	Singapore	Others
share(%)	90	3.4	3.3	1.5	0.9

(Source: PEZA)

(2) Investment by locators in ECOZONES

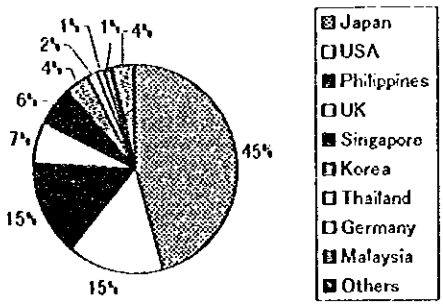
Yearly trends in value of investment by locators in the ECOZONES (approval basis) are shown in Table 3-3. Also, breakdown of total investment by subsector and origin of investors during the same period are shown in Figures 3-1 and 3-2.

Fig.3-1 Breakdown of Investment by Subsector



(Source: PEZA)

Fig.3-2 Breakdown of Investment by Country of Origin



(Source: PEZA)

Table 3-3 Yearly Trends in Total Investment by Tenant companies in the ECOZONEs (Approval Basis)

	1995	1996	1997	1998	1999	'95 – '99
Value of Investment (Billion Pesos)	49.7	22.7	53.6	64.1	36.8	226.9

(Source: PEZA)

The total investment made by locators in the ECOZONES between 1995 and 1999 amounted to 226.9 billion peso. During the same period, BOI approved investment projects directed to the manufacturing sector, totaling 615.3 billion peso (see Fig.2-3 in 2.3.1). Assuming that the total of the above two figures represents the grand total of investment in the manufacturing sector, investment by locators in the ECOZONES accounts for approximately 27%. Of total investment by the ECOZONE industries, electronic parts and products account for 50.5% (mostly electronic parts), followed by household appliances and electrical machinery (16.4%), basic metal products, transportation equipment and automotive parts and precision/optical products. In fact, these top five are high-tech industries, which represent a combined total of around 89% of total investment. Other industries, mainly light industries including rubber and plastic products, textile and garment, and leather products, account for a merely 4%.

By origin of investors, Japan accounts for the largest share of ECOZONE investment. As shown in Fig. 3-2, they account for 45.7% of total, followed by the U.S. (15.4%), the Philippines (14.6%), the UK (6.6%), Singapore (6%), and South Korea (3.9%). These six countries hold a 92.2% share of total. Other countries include Thailand, Germany and Malaysia.

(3) Incentives for ECOZONE developers and locators

Incentives available to ECOZONE developers and locators are summarized below:

Incentives for ECOZONE developers

a. Incentives under the BOT Act;
b. Provision of vital off-site infrastructure facilities;
c. Incentives listed as (e), (f) and (g) among the incentives to be granted to ECOZONE locators;
d. Assistance in the promotion of ECOZONES to local and foreign locators enterprises; and
e. Other incentives under EO No.226 (Omnibus Investment Code of 1987), as may be determined by the PEZA Board.

Incentives for ECOZONE locators

a. Income Tax Holiday or exemption from corporate income tax for 4 – 8 years;
b. After the Income Tax Holiday, the option to pay a special 5% Tax on Gross Income, in lieu of all national or local taxes;
c. Exemption from duties and taxes on imported capital equipment, spare parts, supplies, raw materials, breeding stocksand/or genetic materials or the equivalent tax credit on these items, when sourced locally;
d. Exemption from wharfage dues and export taxes, imposts and fees;
e. An additional deduction of 50% of the total cost of development training for labor and management from the 3% National Government's-share of the 5% Special Gross Income Tax;
f. Permanent resident status for foreign investors and immediate family members;
g. Employment of foreign nationals;
h. Simplified export and import procedures; and
i. Other incentives under EO No.226 (Omnibus Investment Code of 1987), as may be determined by the PEZA Board.

(4) Employment and export trends in the ECOZONES

The aggregate total of employment in the ECOZONES in recent years is shown in Table 3-4, and export trends in Table 3-5.

Table 3-4 Employment in the ECOZONEs (Aggregate Total)

	1994	1995	1996	1997	1998	1999
Aggregate Total	229,650	304,557	380,625	562,085	609,044	617,690

(Source: PEZA)

Table 3-5 Exports from the ECOZONES

	1994	1995	1996	1997	1998	1999 (upto Nov.)
Value of Export (Million US.$)	2,739	4,284	6,500	10,266	13,270	15,807
Growth rate (%)		56.4	51.7	63.5	24.9	19.1
Share of total exports of manufactured goods (%)	22.1	27.2	35.1	49.1	51.0	49.2

(Source: PEZA)

As seen from the above figures, the ECOZONES have been producing significant results in terms of both employment and export. In particular, the export value has been growing continuously and the exports from ECOZONE in 1998 accounted for around 50% of the country's exports of manufactured goods.

3.2.3. Development History and Current State of the Cavite Economic Zone

(1) Development history

The first phase construction of the Cavite Export Processing Zone (currently called the "Cavite Economic Zone: CEZ") was commenced in 1983 (first phase) under authority of Presidential Decree No.1980 dated May 30, 1980 and Presidential Decree No.2015 dated September 19, 1980. EPZA, then implementation agency of the project, prepared a master plan in 1980 to proceed with construction in five consecutive phases, as shown in Table 3-6.

Table 3-6 CEZ Development Plan (Master Plan)

	Industrial Site	Public space*	Total area
Phase I	396,180	238,814	634,994
Phase II	394,742	246,682	641,424
Phase III	279,089	125,721	404,810
Phase IV	390,854	310,616	701,470
Phase V	278,894	169,858	448,752
Total	1,739,759	1,091,691	2,831,450

Source: JICA, "The Cavite Export Processing Zone Development and Investment Promotion Study Report," – September 1990)

The first phase was completed in 1989, followed by the second phase. At the time when the Cavite Export Processing Zone Development and Investment Promotion Study was carried out, the second phase construction was underway, and thus the Study was undertaken to prepare the basis for formulating the development plan for the third and later phases. Though the industrial site area developed in the first phase was decreased by 70,000m2 from the planned area shown above, the subsequent phases were proceeded according to the master plan. The third phase was completed in 1994, the fourth phase in 1995 and the fifth phase in 1996.

Thus, CEZ has been developed up to the fifth stage in accordance with the master plan, with a total land area of 276ha including an industrial area of 167ha (7ha short of the originally planned area, as pointed out above).

(2) CEZ's facilities

Outline of the facilities in CEZ is enumerated below.

- ✧ Location: Rosario, Cavite (approx.30km south of Manila)
- ✧ Total land area: 276ha
- ✧ Utilities
  - ♦ Water supply system – 8 deep wells and a pumping station (intake capacity, 45,000m3/day)
  - ♦ Power supply
    - Main source – A 63MW power station operated by Magellan Co-Generation Inc. adjacent to the CEZ

- Backup source – Rosario substation (100MVA, 115/345KV)

✧ Sewage treatment plant – 2 units (capacity of 7,680m3/day each)

✧ Public facilities and common service facilities provided in the CEZ

- ♦ PEZA administration office
- ♦ Customs office
- ♦ DOL field office
- ♦ Mutual Housing Fund Branch Office
- ♦ State Government Office
- ♦ 5 Banks Branch Offices
- ♦ Hall (CEZIA Club House)
- ♦ Field offices of service providers
- ♦ Medical facility (St. Dominic Medical Center)
- ♦ Container yard
- ♦ Sports facilities

(3) Role and service of the PEZA CEZ administration office

The role of the PEZA CEZ administration office is summarized as follows:

a. Maintenance of the CEZ.

b. One-stop service for procedures and reports to government offices made by locators as required under the IRRs of the Special Economic Zone Act.

c. To give a permit on incoming and outgoing of cargoes, such as raw materials and shipped products, as required by locators. (Note that a container delivered to the CEZ for imports and the one shipped from the CEZ for exports are to be inspected by the customs officer being stationed at the CEZ.)

d. Collection of garbage and general wastes discharged by locators, and transportation and disposal at a dumping site, which is currently carried out by a garbage collector under the contract with the PEZA administration office. (The dumping site currently used is filled up and it is imperative for the PEZA to find a new dumping site as early as possible. However, it may become a serious issue, since there is no dumping site available within the Cavite Province.)

e. Locators shall manage industrial wastes by arranging contract with private collectors for taking off. Nevertheless, the PEZA administration office introduces such private collectors if requested by locators. Currently, the PEZA administration office encourages locators to seek the way for recycling use of those industrial wastes.

f. Monitoring and supervision of solid waste discharge made by locators (both garbage and industrial wastes);

g. Recruitment service for workers employed by locators and employment support activities; and
h. Sponsoring of seminars regarding various issues of common interest to locators.

(4) Lease charges for the CEZ industrial lot and other service charges

Lease charges for the CEZ industrial lot and other service charges to be paid by locators are summarized as follows:

a. Lease charge for the industrial lot: 17.55 peso/m2/month (subject to an upward amendment at 5% every five years).
b. Lease charge for the factory building: 90.65 peso/m2/month for old building and 121.67 peso/m2/month for new building.
c. Garbage collection fee: classified – 100 peso/m3; unclassified – 150 peso/m3
d. Waste water discharge fee: 4 peso/m3
e. Container yard fee: 50 peso/container/day

(5) Current state of related infrastructure

During the CEPZ Study, the apparent shortage of infrastructure was recognized as a major issue, including power shortage, poor communication networks, and traffic congestion due to poorly developed road networks around the site. Since then, power supply situation has been improved and communication networks have been added to offer higher capacity. On the other hand, road conditions have worsened in terms of traffic congestion because construction of bypass roads and the widening of various sections did not catch up with increased traffic volume.

3.2.4. Current State of Locators in the CEZ

At the time when the CEPZ Study was conducted in 1989, there were only eleven locators operating in the zone. As construction progressed to the second, third, fourth and fifth phases, the number of locators grew rapidly. As of the end of 1999, there were 221 locators operating and 10 new locators being under construction.

The current state of locators in the CEZ as the end of 1999 is as follows:

Number of locators which signed the contract:	252	(4 canceled)
Those in operation:	221	
Those building the factory:	10	
Those that suspended operation:	17	

Almost all of land tracts available for industrial use have been leased out. While 17 locators have suspended their operation due to the difficulty after the Asian economic crisis in 1997, most locators are normally operating.

The total amounts of investment made by the CEZ locators from 1991 to 1999 (approval basis) are shown in Table 3-7.

Table 3-7 Investment by CEZ Locators (1991 – 99)

	1991	1992	1993	1994	1995	1996	1997	1998	1999
Investments (Million Peso)	1,159	881	499	932	4,112	3,279	506	957	1,574

(Source: PEZA)

Classification of the locators (including 10 under construction) by industry type and origin of investors is shown in Table 3-8. As for subsector-based classification, electronic equipment, household appliance/electrical equipment and parts dominate by 93 locators (40.1%), followed by textile and garment 46 (19.8%), machine parts other than automotive parts and metalworking 34 (14.7%), plastics processing 19 (8.2%), and automotive parts 8 (3.4%). These five industries account for 200 locators (86.2%). Also, locators operating in the CEZ export more than 70% of their products directly or indirectly. This indicates that CEZ has successfully achieved the location of high-tech based export industries as originally planned.

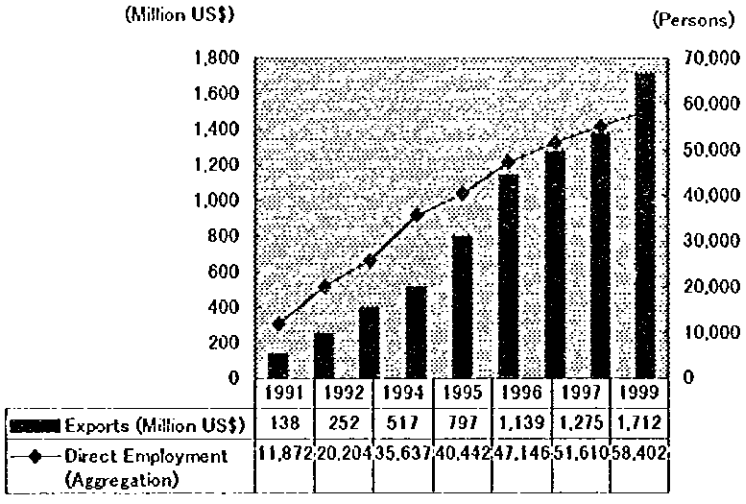
By origin of investors, 84 locators come from South Korea, followed by Japan (79), the Philippines (31), and Taiwan (10). Top four countries represent 204 locators. Six locators come from the EU except UK, 5 from the U.S., 4 from the UK, and 12 from other countries. Japan, South Korea and Taiwan were specified in the CEPZ Study as key targets for investment promotion. In addition, it is noteworthy that the CEZ receives large amounts of investment by domestic capital as well as European and U.S. companies.

In view of this situation, the CEZ project is considered to be a successful case of developing a large-scale industrial estate as it is mostly occupied within three years after completion (fifth phase) and has successfully attracted both foreign and domestic investments.

3.2.5. Employment and Export Trends in the CEZ

Aggregate totals of employment in and exports from the CEZ between 1991 and 1999 are shown in Fig.3-3.

Fig. 3-3 Employment and Export Trends in the Cavite EZ



	1991	1992	1994	1995	1996	1997	1999
Exports (Million US$)	138	252	517	797	1,139	1,275	1,712
Direct Employment (Aggregation)	11,872	20,204	35,637	40,442	47,146	51,610	58,402

(Source: PEZA)

With increases in the number of locators, direct employment grew steadily over the period to reach 58,000 in 1999. If employment in related industries and temporary labor are added, the CEZ employs 70,000 – 80,000 workers, most of which live in the Cavite Province, thus contributing greatly to the regional economy. Meanwhile, exports grew appreciably to approximately $1.7 billion in 1999, twelve times that in 1991 and representing around 10% of total exports from the ECOZONES. The net foreign currency earning from the exports (the value of exports less imported material costs) amounted to $1,060 million in 1999 (approximately 62% of total exports). Thus, the CEZ contributes greatly to both exports and foreign currency earnings.

TABLE 3-8 ESTABLISHMENTS IN CAVITE ECONOMIC ZONE

Industrial Branches	KOREA			JAPAN			PHILIPPINE			TAIWAN			USA			UK			EU			OTHERS			TOTAL		
	(A)	(B)	TOTAL	(A)	(B)	TOTAL	(A)	(B)	TOTAL	(A)	(B)	TOTAL	(A)	(B)	TOTAL	(A)	(B)	TOTAL	(A)	(B)	TOTAL	(A)	(B)	TOTAL	(A)	(B)	TOTAL
1. Electric/electronics equipment/devices & components	14	22	36	23	12	35	7	7	14	2	1	3	1	1	2	1		1				1	1	2	49	44	93
2. Automotive components	1		1	3	4	7																			4	4	8
3. Metal engineering/metal products	5	4	9	8	7	15	2	2	4	1	2	3										2	1	3	18	16	34
4. Plastics products	3	1	4	9	2	11	2		2											1	1		1	1	14	5	19
5. Wood-work products					3	3	1	1	2																1	4	5
6. Apparel/garments/textiles	15	7	22	1	4	5	4	3	7		1	1		2	2	1	1	2		2	2	2	3	5	23	23	46
7. Paper products	1	2	3							1		1													2	2	4
8. Food processing																							1	1	0	1	1
9. Others	6	3	9	1	2	3	1	1	2	1	1	2		1	1		1	1	1	2	3				10	11	21
Total	45	39	84	45	34	79	17	14	31	5	5	10	1	4	5	2	2	4	1	5	6	5	7	12	121	110	231

(Notes)
EU: three countries of German, France and Italy
Others: Hong Kong, Singapore, India, Yemen and China
A: 100% owned
B: Joint Venture with 50% or more owned by the indicated origin

Source: PEZA

3.3. Management Status of Locators and Major Issues

3.3.1. Current State of Management

As reviewed earlier, 200 locators (87%) in the CEZ are foreign companies. Of total, 108 are wholly owned subsidiaries and 92 are more than 50% owned by foreign companies. These companies have confidently decided to operate in the CEZ by applying high levels of technology, rich experience and sound financial positions. They export most of their products and use the CEZ as their overseas production bases to serve their established export including the markets in their home countries where they have established marketing channels. Hence most products are marketed by their parents or group companies and have no trouble finding customers.

Similarly, most local companies operating in the CEZ have set up their factories for expanding their established businesses. They have relatively high levels of technology and marketing capability. As they export at least 70% of their products, many of them suffered from declines in export sales and profits between 1997 and 1998 due to the Asian economic crisis, a slow economic recovery in most industrialized countries including Japan, and intensified price competition in export markets. In 1999, however, orders returned to the previous levels and several companies operate at their full capacity to meet demand. Nevertheless, export prices continued to decline and most companies reported only slight growth of export revenues and profits. In the future, price competition in the export markets for the CEZ locators will become fierce.

The following sections describe the management status of the major industries operating in the CEZ, i.e., electronic equipment/household appliance/electrical products and parts, textile and garment, machine parts (not including automotive parts), plastics processing, and automotive parts. All plastics processing companies in the CEZ produce electronic parts and are classified as manufacturers of electronic equipment/household appliance/electrical products and parts.

(1) Manufacturers of electronic equipment/household appliance/electrical products and parts

Most manufacturers in this category produce key parts for precision components (e.g., ICs, PCBs, hard disk drives, connectors and wire harnesses) and precision machined parts (such as aluminum die cast, injection molded and metal stamped parts). They export their products to leading electronics and electrical system makers or component makers in foreign countries and parts distribution centers that constitute the international logistic

system. Some of them who make precision parts supply their products to component assembly companies who operate in the CEZ or other ECOZONE. These single parts are considered to be indirect exports as they are incorporated into assemblies that are to be exported. These manufacturers compete not only for price but quality and delivery schedule as well, because they have to win orders from world-class manufacturers that have the broad supplier base.

In the CEZ, 112 locators are classified as these industries, including plastics processing. Of total, 46 locators come from Japan, 40 from South Korea, 16 from the Philippines, 3 from Taiwan, 4 from Europe and the U.S., and 3 from other countries. All of them, regardless of origin countries, are well-established companies in respective industries with high levels of technology and management capabilities. They import most raw materials as well as dies and molds for injection molding and aluminum die-casting, and as a result, they add a relatively small value within the CEZ. To generate profits in the less favorable condition, they make serious efforts to raise productivity and production efficiency, minimize material costs through strict procurement management and inventory control, and implement strict control practice.

(2) Textile and garment manufacturers

46 companies operating in the CEZ are classified into this category. Of total, 22 are Korean companies, 7 Filipino, 5 Japanese, 6 Europe and the U.S., 1 Taiwan, and 5 other countries. All of them make medium- and high-grade garment for exports. The Philippines was a major exporter of low-end products such as underwear and T-shirts up to the mid-1980s. As new low-cost producers emerged in various countries including China and Vietnam, traditional garment manufacturers in the country were wiped out. Today, mid-sized manufacturers of medium- and high-grade products with modern equipment can compete in the export markets.

All companies operating in the CEZ are well established and use modern equipment, including the CAD/CAM system for pattern making, precision cutting, and computer-controlled sewing machines. Workers are well trained and strict quality control and production management is enforced to ensure high levels of efficiency and productivity. The companies in the CEZ take advantage of non-tariff imports of equipment and raw materials, which allow them to specialize in higher-grade products. Many foreign manufacturers operate factories in China where they mass-produce low-end products, while positioning the Philippine facilities as the production base for small-lot, diverse, high-grade products. While wages are much higher than those in China, female workers in the Philippines are considered to be highly qualified for sewing work in terms of

workmanship and efficiency. For this reason, they have strategically chosen the country as the highly specialized production base. Another factor attracting foreign garment manufacturers is possible utilization of quota available in the Philippines, since there are some unutilized quota that can be utilized with application due to the recent decline in the number of low-grade manufacturers who export to the U.S. market. Export volume has declined to create a room for export production.

Nevertheless, the U.S. may lift the quota in 2004 according to the WTO agreement, in which case the market will become highly competitive to make the Philippine industry difficult to maintain competitiveness, as some manufacturers anticipate.

(3) Precision parts manufacturers and metalworking shops

Of 34 companies in this category, Japanese companies are largest in number, totaling 15, followed by Korean (9), Philippine (4), Taiwanese (3) and others (3). These companies are engaged in the manufacture of precision-machined parts and other machining operations. They are characterized by direct imports of parts and products for machining, followed by supply of machined parts to manufacturers of dies and molds operating in the CEZ and other ECOZONES. In particular, Japanese companies have often followed their customers who came to the CEZ for export production and thus make products ordered by them. While these companies have high levels of technology and the sound financial base, they are relatively small suppliers and must meet strict requirements for price, quality and delivery schedule, as seen in the suppliers of electrical and electronic parts, facing the difficulty in generating profits.

(4) Automotive parts manufacturers

There are only 8 automotive parts manufacturers in the CEZ, of which 7 are Japanese and one Korean. All of them make parts for assembly manufacturers operating in East Asia countries. The number of automotive parts suppliers is limited because they cannot rely on the domestic market where automobile makers operating within the country have relatively small scale. All of them are small suppliers and are required to meet strict requirements in terms of price, delivery schedule and quality. As seen in the manufacturers of electronic and electrical parts, these suppliers import all raw materials and most of jigs, molds and dies.

3.3.2. Export Competitiveness and Other Advantages

All the above manufacturers have high levels of technology and productivity as they use modern production equipment. They import all raw materials and semi-finished

goods. Some companies make jigs, dies and molds by themselves, but many companies use imported ones. While these imports are not unduly costly because of duty free, they have to be purchased in larger quantities than usual in an effort to minimize lead-time and meet delivery schedule. This leads to the increases in inventory causing financial burden. Similarly, the excess numbers of jigs, dies and molds need to be held (only limited quantities are available from suppliers operating in the CEZ and other ECOZONES) to incur additional costs, including time and cost required for repair in foreign countries. Finally, self-making of jigs, dies and molds also cause relatively high cost because their manufacturing lots are relatively small below an economic scale.

While workers are relatively skilled in terms of workmanship and efficiency, wages are on a rise recently. Also, a high turnover of skilled workers incurs training costs. These factors make the manufacturers increasingly difficult to maintain cost competitiveness. Also, the power cost is relatively high compared to other countries, and so is the transportation cost for container trailers.

Under these circumstances, manufacturers operating in the CEZ appear to strive in the highly competitive export markets, as they do not have an outstanding competitive edge in a particular area.

3.3.3. Constraints and Other Issues

While the CEZ manufacturers enjoy the privilege of duty-free import of equipment and materials for export production, PEZA is required to inspect such imports strictly and manufacturers must obtain PEZA's approval to bring goods in and out of the CEZ. These procedures often take a fairly long period of time and sometimes prevent timely shipment of products. Also, delays in delivery of raw materials have caused some companies to reject customer's order because of the inability to meet delivery schedule.

The PEZA administration office has increased staff to meet locator's demand, but many companies ask the streamlining of the inspection and approval procedures.

An increasing number of the CEZ locators are considering procurement from local industries operating outside the CEZ in an attempt to maintain cost competitiveness, but they are handicapped under the present VAT system. Both the CEZ companies and local companies request various changes in the system to invigorate commercial relationships between them. In this connection, there is the lack of interaction between the two groups to prevent the development of an effective inter-industrial linkage that is desirable for both sides. Many companies also want the improvement of infrastructure including inland transportation service, access roads and communication networks

3.4. Items and Methodology for Evaluation of the Effects derived from the CEPZ Development and Investment Promotion Program Study

3.4.1. Items for Evaluation of the Effects

(1) Basic evaluation items

As discussed in 1.3.1, the basic items adopted for the evaluation of the effects are listed as follows.

1. To evaluate "broad effects" brought about by the CEPZ development project that has been implemented on the basis of the CEPZ Study. The evaluation is made in terms of the effects to the development goal set for the project, particularly in the following four factors:
   - Effectiveness
   - Relevance
   - Impact
   - Sustainability

2. To evaluate more specific effects derived from the recommendations (measures and action programs) proposed in the CEPZ Study. The evaluation work is carried out in the following two steps:
   - First step: To evaluate on how have the recommended measures and action programs been applied or utilized for implementation.
   - Second step: To evaluate the correlation between the achievement of the project objective (i.e., the development of CEPZ, investment promotion for CEPZ, and performance of CEPZ locators) and the effects contributed by the proposed measures and action programs. This evaluation is made on the basis of the results of the first step evaluation and the results of evaluation (1) above. In particular, the degree of effects is assessed on the following three items:
     - Effectiveness
     - Impact
     - Sustainability

As the effect in terms of "relevance" is not evaluated, because the relevance is concerned with the substance of the project itself and the recommended measures and programs are the means for bringing the project to success and thus have no

direct relation with the "relevance" of the project. Thus the evaluation of the "relevance" is made in (1) above.

(2) Specific evaluation items

For each of the basic evaluation items as discussed above, specific evaluation items and their rationales are discussed below.

1) The project goal that is the subject for the evaluation of "broad effects" brought about by the CEPZ development project: In view of the primary objective of the CEPZ development project, the following three goals are set for the evaluation:
   a. To promote the development of the CEPZ and industrial investment therein by manufacturers (locators). The industries to be promoted with priority are as follows:
      - Electrical and electronic equipment
      - Automotive parts
      - Metalworking
      - Precision machinery
      - Plastics molding and processing
      - Textile and garment
      - Computer software

   Among those industries, an emphasis is made to promote non-polluting, energy saving, export-oriented (including supply to export industries) and high-tech industries.
   b. To promote non-traditional exports and generate new employment opportunities through the promotion of export industries.
   c. To accelerate industrial development in the Cavite area that serves as an industrial center of the CALABARZON region (designated as an accelerated industrial development region) by inducing industrial investment in the CEPZ. In particular, priority is given to the buildup of inter-industrial linkages between the CEPZ locators and SMEs in the surround areas.
2) Rationale for setting the four items for the evaluation of the "effects" to the development goals that were brought about by the CEPZ Study through the implementation of the CEPZ development project
   a. ***Effectiveness:*** The level of achievement of the development goal (a) that was brought about by the CEZ development project; specifically, the level of achievement in industrial investments into the CEPZ, as compared to the original plan.

b. *Impact:* Direct and indirect impacts (both positive and negative) brought by the CEPZ development project. Positive impacts comprise the level of realization of the development goal (b) namely, "export and employment generation effects in the CEPZ", and development goal (c), namely, "effects measured by industrial development within the Cavite Province and the buildup of the linkage with local SMEs". Negative impacts are evaluated in terms of any affect to environmental pollution and other negative factors.

c. *Relevance:* "Relevance" of the project objective designed to develop the EPZ and promote industrial investments therein, in light of the development goal as well as the national development policy, especially in the changing external economic environment.

d. *Sustainability:* "sustainability" of the project for the future, particularly focusing on the capabilities of the CEPZ to provide locators with adequate facilitations that enable them to maintain long-term sustainable operation. Specifically, the following five points are evaluated:

- Development and maintenance of the related infrastructure;
- Management and administration of the CEPZ;
- Availability of service in the CEPZ;
- Possibility of continuous provision of various incentives granted to the CEPZ locators; and
- Ability to maintain a competitive advantage for locators to operate in the CEPZ on a sustainable basis.

3) To evaluate the results of the priority measures and action programs. In consideration of the recommendations made in the CEZ Development Program, the following measures and programs are evaluated.

Recommended Measures

1. Measures for foreign investment promotion to be taken by BOI and EPZA
   a. Strengthening of BOI's and EPZA's functions to develop and maintenance the support system for implementation of investment promotion activities;
   b. Driving the activities to promote foreign investment; and
   c. Establishment of international networks for investment promotion.
2. Development and upgrading of infrastructure around the CEPZ and existing common service facilities within the CEPZ, particularly focusing on:
   a. Extension of a coastal highway (a Baccoor - Noveleta section) and construction of a Noveleta – CEPZ section;
   b. Upgrading of telecommunication system;

c. Amelioration of power supply shortage; and
d. Securing of water supply.

3. Improvement of EPZ's operational organization and system, and upgrading of facilities and services within the CEPZ:
   a. Improvement of the administrative organization and management system; and
   b. Upgrading of facilities and services within the CEPZ.
4. Establishment of inter-industrial linkages between the CEPZ locators and local SMEs:
   a. Encouragement of indirect export (supply of parts and sub-assemblies to system manufacturers of export products);
   b. Support for development of local SMEs forming the supplier base;
      - Institutional lending for equipment modernization
      - Exemption or reduction of customs duties
      - Transfer of machining and metalworking technology (including production management and quality control)
      - Duty-free imports of raw materials for export processing (tax return)
      - Establishment of a collective purchase system
      - Commendation of excellent suppliers in terms of quality and others
   c. Establishment of the CEPZ's intermediary office to link suppliers and the CEPZ locators; and
   d. Technical assistance and education for local suppliers in the area of quality improvement.

Recommended action programs

♦ Program 1: Foreign investment promotion program (BOI)
   a. The establishment of investment promotion offices abroad, particularly in Japan, South Korea, Taiwan and Hong Kong;
   b. The strengthening of BOI/EPZA headquarters' functions in terms of overall coordination and support capabilities; and
   c. Promotional activities at the investment promotion offices set up abroad.

♦ Program 2: Investment promotion program for CEPZ (EPZA)
   1) Delineation of priority industries to be promoted for location of production units in CEPZ;
   2) Securing of cooperation from domestic industrial associations; and

3) Main promotion activities, including:
   a. Public relations
   b. Follow-up/marketing activities
   c. Information service
   d. Consultation
4) Monitoring

3.4.2. Evaluation Method and Criteria for Each Items

An evaluation method and criteria are established for each of the above items and evaluation is carried out. Details of these methods and criteria are described below.

3.4.2.1 Evaluation criteria on measurement of results vs. the development goals (project purpose) in the target sub-sectors

(1) Effectiveness: The level of achievement in terms of the goal of the CEZ development project; in particular, the level of achievement in attraction of industries to the developed CEZ, as compared to the original plan.
(2) Impact: Direct and indirect impacts (both positive and negative) brought by the CEZ development project. Positive impacts include the goal of export and job creation effects in the CEZ, and goal of effects measured by industrial development within the CEZ and the buildup of the linkage with local SMEs, and negative impacts include environmental pollution.
(3) Relevance: Relevance of the policies to develop the EPZ and attract investment in the EPZ, as mandated by the project purpose and development goal; and relevance of the country's development policy, especially in the changing external economic environment.
(4) Sustainability: Measurement of the project's ability to develop on its own as well as the ability to create and maintain a sustainable advantage.

Evaluation criteria and rating of results against project goals

(1) Effectiveness

Evaluation factor: Five grade system

The level of achievement in terms of the goal of the CEZ development project

Effectiveness evaluation rating

- More than 90% 5
- 70% - 90% 4
- 50% - 70% 3
- 30% - 50% 2
- Less than 30% 1

(2) Impact

Positive impacts

1. Job creation
2. Export growth
3. Industrial accumulation
4. Enhanced linkage
5. Other indirect effects (Influence to local economic development)

Negative impacts

1. Air pollution by exhaust
2. Water pollution by drainage
3. Environmental pollution by industrial waste
4. Heavy traffic
5. Other adverse effects on local community

Rating

- The CEZ development program is rated for both positive and negative impacts according to the five-grade system and scores are added up to obtain the net impact.

Evaluation criteria

Positive impact

+5	Very large
+4	Fairly large
+3	Average
+2	Fairly small
+1	Very small

Negative impact

-5	Very serious
-4	Fairly serious
-3	Slightly serious
-2	Acceptable
-1	No or few problem

(3) Relevance

Evaluation items

1) Relevance of the policies to develop the EPZ and attract investment in the EPZ, as mandated by the project purpose and development goal
2) Relevance of the country's development policy, especially in the changing external economic environment.

Rating

Each item is rated according to the five-grade system and scores are added up to obtain the total rating.

Evaluation criteria

	Relevance (1)(2)	
	Consistency with higher policy	Degree of importance viewed from higher policy
+5	Perfectly consistent	Very important
+4	Mostly consistent	Fairly important
+3	Fairly consistent	Average
+2	Somewhat inconsistent	Not very important
+1	Largely inconsistent	Rarely important

(4) Sustainability

Evaluation items

Measurement of the project's ability to develop on its own as well as the ability to create and maintain a sustainable advantage

1) Development and maintenance of the related infrastructure;
2) The formal system to operate and manage the CEZ;
3) Availability of service in the CEZ;
4) Sustainability of various incentives granted to the CEZ tenants; and

5) The ability to maintain a competitive advantage for companies to operate in the CEZ on a sustainable basis.

Rating

Each item is rated according to the five-grade system and scores are added up to obtain the total rating.

Evaluation criteria

+5	Very satisfied
+4	Fairly satisfied
+3	Somewhat uncertain
+2	Fairly uncertain
+1	Extremely uncertain

3.4.2.2 Evaluation method for priority measures/action programs

The implementation status of priority measures/action programs recommended for CEZ development program is evaluated.

(1) Classification of implementation status

(a) Recommended priority measures/action programs are implemented to this date.

(b) Recommended priority measures/action programs were implemented for a limited period.

(c) Recommended priority measures/action programs are implemented to this date with some modification.

(d) Recommended priority measures/action programs were implemented for a limited period of time, with some modification.

(e) Not implemented at all.

Reasons for (b) – (e)

(1) Implemented for expected results but discontinued for any of the following reasons:

1) Operational constraints (① budget constraint; ② human resource constraint; ③ organizational constraint; or ④ other factors);
2) Terminated as the initial purpose was achieved;
3) Terminated as no positive result was expected due to environmental changes; or
4) Terminated as the expected results were not obtained (① policy or program was not suitable for local conditions; ② policy or program faced obstacles at

the implementation stage; or ③ policy or program faced strong opposition from potential beneficiaries).

(2) Implemented with some modification (substantial results were expected) for any of the following reasons:

1) Modification was required to make it suitable for local conditions; or
2) Modification was required due to the inability to establish an implementation system under the original plan (reason: ① budget constraint; ② human resource constraint; ③ organizational constraint; or ④ other factors).

(3) Implemented with some modification for any of the above reasons and discontinued

(A) Reason for implementation with modification:
(2)-1) or (2)-2)

(B) Reason for termination:

1) Operational constraints (① budget constraint; ② human resource constraint; ③ organizational constraint; or ④ other factors);
2) Terminated as the initial purpose was achieved;
3) Terminated as no positive result was expected due to environmental changes; or
4) Terminated as the expected results were not obtained (① policy or program was not suitable for local conditions; ② policy or program faced obstacles at the implementation stage; or ③ policy or program faced strong opposition from potential beneficiaries).

(4) Not implemented for any of the following reasons:

1) No positive result can be expected; or
2) Although some results were expected, implementation was hindered due to operational constraints (① budget constraint; ② human resource constraint; ③ organizational constraint; or ④ other factors).

Evaluation of correlation between recommended priority measures/actionprograms and project results

Evaluation is made on the basis of the degree of contribution in the following three areas:

1. Effectiveness
2. Impact
3. Sustainability

Rating

Each priority measure/action program is rated for the degree of contribution to each of the above criteria according to the five-grade system.

+5	Strongly contributed
+4	Substantially contributed
+3	Moderately contributed
+2	Weak contribution
+1	Little contribution

(Zero for no contribution)

3.5. Results of Evaluation and Basis for Evaluation

(1) Effectiveness: +5 (The level of achievement in terms of the goal of the CEZ development project: more than 90%)

The other evaluation results are summarized in the following tables.(AAC-1 to AAC-4) Detailed explanation is given in 3.5.1 and onwards.

AAC-1 Impact

Positive Impact					
	1. Job creation	2. Export growth	3. Industrial accumulation	4. Enhanced linkage	5. Other indirect effects (influence to local economic development)
Rating	+5	+5	+4	+1	+4
Negative Impact					
	1. Air pollution by exhaust	2. Water pollution by drainage	3. Environmental pollution by industrial waste	4. Heavy traffic	5. Other adverse effects on local community
Rating	0	-1	-1	-3	-1
Total	+3				

AAC-2 Relevance

	Relevance (1)		Relevance (2)	
	Consistency with higher policy	Degree of importance viewed from higher policy	Consistency with higher policy	Degree of importance viewed from higher policy
Rating	+5	+5	+5	+5
Total	+5			

AAC-3 Sustainability

	1. Development and maintenance of the related infrastructure	2. The formal system to operate and manage the CEZ	3. Availability of service in the CEZ	4. Sustainability of various incentives granted to the CEZ tenants	5. The ability to maintain a competitive advantage for companies to operate in the CEZ on a sustainable basis
Rating	+3	+3	+4	+4	+3
Total	+4				

AAC-4 Evaluation of Priority Measures / Action Program

	Status	Reason	Degree of contribution		
			Effectiveness	Impact	Sustainability
Priority measures:					
1. Attraction and promotion of foreign investment by BOI and EPZA	(a)	(4)-2) ①	+4	+4	
2. Development and upgrading of infrastructure around the CEZ and existing common facilities within the CEZ	(a)		+4	+3	+2
3. Improvement of EPZ's operational organization and system, and upgrading of facilities, organizations and services within the CEZ	(a)	(4)-1), 2) ①	+3	+3	+3
4. Establishment of the inter-industrial linkage between the CEZ industries and local SMEs nearby	(d)	(2)-1) (3)-1), 4) ①,②	0	0	0
Total evaluation			+3	+3	+2
Recommended action programs:					
1. Foreign investment attraction and promotion program (BOI)	(c)	(2)-2) ①	+2	+2	
2. EPZ investor recruitment program (EPZA)	(c)	(2)-2) ①,③	+2	+2	
Total evaluation			+2	+2	
Overall evaluation +3					

3.5.1. Degree of the "Effects" to the Development Goal

(1) Effectiveness

The CEPZ, following the completion of its first phase development in 1989, completed the second phase in 1991, and the third to fifth phases up to 1996 when the entire project was completed. Within three years after completion, most industrial buildings and tracts in the CEPZ were occupied. It has successfully located non-polluting, high-tech, export-oriented industries as originally planned, including suppliers of electrical and electronic parts, metalworking shops and precision machined parts suppliers, automotive parts suppliers, precision plastics processing companies, and medium- and high-grade garment manufacturers. Thus, the project has achieved one of its major purposes. It is considered to be a successful case for industrial estate development focusing on attraction of foreign investment.

(2) Impact

The project has produced remarkable results in terms of job creation and export promotion. It has also contributed greatly to industrial development on a regional scale. The Philippine government has designated four states surrounding the Manila Metropolitan Region, namely Cavite, Laguna, Batangas and Quezon, as the CALABARZON region and has been promoting a plan to develop it into a major high-tech center in the country. As part of the initiative, PEZA has been promoting the development of many private-led ECOZONE projects in these regions and the location of high-tech, export-oriented industries. As a result, Cavite and Laguna grew to core industrial centers in the region. The CEPZ has been in the vanguard of the industrial development process. With over 200 manufacturers operating in the CEPZ, it has been helping many other ECOZONE projects in the Cavite Province to attract a large number of foreign-owned, export-oriented companies. Thus, the CEPZ has a significant positive impact on rapid and successful industrial development in the Province. At the same time, however, almost all companies operating in the CEPZ are specialized in export by importing raw materials and parts which are processed and assembled into semi-finished or final products for export, so that there is few linkage among the CEPZ locators, between manufacturers in the CEPZ and other ECOZONES and between the CEPZ locators and local ones. The CEPZ has contributed in a very limited role to forming the inter-industrial linkages. Nevertheless, the CEPZ development project has brought a number of indirect benefits to the state. First of all, it has generated and is

still generating a large number of employment opportunities. Most workers employed by the CEPZ locators come from the Province. If those employed by companies related to the CEPZ, such as the service sector, are added to the directly employed labor force, the CEPZ accounts for a major portion of employment in the Province. It also supports the broad-based service sector of the Province including local retailers who benefit from the CEPZ and its operation directly and indirectly.

In general industrial estates have some extent of negative impact on environment with pollution from operation of industries located in those estates. In the CEPZ, however, there is no air pollution problem, because such pollutant industries were not allowed to locate in the CEPZ. Each factory is forced to install a wastewater treatment facility and is required to discharge effluent after proper treatment to meet specific standards. Sewage goes through a treatment plant built in the CEPZ before being discharged to the environment. Industrial wastes are processed by waste management companies under the agreement with locators and are increasingly recycled for productive use. Garbage are collected and disposed by garbage collectors under the contract with the CEPZ administration office. Thus, the CEPZ's environmental management is considered to be in proper order.

The CEPZ, however, causes traffic congestion that originates in brisk industrial activities. In fact, it was predicted in the CEPZ Study and various mitigation measures were proposed, including construction of bypass roads. While new roads were constructed and existing roads were expanded, such efforts have not caught up with rapid growth of traffic volume, including general traffic as well as service traffic in and out of the CEPZ, e.g., trailers and trucks. Except for traffic congestion, however, the CEPZ has a negative impact on local communities and residents.

Overall evaluation of the above positive and negative impacts, as shown in the summary table, indicates that the CEPZ has a fairly positive impact on the region and its economy.

(3) Relevance

Promotion of foreign investment and export industries is the government's fundamental policy that will not change for many years. The development of CEPZ is positioned as a major vehicle to implement the policy, and together with its successful results, it shows significant "relevance".

(4) Sustainability

The following elements are considered to be the key to support "sustainability" of the CEPZ locators and are evaluated accordingly:

a. Development and maintenance of the related infrastructure;
b. Efficient management and administration of the CEPZ;
c. Availability of service in the CEPZ;
d. Possibility of continuous provision of various incentives granted to the CEPZ locators; and
e. Ability to maintain a competitive advantage for companies to operate in the CEPZ on a sustainable basis.

While "sustainability" is largely dependent upon the ability of each company to survive and prosper in the competitive environment, those operating in the CEPZ are significantly affected by infrastructure provided by the CEPZ, operating conditions of the CEPZ that are governed by PEZA's management system and services, and investment incentives in the CEPZ. From this perspective, evaluation is made to determine how these external factors affect "sustainability" of the CEPZ locators.

First of all, infrastructure is well developed within the CEPZ, while that in surrounding areas is not lagging behind. In particular, the road system is unable to meet rapidly increasing traffic demand, and if traffic volume grows further as expected, operation of the CEPZ may be affected due to the delay in delivery of materials and shipment of products. Also, traffic congestion will lead to the increase in transportation cost.

Secondly, the CEPZ's operation and management system appears to have some problems, e.g., many companies point out complicated and time-consuming procedures to obtain approval to bring goods in and out of the CEPZ. While the locators are generally satisfied with other services, the approval procedures need to be streamlined as they affect daily operation of the CEPZ locators and their efficiency.

Investment incentives, particularly exemption of import duties on raw materials, are the primary concern for the CEPZ locators and are expected to be provided in the long run as the government made it clear in its policy.

Nevertheless, there are several uncertainties about whether the locators will be able to enjoy the existing competitive advantage of operating in the CEPZ. For the manufacturers of electrical and electronic parts, automotive parts, and precision machined parts, cost advantage may be short-lived for several reasons. At present, they import raw materials or semi-finished products and process or incorporate them

into parts for export, with few commercial interaction with other locators or local industries operating outside the CEPZ. Thus, they do not cultivate an economic advantage that is offered by the industrial buildup and are thus vulnerable to price fluctuation and changing supply conditions of raw materials. On the other hand, they make or import jigs, dies and molds that can be made by local shops, resulting in higher costs including the repair cost. As wages gradually rise in the country, their margin is being eroded to threaten the cost advantage. In fact, garment industries can no longer compete with China and Vietnam in terms of labor cost. As discussed earlier, manufacturers of medium- and high-grade products with advanced equipment are managing to maintain a competitive edge in their exports to the U.S. by using an available import quota in the large market. Many of them are uncertain about their competitiveness if the quota is discontinued under the WTO agreement. These potential problems may become serious enough to force some companies to cease operation in the CEPZ, and if it happens extensively, the CEPZ's future will become cloudy.

3.5.2. Evaluation of the Effects brought about by the Recommended Measures and Programs and Basis of Evaluation

(1) Results of foreign investment promotion measures by BOI and EPZA

It was recommended in the CEPZ Study that BOI and EPZA implement measures to undertake intensive foreign investment promotion activities, consisting of the following actions: (1) the strengthening of BOI's and EPZA's functions to develop and maintenance the support system for implementation of investment promotion activities; (2) driving the activities to promote foreign investment; and (3) the establishment of investment promotion offices abroad. BOI and EPZA recognized effectiveness of these measures and expanded their organizations, including the appointment of resident advisers from Japan and other countries to provide consultation service for potential foreign investors. They also initiated promotion of foreign investment within the country. On the other hand, however, no attempt was made to establish investment promotion offices abroad because of budget constraints. Nevertheless, their efforts helped expand foreign investment after 1995, including the CEPZ, and are considered to have brought positive impacts, directly and indirectly, on the success of the CEPZ development project and other areas.

(2) Development and upgrading of infrastructure around the CEPZ and existing common service facilities in the CEPZ

The power shortage, the most serious infrastructure-related issue at that time, was resolved by construction of power plants, creating a major positive impact on promotion of foreign investment. In particular, the CEPZ was greatly benefited from a co-generation plant completed adjacent to the zone, which was capable of providing stable power supply and thus largely motivated foreign companies to invest in the CEPZ. At the same time, roads were constructed and common service facilities in the CEPZ were newly built or expanded. As a result, many locators cite well-developed infrastructure as one of major reasons for their decision to operate in the PECZ. Thus, infrastructure development appears to have helped the CEPZ development project greatly to achieve its goal. Nevertheless, infrastructure is a relatively minor element when the overall effect of the project is assessed and is considered to have a moderate impact. Also, it has some negative impacts potentially, i.e., the delay in road improvement to meet traffic demand and the future constraint in waste disposal.

(3) Improvement of PEPZ's management and administrative system, and upgrading of facilities and services in the CEPZ

EPZA/PEZA has been working vigorously to address these issues, although not all the recommendations under the CEPZ Study were accepted. In particular, two new services benefit the locators greatly, i.e., introduction of customs clearance service within the CEPZ that inspects goods in the container at each factory, and one-stop service for applications to related government offices. In fact they are considered to be a major factor for many companies to select the CEPZ as new factory sites. While these measures provided a positive impact and helped the project to achieve its goal, there are a number of areas to be improved, in particular the complicated procedures and long time to obtain approval for delivery and shipment of goods in and out of the CEPZ. Thus, this factor should be given of relatively low rating on its impact on "sustainability" of the project.

(4) Establishment of the inter-industrial linkages between the CEZ industries and local SMEs in surrounding areas

In the CEPZ Study, the following measures were recommended to promote the linkages between the CEZP locators and local industries:

1) Encouragement of indirect export;

2) Support for development of local SMEs forming the supplier base with the following supports;
   - Institutional lending for equipment modernization
   - Exemption or reduction of customs duties
   - Guidance of fabrication technology (including production management and quality control)
   - Duty-free imports of raw materials for export processing (or alternatively application of tax rebate system)
   - Establishment of a bulk purchase system
   - Commendation of excellent suppliers in terms of quality and others
3) Establishment of the CEPZ's intermediary office to link suppliers and the CEPZ locators; and
4) Technical assistance and education for local suppliers in the area of quality improvement.

Although BOI and EPZA/PEZA expressed strong interest in taking these measures, EPZA at that time was prevented from taking active leadership due to their institutional constraint. Under EPZA and the old act, duty-free purchase of raw materials from the outside of the EPZ and supply of products to the domestic market was totally banned. Under the new act, PEZA started to promote the commercial linkage in and out of the ECOZONE including CEPZ and allowed the ECOZONE locators to purchase raw materials, semi-finished goods, sub-materials and others required for export production from local suppliers. At the same time, such purchase was tax exempted (VAT) as indirect export and the local supplier was entitled to the reimbursement of import duties and VAT that were paid on imports required for production of their parts. These incentives somewhat encouraged the CEPZ manufacturers to increase the purchase from local companies. However, local suppliers often had difficulty in receiving the tax reimbursement, and other problems surfaced to prevent the measures to take full effect.

The other recommended measures are not widely adopted because EPZA/PEZA is unable to take leadership for locators, who generally view EPZA/PEZA's initiatives as government intervention, while these measures require concerted efforts by the two parties.

Thus, despite the fact that both BOI and PEZA share the view that the closer linkages between the ECOZONE locators and local suppliers is of common interest, they have still to find an effective way to promote it. It is time to devise specific measures to promote such initiative in a way to encourage spontaneous participation of

the ECOZONE locators, while creating incentives for them to receive tangible benefits from seeking a commercial relationship with local companies.

Under the present circumstances, therefore, the measures recommended in the CEPZ Study were not easily executable and did not produce visible results.

(5) Foreign investment promotion program (BOI)

In the CEPZ Study, the following action programs were recommended as foreign investment promotion programs to be implemented by BOI:

a. The establishment of investment promotion offices abroad, particularly in Japan, South Korea, Taiwan and Hong Kong;
b. The strengthening of BOI and EPZA headquarters' functions in terms of coordination and support functions; and
c. Promotional activities at the offices set up abroad.

BOI has been deploying vigorous promotion activities and view the recommended programs to be an important starting point and a valuable tool to develop their own action programs, as evidenced from the fact that large portions of the recommendations were incorporated into BOI's plans, except for the establishment of investment offices abroad, which was not realized due to the budget constraint. BOI continues to lead investment promotion activities. Clearly, the recommendations have produced some tangible results.

(6) Investment promotion program for CEPZ (EPZA)

The CEPZ Study recommended the investment promotion program for CEPZ, including the following actions, to be incorporated into EPZA's initiatives in addition to BOI's foreign investment promotion program:

a. Delineation and priority industries to be promoted;
b. Securing of cooperation and support from industrial associations in the country;
c. Major promotional activities;

EPZA launched these programs and worked together with BOI to promote the CEPZ to foreign investors. Then, PEZA was authorized to take initiative in inducing investment in the ECOZONES and it established an organization in charge of investment promotion. PEZA carried out ECOZONE-focused activities, as separated

from BOI, which have led to the favorable results. Thus, the recommended programs were effective.

Nevertheless, separate promotion activities by BOI and PEZA, while have clear advantages (e.g., invigorating investment promotion efforts), create some confusion among potential foreign investors who consider investment in the Philippines, because they are unclear about the relationship between BOI and PEZA, are unable to obtain information from a single source, and are not sure about which they should contact. Clearly, proper coordination should be made to address these issues and give a clear picture to potential investors.

3.5.3. Overall Evaluation

In overall consideration of these evaluation results, the CEPZ Study is considered to have made substantial contribution to the success of the CEPZ development project, both directly and indirectly. On the other hand, it failed to address various constraints that were present on the Philippine side, including the budget and the structural difficulties, as well as local conditions peculiar to the country. As a result, some measures and programs recommended in the Study were unable to demonstrate their effectiveness that would otherwise be realized if such constraints had been taken into account. In the future, therefore, it is important to devise executable measures and programs (including at least two alternatives) on the basis of in-depth analysis and evaluation of possible impeding factors including constraints.

3.6. Recommendations to Future Measures and Programs

The development of the ECOZONES including the CEPZ and the efforts to attract domestic and foreign investors have been contributing greatly to industrial development in the country, particularly promotion of export industries led by foreign capital. However, manufacturers operating in the ECOZONES have selected the areas to enjoy tax incentives (duty-free import) and low-cost labor force. As a result, they are not very enthusiastic about procurement from local suppliers.

This is reflected in the current situation that there is little commercial relationship between the ECOZONE locators and local companies operating outside, and no effective inter-industrial linkage is not established yet. Meanwhile, as wages increase gradually, the ECOZONE locators cannot permanently maintain economic production by relying on the traditional incentives. In fact, their operation will become less and less profitable and there may be the case where some locators decide to withdraw from

the ECOZONES. To avoid such consequence, comprehensive measures to create new competitive advantages for them should be taken, i.e., focusing on the strengthening of industrial infrastructure. The inter-industrial linkage between the ECOZONE locators and local suppliers is therefore recommended as an integral part of the infrastructure.

To develop the measures and programs to direct the industrial structure to a new direction, mutual interest of the ECOZONE locators and local companies should be identified and addressed. In particular, PEZA in charge of the ECOZONE and BOI that handles general investment need to collaborate in that direction.

CHAPTER 4

EFFECTS OF THE INDUSTRIAL SUB-SECTOR DEVELOPMENT STUDY

4. Effects of the Industrial Sub-sector Development Study

4.1 Background and Objective of the Study and A General Outline of Recommended Measures and Programs

4.1.1 Background and Objective of the Study

Exports from the Philippines at the time of the study were already dominated by non-traditional industries (80%), while a trade deficit was on the rise and further promotion of non-traditional exports was a major policy issue for the government. As part of its efforts to pursue the goal, the Philippine government requested the Japanese government to conduct a study to evaluate development potential of six industrial sub-sectors which already demonstrated high export potential among other non-traditional products, namely molds and dies, wooden furniture, computer software, stuffed toys, fashion accessories and oleo-chemicals.

In response, the Japanese government conducted the Study on Industrial Sub-sector Development through JICA. A study team appointed by JICA developed a master plan for development of the six sub-sectors to export industries with international competitiveness (particularly SMEs) and export promotion of key products made by the sub-sectors, with an ultimate goal of boosting industrial exports from the country and improve the trade balance.

The Sub-sector Development Study had the following objectives:

1) To study and analyze the current state of the six sub-sectors that are highly promising export industries, including the nature of operation and the type of product;
2) To devise industry-specific measures and programs to develop each of the subsectors into export industries having international competitiveness and promote their products in export markets; and
3) To develop a database on manufacturers in the six-subsectors and their products, which look for Japanese partners as part of efforts to promote joint venture and technical assistance between Japanese and Philippine companies.

4.1.2 A General Outline of Recommendations in the Industrial Sub-sector Development Study

The study set the following strategic directions for promotion of the target sub-sectors:

(1) To promote the industrial development by leveraging the country's comparative advantage in the changing global environment.

(2) To promote an industry-wide collaborative approach to sub-sector development, i.e., aiming to deepen the inter-industrial linkage, particularly the complementary linkage between large manufacturers and small suppliers, rather than relying on a handful of large companies as a driving force. This entails the fostering of SMEs.

The development study then proposed the following steps to be taken for promotion of the target sub-sectors as a whole.

(1) To provide opportunity for access to export markets with an aim to make enterprises recognize the needs for technology, production management, marketing and business management as critical tools to compete in export markets, while expecting immediate export growth.

(2) To help individual enterprises in each sub-sector to develop capability to meet the export market needs and take actual steps, including market exploration and alliance with foreign partners.

(3) To support the above adaptation process by individual enterprises through the provision of infrastructure (including technology and resources), a financial system and an education and training system.

The Sub-sector Development Study identified major development-related issues that are of common interest to the subsectors, which were later translated to sector-specific measures and action programs.

(1) Investment promotion
   1) Strengthening of BOI's and PEZA's organizations to attract investment;
   2) Invigoration of promotional activities; and
   3) Cooperation with industries.

(2) Improvement of financial system for sub-sector promotion
   1) Long-term financing for capital spending;
   2) Loans focusing on export promotion; and
   3) Development and upgrading of a loan guarantee system.

(3) Upgrading of technology levels
   1) Establishment and upgrading of education and training organizations and facilities, and alliance and cooperation with related organizations;
   2) Provision of a technical support system;
   3) Promotion of R&D activities and improvement of product and technology development capabilities;
   4) Learning of technical expertise and know-how by sending trainees to overseas; and
   5) Technology transfer through joint venture and alliance with foreign companies.

(4) Strengthening of product development and marketing activities
   1) Advertisement on products and services and potential export capabilities;
   2) Research and study on foreign markets;
   3) Partnering with foreign companies; and
   4) Improvement of responsiveness to buyers.

(5) Industrial standardization and promotion of quality control
   1) Development of quality awareness and learning of quality control techniques to meet quality requirements for export products;
   2) A formal system to develop and disseminate industrial standards as the technical element of quality control; and
   3) Provision of testing facilities and equipment essential for quality control, which cannot be afforded by SMEs.

(6) Strategic and focused implementation of SME promotion measures and revitalization of trade associations
   1) Consultation and guidance for SMEs in the areas of production technology, marketing, business administration and management;
   2) Effective use of associations in consultation, information service and coordination; and
   3) Upgrading of a financial system for SMEs.

4.2 Current State of the Target Sub-sectors and Comparison with the Results of the Industrial Sub-sector Development Study

4.2.1 Metal Processing (Die and Mould) Industries

4.2.1.1 Industry Trends

During the Sub-sector Development Study, die and mould demand in the Philippines was dominated by metal processing uses such as die casting, forging and pressing, and most die and mould shops manufactured products for metal processing applications. The market was very small, so was the industry. There were around 100 establishments including captive shops of large manufacturers, which employed 1,500 workers and were mainly located in Manila and its vicinities. Their customers, metal processing industries, made parts for household appliances. It was therefore expected that die and mould demand would expand as the basic metal and metal processing industries grew with recovery of the then sluggish demand for consumer durables and government support to require local content.

Recent demand, however, shows a changing face of industry. Die and mould demand for plastics parts of electronic systems grew at a pace much faster than that for metal parts of household appliances. The fast-growing demand primarily comes from foreign-owned electronic parts manufacturers who have recently begun to operate in the ECOZONEs. Despite the rapidly growing demand, however, the local die and mould industry did not grow much compared to the time of the Sub-sector Development Study, both the number of establishments and employment.

According to the die and mould industry association of the Philippines, the country's die and mould market expanded from an estimated $55 million in 1992 to $280 million in 1997, a fivefold increase. Nevertheless, local die and mould manufacturers grabbed only 10% of the market, and most demand was fulfilled by internal production or import.

Die and mould exports show a moderate increase from approximately $1.6 million in 1990 to $2.3 million. Major importers are Japan, Taiwan and Malaysia for metal processing applications and Japan and China for rubber and plastics processing. Other products are exported to Italy, Japan and Hong Kong. A bulk of exports are tools and dies for rubber and glass products and other non-precision applications.

Thus, while the die and mould market underwent major expansion during the past decade, most demand comes from foreign-owned electrical and electronic parts manufacturers in the ECOZONEs, which are specialized in export production. The rest of the market remained almost unchanged from 1990 in terms of size and demand structure. Most of parts manufacturers operating in the ECOZONEs meet die and mould requirements by internal production or import, but some companies, although very small in number, have begun to use local shops for design and manufacture of selected products (dies and molds that not require precision machining or complex shape and do not demand tight delivery schedule) or are at least considering it. Thus, a new market for the local industry is emerging.

In 1990 when the local die and mould market was very small, the government attempted to foster the industry by promoting export-oriented industries. Then, as the market expanded rapidly – mainly driven by demand from manufacturers operating in the ECOZONEs – it is important for the local industry to win orders from these new customers including design, manufacture and repair. In reality, however, the ECOZONE manufacturers mostly demand dies and molds that are complex in structure and require precision machining, with strict requirements for price, quality and delivery schedule. Most of local die and mould shops are unable to meet such demand. And many manufacturers are inclined to the manufacture of low-end products for export markets. On the other hand, a handful of local manufacturers attempt to win orders from the ECOZONE companies and other foreign manufacturers by upgrading production techniques, developing new products and introducing latest production equipment.

At present, most foreign manufacturers, who are potential customers for the local die and mould industry, are not aware of local suppliers and their potential usefulness. By the same token, most local die and mould manufacturers do not have any contact with foreign manufacturers. Obviously, efforts to establish a close relationship between the two groups of manufacturers are prerequisite to the expansion of the local die and mould industry and the upgrading of their technology levels.

4.2.1.2 Competitiveness in Export Markets

At the time of the Sub-sector Development Study, the local industry was dominated by shops that were not capable of making products that were acceptable to export

markets. Large companies, small in number, exported low-end products that did not required high levels of precision to Taiwan, Hong Kong and China.

Recently, a small number of companies have introduced CAM systems, CNC machines and machining centers and design and manufacture precision dies and molds. However, the majority of the industry, mostly small shops, still relies on old production techniques. Thus, few companies in the industry can compete in export markets in terms of product development capability and production technology. As discussed earlier, foreign electronic parts manufacturers operating in the ECOZONEs require precision machined dies and molds for injection molding of plastics parts, aluminum die casting and stamping, which demand extremely high levels of precision. In addition, products must be supplied according to a very short delivery schedule and at a competitive price. There are a limited number of manufacturers who make precision dies, but they have still to meet all these requirements.

These manufacturers (mostly large enterprises and some mid-sized) have made significant improvements in productivity, product grade and quality by introducing latest equipment, learning advanced design and machining techniques and establishing reliable production management and quality control systems. Yet, their product often fail acceptance tests by customers, particularly foreign companies, who enforce world-class inspection standards in terms of defect and functional performance. They are currently striving to satisfy these requirements, and some manufacturers have obtained the ISO9000 certification. In contrast, small manufacturers are lagged behind. Although they have introduced some of latest quality control techniques, such as the 5S campaign and the use of ISO manuals, they have not operationalized them to practices, techniques and knowledge that are applicable to shop floors.

Delivery schedule is a major bottleneck for local manufacturers. They can deliver simple products or products that require a long period for prototyping or commercial production according to the schedule, but they are incapable of meeting demand for precision dies or those to be delivered within a very short period.

At the time of the Sub-sector Development Study, some companies tried to serve both domestic and export markets, most companies stayed in the domestic market and did not explore new customers. The situation virtually remains unchanged, and only a handful of large manufacturers are expanding overseas. Some of mid-sized companies

strive to enter the precision die market by supplying metal molds for pressing and plastics molding to electronic parts manufacturers in the ECOZONEs, but they have not won much orders as they cannot meet strict requirements for advanced design and short delivery schedule.

4.2.1.3 Competitive Advantage of Production Factors and Constraints

(1) Raw Materials

At the time of the Sub-sector Development Study, all materials used to make tools, dies and molds, including special steel, were imported, offering no competitive advantage for the local industry in this area. Since then, the situation has not changed. In addition, import tariff and VAT imposed on raw materials increase material costs. Thus, raw materials do not provide any competitive advantage for the die and mould industry.

(2) Production Equipment and Technology

At the time of the Sub-sector Development Study, many companies used second-hand equipment imported from Taiwan and other countries, and very few introduced latest equipment. Today, small manufacturers still use very old equipment. In fact, they represent the majority of the industry. These SMEs are unable to modernize their equipment because of the lack of financial resources. Large companies and some mid-sized ones have introduced modern equipment including CNC and CAD/CAM systems.

(3) Human Resources

It was found during the Sub-sector Development Study that the industry faced difficulty in maintaining steady production due to the shortage and a high turnover of engineers and skilled workers. The situation has not changed much, regardless of company size. They must strive to recruit and retain skilled workers. Clearly, the shortage of skilled workers constitutes a major obstacle to the continued competitive advantage in this area.

(4) Energy

Previously, stable power supply was a major concern for the industry. Since then, some improvement has been made but power outages are not unusual and some companies have uninterruptible power supply systems for emergency.

(5) Development of the Supplier Base

At the time of the Sub-sector Development Study, the supplier base for household appliance production emerged in response to the increase in the number of foreign manufacturers. After then, local suppliers had little opportunity to expand presence in the enclosed market partly because they failed to attain high production techniques to meet demand and partly because foreign manufacturers who operated in the Philippines accompanied die and mould manufacturers or international production capabilities.

In conclusion, the local die and mould industry has little competitive advantage in vying for export markets. Thus, its development target should be placed on the domestic market that is growing steadily with demand from manufacturers operating in the ECOZONEs. The industry should make further efforts to meet requirements by the ECOZONE companies, which are equivalent to world class standards for specifications and delivery conditions. Once it attains the ability to meet demand from these customers, it will be able to have sufficient competitiveness in export markets.

4.2.1.4 Future Challenges

The die and mould industry serves as the coleof the precision parts industries (including machinery, engineering and precision plastics processing), such as electrical and electronic parts and automotive parts. As discussed above, precision die and mould demand grows rapidly and a major driving force is a large number of foreign-owned precision parts manufacturers operating in the ECOZONEs. As the market appears to have reached a sufficient size to support the local industry and its future growth, it is time for individual manufacturers to develop technical capabilities (both design and manufacture) to meet the customer's requirements for high specifications and precision, quality, competitive price and quick delivery, which must be supported by better management and aggressive marketing efforts.

Meanwhile, the government is expected to assess the current state and future potential of the business environment for the die and mould industry and needs to devise and implement a renewed approach to promote the industry by taking in account the perspectives of their potential customers, i.e., engineering industries as a whole. In particular, an emphasis should be placed on the ways to induce the die and mould industry to establish a close linkage with the engineering industry, which has sufficient breadth and depth to form a competitive industrial structure.

Only this approach will enable electrical and electronics industries, automotive parts industries and their suppliers to establish the mutually beneficial partnership, through which they can build up world class capabilities and competitiveness on a sustainable basis.

Within the above framework, specific measures and programs to support and foster the die and mould industry should be developed. The following measures should be included in the plan and their feasibility and action programs should be studied:

(1) Specific measures and programs to encourage the establishment of a close business relationship between the local industry and its customers (mainly manufacturers operating in the ECOZONEs), such as an intermediary service to introduce potential customers and suppliers, information networks, and formation of formal supply chains;
(2) The technical assistance system customized to the needs of the metal and metal processing industries, as multi-faceted ramification of the technology transfer program led by MIRDC;
(3) Expansion and upgrading of technical training led by TESDA;
(4) Tax incentives for local die and mould manufacturers who supply products to the ECOZONE companies who make and export parts by treating the deal as indirect export; and
(5) A loan program to provide working capital for die and mould manufacturers to purchase raw materials.

4.2.2 Furniture (Wooden furniture)

4.2.2.1 Industry trends

At the time of the Sub-sector Development Study, wooden furniture made in the Philippines was characterized by antique designs with engravings. Major export items were chairs and others in the form of sanded frame. Today, the industry mainly supplies modern furniture using diverse materials, i.e., local woods, imported species such as pine and oak, and medium density fiberboard (MDF), and it is capable of exporting finished products. While Narra, a renowned hardwood species used for high-grade furniture, gradually disappeared from the market due to depletion, G-melina was commercially grown and cultivated as an alternative species and drove expansion of the furniture industry. The industry was originally depended upon availability of high-

grade wood within the country. Then, the advancement of design and processing techniques has enabled the industry to use imported woods and the second-grade species such as G-melina and make furniture for exports. The furniture industry in the Philippines is still labor intensive in nature.

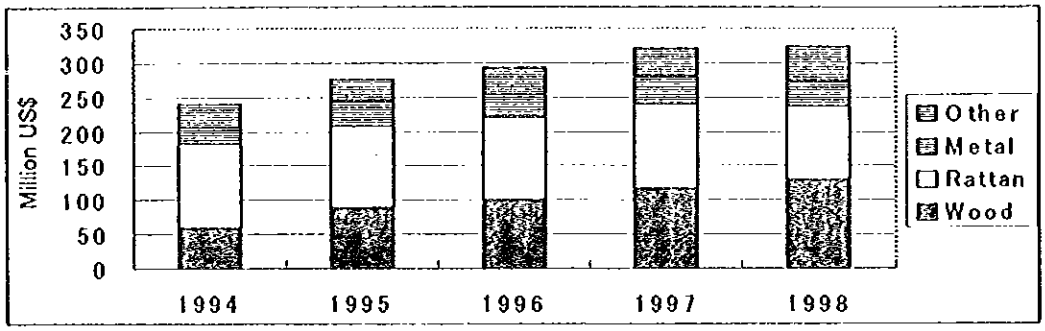
There are around 15,000 establishments related to the furniture industry, which employ 480,000 workers. Additional 300,000 workers are hired by subcontractors. 90% of these establishments are classified as Small and Medium Enterprises (SMEs) and Micro Enterprises (MEs), characterized as cottage industries or family operations.

At the time of the Sub-sector Development Study, rattan furniture represented a major export item. Then, local rattan resources were exploited near depletion, and Indonesia, the largest rattan exporter, banned exports of unprocessed rattan in 1989, severely limiting availability on market. Furthermore, Indonesia started to export low-priced rattan furniture in large quantities, which caused considerable price declines and drove Philippine-made products out of the export markets because their costs (both labor and raw material) were already high. As a result, a large number of rattan furniture makers in the country shifted to production of furniture using rattan and other materials, or wooden furniture. In the process, their operations have been highly mechanized. Nevertheless, production of knockdown furniture that requires precision machining is very limited.

The value of furniture exports from the Philippines has been keeping the pace with growth of the world furniture market, and in particular, it is fueled by the strong U.S. economy. Most recently, many companies are concentrating their efforts to explore the European markets.

In 1988, the value of furniture exports totaled $154 million, of which wooden furniture represented an only 11.4%. In 1998, wooden furniture accounts for slightly less than 40%.

Fig.4-1 Furniture Export Trends



(Source: BOI&CFIP)

Fig.4-1 shows the value of furniture exports in the recent five years. In the domestic market, furniture demand has been growing in hotel, restaurant, office and home sectors. Some companies are shifting their focus to the domestic market. Furniture used by hotels, restaurants and offices are purchased by contractors who build them. Recently, medium- and high-grade furniture is sold at specialty stores and department stores.

The government is actively involved in promotion of furniture exports. The Philippine Export Development Plan (1999-2001) sets forth the following strategies for export promotion:

(1) Liberalization and promotion of imports of raw materials
(2) Strategic marketing for market expansion
(3) Development and promotion of furniture for SOHO
(4) Support for SMEs through existing and new financial assistance programs
(5) Increased plantation to secure supply sources

4.2.2.2 Competitiveness in export markets

Overall, the furniture industry gained international competitiveness significantly compared to the time of the Sub-sector Development Study.

While labor costs in the country are on the rise (although slower than those in Taiwan and Malaysia) to increase the production cost for furniture. However, many export companies have successfully increased productivity by introducing a standard set of woodworking equipment, including milling machines, grinders, sanders and routers, although advanced equipment is not affordable for many of them. Only large

manufacturers mainly in Cebu have process lines designed for volume production of standard products. Also, processing techniques still require some improvement. Local wood supply has been on the steady decline to push prices upward and many manufacturers are increasingly relying on imports. Meanwhile, not much efforts are made to promote the efficient use of raw materials, including the introduction of furniture production technology to enable the efficient use of high-grade wood. Many companies still follow old production methods and mechanization is limited to small portions of the entire process.

On the other hand, diversification has been progressed in the areas of design and type of material used. While traditional antique designs rich with engravings are still available, modern furniture using abaca, rattan and bamboo are becoming the mainstream.

The quality of furniture made by local manufacturers is coming close to international standards as they have been competing in export markets, but it requires a further improvement. In this connection, technology transfer made by a training center in Pampanga contributes to the upgrading of furniture production technology among many manufacturers. Finally, buyers are demanding quick delivery schedules which are increasingly difficult to be met by manufacturers.

As for marketing activities, the Philippines International Furniture Fair (organized by CFIP) has been held in Manila since four years ago, concurrently with a furniture trade show held in Cebu, to draw a large number of buyers. In addition, the industry has been participating in foreign trade shows, particularly the major ones in an attempt to appeal to the U.S. and European markets.

4.2.2.3 Competitive advantage of production factors and constraints

Previously, the industry was disadvantaged by high tariff rates on sub-materials. Since then, import tariff rates have been reduced to allow them to import sub-materials as well as wood from the North America, New Zealand and Papua New Guinea. In response to the decrease in natural forest, the use of planted species such as G-melina is encouraged.

During the Sub-sector Development Study, various problems were pointed out for the splicing and coating processes. Since then, some improvement has been made.

Nevertheless, mechanization is still limited. Many small shops which do contract jobs use standard woodworking equipment and manual workers. On the other hand, larger manufacturers of export products have achieved higher productivity by introducing a variety of machinery.

While highly export-oriented manufacturers have come to realize the importance of product quality at the management level, they have still to introduce a modern quality control system as they have not introduced fully mechanized process lines. Current quality control efforts rely on employee education, the increase in inspection personnel, and quality improvement of raw materials and sub-materials. On the other hand, managers having sufficient knowledge on quality control are limited in number, constituting a bottleneck to strict enforcement of quality control practice.

As mentioned earlier, the Philippines International Furniture Fair organized by CFIP (held in Cebu and Manila) is recognized as a major furniture trade show in Asia and draws a large number of buyers who look for new designs. In addition, the government has been conducting promotional activities to advertise excellence of Philippine furniture design to the export markets.

4.2.2.4 Future challenges

The country has boosted furniture exports side by side with expansion of the world market, especially the U.S. market that is bolstered by the strong economy. In particular, wooden furniture exports recorded rapid growth partly because of improved quality and partly because the emphasis on design, together with marketing activities including the trade show, has drawn attention of the buyer. The government has also been contributing to it in the areas of marketing, design upgrading and training opportunity.

Nevertheless, the furniture industry faces various threats, including the rise in labor cost, depletion of raw materials, and competitive pressure from neighboring countries, and it is expected to strengthen competitiveness in the export markets by making efforts in the following areas:

(1) To introduce modern equipment and promote standardization to raise produce grade;
(2) To introduce processing techniques (manufacture of laminated lumber, processing of core-top plate, and press working) to promote the efficient use of raw materials and improve the value added, and encourage collaborative work among different factories, including the installation and operation of a common service processing center;
(3) To promote cooperation and specialization among individual factories and joint production of standard products for exports;
(4) To step up marketing efforts and foster designers (bottom-up efforts) in order to establish the position and reputation of Philippine furniture in the export markets; and
(5) To introduce line-flow process technology required for quality improvement and production efficiency, and conduct research on field application of modern production planning techniques and quality control systems, together with education of middle management that can implement such application.

4.2.3 Computer Software

4.2.3.1 Industry Trends

At the time of the Sub-sector Development Study, the computer software industry in the Philippines consisted of two segments, software development and data entry service. There were as many as 300 establishments which employed an estimated 20,000 workers (limited to larger companies). Software development covered a wide variety of fields, among which manufacturing, physical distribution and financial sectors represented major portions. Data entry service primarily dealt with entry of numerical information and text data, such as telephone directories, encyclopedias and medical records. These jobs were mostly received from foreign customers.

While the nature of operation in the industry has remained mostly unchanged, it has grown in number to 400 establishments in total, of which around 200 establishments are relatively large. Software developed by the industry covers similar fields, but to reflect the changing development environment throughout the world, hardware and software platforms have shifted to PC-based and on-line development is on the rise. On the other hand, data entry service has shifted from traditional numerical information and text data to entry of computer programs such as video and voice processing and mapping. In addition, more and more entry services require a high level of professional knowledge

such as medical records and court decisions. In the system development area, the industry was primarily engaged in module development and rarely received an order to develop an entire system. Today, the dramatic change in the system development environment during the past decade is reflected in diversification of contract jobs in addition to conventional application development, such as modification of software modules and the upgrading of program versions.

At the time of the Sub-sector Development Study, the domestic market was estimated at around $10 million (a sum of revenues reported by BOI-registered enterprises in 1989). In 1999, it expanded to some $50 million (also BOI-registered enterprises) and increased fivefold over the decade.

The value of contracts received from foreign customers in 1989 amounted to around $10 million for software development (BOI-registered enterprises) and $8.5 million for data entry service, totaling $18.5 million. In 1998, the total contract value reached an estimated $385 million, an increase by 20 times during the decade. Job orders from the U.S., Australia and Canada account for 80% of the total.

During the Sub-sector Development Study, the ratio of domestic revenues to revenues from foreign contracts was 1:2. Since then, the latest ratio grew to 1:7.7 to reflect rapid growth of revenues from foreign contracts, which outpaced steady growth of domestic revenues.

Over the past decade, the government's policy toward the computer software industry underwent a marked change. Previously, the National Information Technology Plan (NITP) was recommended but no implementation measures were taken due to the budget constraint and the shortage of human resources. At present, the government has announced the National Information Technology Plan for the 21st Century (IT-21) and has set forth national policy for fostering of the IT industry and the G-WISH (Government-wide Information Super Highway) scheme to promote computerization of the government system, followed by implementation of various measures and programs. Also, PEZA plans to establish an IT zone as part of its ECOZON project plan.

4.2.3.2 International Competitiveness

At the time of the Sub-sector Development Study, the computer software industry showed significant competitive advantages, due to low labor costs, over other countries which had English-speaking workers. Recently, however, India and Sri Lank have emerged in the programming business, and data entry service saw the entry of China and Vietnam into low-end service (simple data entry). The Philippine industry is facing competitive pressure from these new entrants.

Previously, foreign-owned companies, large local companies (subsidiaries of company groups) and large independent companies maintained cost competitiveness with high productivity. Smaller independent companies also managed to retain competitiveness. Recently, availability of high performance hardware, software and tools, and the general improvement of skills have raised productivity further. However, some companies feel difficulties in handling jobs related to voice and video data that involve tremendous amounts of data as well as the complexity of application development over the network.

During the Sub-sector Development Study, most companies responded that they did relatively simple development jobs under the contract with foreign companies. At present, they provide more advanced service such as the development of packaged software. They are now capable of developing proprietary software by applying their expertise and experience in application development over the network, Y2K remediation projects and the development of customized software, whereas users increasingly demand solution tools.

They have generally been meeting strict quality requirements of customers since the beginning by delivering products after the completion of a module test. As a result, they have rarely received the customer's complaint on quality. Recently, as variation of quality due to the difference in development environment has been virtually eliminated, and as skill levels of developers have risen significantly, they boast further improvement in product quality. They meet delivery schedule partly because software and entered data are delivered via the network.

As for marketing, large captive companies relied on orders from domestic companies and parents, while independent companies were unable to win contracts from local customers and mostly took orders from English-speaking countries. The

domestic situation remains almost unchanged since then. On the other hand, they are fairly active in selling to foreign markets. Some entered alliances with foreign marketers and partners or participate in international trade shows. Others look for customers in non-English-speaking countries in order to avoid competitive pressure from Indian and Sri Lankan companies.

4.2.3.3 Competitive Advantage of the Computer Software Industry and Constraints

(1) Human Resources

At the time of the Sub-sector Development Study, professional workers in the computer software industry (both application development and data entry) were mainly programmers and operators, while system engineers and analysts capable of system design and development were very limited in number.

Today, some 10,000 students graduate from IT-related departments of universities and colleges each year and form an abundant source of skills. Also, private computer schools have been established. Education and training is also provided at NCC/PSDI and TESDA, contributing to computerization of the public administration system.

Private companies are said to provide in-house education and training for skills that meet the customer's demand. Nevertheless, skill training still gives priority to programming and PC operation, while there is the apparent lack of efforts to educate highly specialized engineers capable of designing customized application systems, resulting in the shortage of such advanced skills. These skills are indispensable if the industry is to expand its business beyond programming and data entry service, and if the present situation continues, it will face a bottleneck for business expansion.

(2) Development Environment

Previously, the development environment was generally obsolete. Old hardware and software were used for software development, and data entry was made using old machines. Today, most companies are equipped with the world class development environment. Also, they have machines and software tools that meet the customer's specifications. Thus, they are ready to meet the customer's requirements by always upgrading hardware and software to latest models and versions.

(3) Development Service/Quality Control System

Previously, most companies virtually provided manpower only while their customers prepared specifications and design documents and sent engineers for quality control. Today, they are capable of performing all these functions and have systematized quality control practice to some degree. Nevertheless, quality requirements continue to be escalated, particularly those for development of applications that run on the Internet, and the industry is required to make continuous efforts to improve skills and upgrade resources.

(4) Infrastructure Development

At the time of the Sub-sector Development Study, communication networks were poorly developed, and in particular, international communication lines were inferior in terms of capacity, transmission rate and quality. Since then, liberalization of telecommunications service and deregulation have progressed and network access has been improved to some degree, generally meeting requirements for the contemporary system development environment. Yet, there are many issues to be resolved, such as the shortage of line, quality of communication and a high rental charge for leased line. As the development environment continues to change and application development and other service on the network are increasingly demanded, there is the urgent need for large capacity, high speed trunk and branch lines. In addition to installation and extension of communication lines, user charges need to be lowered to improve network access.

4.2.3.4 Future challenges

The Philippines is the second largest exporter of computer software in Asia, next to India. However, the industry primarily provides labor-intensive jobs such as programming and data entry. As similar industries and service offerings emerge in many other countries including India, Sri Lanka, Ireland, China and Vietnam, the Philippine industry is losing international competitiveness in labor cost. If it continues to stay in its current business areas, which have driven the past growth, it will increasingly face difficulty in ensuring sustainable growth in the highly competitive environment. Rapid growth of the IT industry is the global trend and most countries give priority to the development of the industry. The Philippine government has adopted the IT-21 as a master plan for IT development and has set forth policy to nurture the IT industry under various initiates. As the computer software industry may experience a major change with development of the entire IT industry, the industry's

promotion must be approached from more broad perspectives. Instead of viewing it as the development of an industrial sub-sector, the computer software industry should be positioned as an integral part of the IT industry and its promotion needs to be designed within the framework of the national policy and strategy for long-term development of the IT industry. In this connection, the following needs must be addressed as priority issues:

(1) To review and modify the measures to promote the computer software industry in alignment with the development strategy for the IT industry;
(2) To devise the measures to support development of human resources and software companies to meet diverse demand (e.g., video processing and multimedia); and
(3) To reinforce the R&D functions of public research institutes such as NCC/PSDI and train software engineers having broad-based and advanced skills.

4.2.4 Toys (Stuffed Toys)

4.2.4.1 Industry trends

As pointed out in the previous study, the industry has already lost advantage over China in labor cost. In addition, it had the following problems: 1) difficulty in procuring plush and other raw materials; 2) the inability to make a counter sample; 3) financial difficulty; and 4) the lack of marketing. There have been no industry-wide efforts to address these problems, because most companies have lost interest in continuing their businesses as the industry showed signs of decline due to competitive pressure from the toy industry in China that grew much faster than expected.

In fact, many companies started to make other products, and foreign companies which employed more than 100 workers each and operated in Philippines as their export production base moved to countries with lower labor costs. At the time of the Sub-sector Development Study, 31 stuffed toy manufacturers were registered with BOI. They have reduced 15 to this date, of which 8 companies are suspending production activities.

The stuffed toy industry in the country developed by specializing itself in export. At the time of the Sub-sector Development Study, the industry was roughly divided into two groups according to the type of operation. One group consisted of manufacturers that provided contract jobs using designs and patterns furnished by foreign exporters. Another group was represented by companies which created their own counter samples

and patterns and sold original designs to buyers. Those in the former group were forced to suspend production as foreign exporters switched to manufacturers in China and other low-cost countries. Some compnies in the second group, which are capable of creating products that meet the market needs, manage to survive today.

Stuffed toy manufacturers are mostly located in Manila and its vicinities. They usually use small job shops as subcontractors to stitch parts together. These shops are concentrated in Bulacan, Tarlac and Pampanga. They are mostly classified as MEs, while some have around 50 employees. Also, there are intermediaries who subcontract jobs to family operations.

4.2.4.2 Competitiveness in export markets

Toy exports from the Philippines totaled $31.1 million in 1998. They are generally on the decline since the peak level of $48.1 million in 1996. There are no statistical data on stuffed toys, but they presumably lose share to total toy exports. On the other hand, imports of toys grow rapidly in recent years, reaching $35.5 million in 1998. The value of imports probably exceeded the value of exports in 1999. Table 4-1 shows exports made by stuffed toy exporters registered with BOI.

Table 4-1 Stuffed Toy Export by BOI registered companies

Unit:Million US$

1992	1993	1994	1995	1996	1997	1998	1999
9.3	10.7	9.1	11.7	8.8	10.7	7.3	3.6

Note: Export figures might include other than stuffed toy

(Source: BOI)

The industry has already lost competitiveness in high volume, low-end products (particularly those made on a contract basis) against China. Most products sold in the domestic market are made in China. As Chinese manufacturers make volume products using sewing machines, the Philippine industry still maintains competitiveness in stuffed toys that are not suitable for mass production because of complex designs or the method of manufacture. Also, they take small-lot orders which Chinese companies do not usually accept. Finally, the devaluation of the peso due to the Asian economic crisis helps the industry to regain some competitiveness against China.

4.2.4.3 Competitive advantage of production factors and constraints

As suitable raw materials are not available locally, toy manufacturers have to rely on import materials. In particular, plush used for stuffed toys is entirely exported. This is a major disadvantage for the stuffed toy industry in the Philippines.

Most export manufacturers use different subcontractors according to different parts of final products, making quality control difficult. Some use same contract shops for important parts and perform critical jobs internally for quality assurance, but these efforts are not always reflected in quality upgrade.

Some manufacturers try to expand the customer base by participating in trade shows, both domestic (sponsored by CITEM) and overseas, and by sending samples and photos to existing trade partners and exporters in the Philippines. These marketing activities have not changed from those practiced during the previous study.

4.2.4.4 Future challenges

The toy industry is still considered as a key export industry of the country and is designated as a priority sub-sector to be supported in the national export development plan. However, stuffed toy exports are clearly on the decline. It is important to provide support for manufacturers to diversify and convert their business by encouraging them to look for new export products and collect and study overseas market information.

4.2.5 Fashion Accessories (Costume Jewelry)

4.2.5.1 Industry trends

The costume jewelry industry in the Philippines is made up of exporters, assemblers (stringers) and manufacturers (suppliers). Assemblers and manufacturers are concentrated in Cebu and its surrounding areas, mostly MEs. Exporters were located in Cebu or Manila.

The value of costume jewelry exports in recent years is shown in Table 4-2. Exports reached their peak in 1993 and plummeted to one fourth in 1997 due to a new fashion trend (minimalism) in industrialized countries to reduce the use of accessories significantly. Then, recovery occurred in late 1998 and exports soared to $24.5 million in 1999 (January through October), particularly those to Germany and Japan.

Table 4-2 Costume Jewelry Export Trends

Unit:Million US$

1991	1992	1993	1994	1995	1996	1997	1998	1999
32.4	39.0	51.4	46.5	25.1	17.7	13.6	14.6	26.6

(Source: BOI)

At the time of the Sub-sector Development Study, most companies made products of almost identical designs and are disadvantaged in negotiation with the buyer. In 1992, the industry received technical assistance from CBI of the Netherlands. Today, they use design consultants to create their original designs and make diverse products.

Manufacturers are also benefited from using advanced equipment at a costume jewelry center (CJC) in Cebu, which was completed in 1997 under the assistance of DTI and DOST, and they have improved craftsmanship for metal parts. Also, the Jewelry Industry Development Act (R.A. 8502) enacted in 1998 has helped manufacturers to create a variety of designs by allowing duty-free imports of raw materials and capital goods.

The slump in exports resulted in dramatic production declines to reduce labor force working at job subcontractors. Although production recovered and many workers regained their jobs, a large number of exporters in Manila went out of business or changed their business to gifts and household goods.

4.2.5.2 Competitiveness in the export markets

The costume jewelry industry in the Philippines emerged and grew by taking advantage of natural materials such as shells available within the country and low-cost, dexterous labor force. Their competitiveness in the export markets was based on these advantages. However, material costs have been rising steadily and labor costs are relatively high compared to low-cost competitors in neighboring countries. Another notable change is the increase in product variety due to introduction of metal processing techniques, import parts and new materials available in the country, although products using natural materials still hold a dominant share.

Availability of diverse products - mainly low-cost products - enables exporters to target new markets. Uniquely designed products with attractive packages are

developed under the technical assistance of foreign consultants who are familiar with export markets. Also, significant improvement has been made in metal parts, which quality was previously questioned, as Korean suppliers started business in Cebu and supply high quality parts in quantities.

The industrial structure made up of subcontractors and exporters remains mostly unchanged since the previous study, and so does their production/quality control systems, except for some export manufacturers who provide workspace for subcontractors to raise productivity.

The association (FAME) and individual exporters are actively involved in marketing. In 1999, a total of 65 companies participated in three trade shows and 17 sent their representatives to a trade mission to Japan. FAME also serves as a contact point for individual companies through its Web site and disseminates information on CD-ROM and other media to buyers and trade promotion organizations.

4.2.5.3 Competitive advantage of production factors and constraints

The industry has started to use new materials in combination with natural materials that still form an appealing part of final products. Advice from foreign design consultants and availability of CJC's facilities and equipment have expanded choices of raw materials to reduce the degree of dependency on natural materials. Exemption of import tariff on foreign materials allows the global sourcing of diverse materials. Also, the industry is actively exploring new materials available in the country by sending a mission to various areas. As a result, the industry has gained significant competitive advantages in this area.

While individual manufacturers (particularly, job contractors) have not introduced new production equipment or systems since the previous study, but availability of CJC's common service facilities have definitely improved the general production environment and have led to better competitiveness in terms of product variety and quality improvement.

In the industry, costume jewelry exporters make advance payment to manufacturers, which is financed by the LC arrangement with banks. Recently, however, smaller enterprises have difficulty in obtaining the LC-based loans. The association plans to establish a cooperative to supply working capital to subcontractors.

4.2.5.4 Future challenges

Traditionally, costume jewelry products made in the country are mostly close to handicrafts using natural materials and are offered in a low price range. Demand for these products is extremely susceptible to the changing market trends. Meanwhile, prices of silver and low-purity gold – once precious materials – have dropped and the costume jewelry market is divided into two segments, a high end to sell high-grade jewelry and gold products, and a low end to use other materials.

At present, the general market trend moves toward the wearing of multiple accessories. As seen in Japan, high school girls follow this trend and "teen jewelry" is growing to a major market worldwide. While each item has a low price tag, total sales are large as many products are purchased by a single person. If the Philippine industry provides products that meet the changing tastes of consumers, it will be able to expand exports in 2000.

The industry has steadily gained the ability to meet the market needs quickly, but it has yet to establish its position in the export markets. In other words, it is still vulnerable to a risk of the abrupt export slump caused by the market changes, as experienced in the past. To minimize such risk, the following actions should be included as part of support measures for the industry:

(1) Promotion of equipment purchase and technology transfer, particularly the upgrading of CJC's common service facilities and equipment;
(2) Education for designers and design development activities;
(3) Education and training for subcontractors; and
(4) Enforcement of marketing activities.

4.2.6 Oleochemicals

4.2.6.1 Industry trend

At the time of the Sub-sector Development Study, oleo-chemical was substantially established as an industry sub-sector in the country. With the small domestic market, products were mostly exported and the industry was positioned as a resource-based export industry. At the same time, some products had to compete with petrochemical products and their export prices were inevitably restrained by the petrochemical market. In addition, the industry was expected to face intensive competition with emerging exporters in countries like Malaysia and Indonesia. It was therefore recognized that the industry would require to establish a strong competitive edge. At that time, 14 oleo-chemical manufacturers were operating, consisting of 5 basic oleo-chemical manufacturers and 9 manufacturing derivatives and byproducts. As t industry is a capital-intensive, process industry requiring large amounts of investment, these manufacturers were fairly large in size and included joint ventures with world leading chemical companies including Colgate and Unilever, a Japanese major detergent manufacturer (Kao), in addition to local enterprises.

The industry's output was limited to relatively low value added segments, namely basic ore-chemicals and derivatives, rather than downstream products such as fine chemicals.

Today, the industry is facing increasingly intensive competition with export competitors in Malaysia and other countries, as predicted in the Sub-sector Development Study. In fact, one of five basic oleo-chemical makers suspended operation and was taken over by a new company who purchased plant facilities. Meanwhile, three more companies entered the market. One company has recently started operation and is still in the commissioning stage, and two companies are building their plants. Thus, seven companies are registered with BOI, but only four in operation. Derivative and byproduct makers decreased from nine to seven as two companies withdrew from the market, and five companies are actually operating. Two companies have recently started production of downstream products. Thus, 14 oleo-chemical manufacturers are currently registered but only 9 companies in operation.

Table 4-3 shows the recent volume of the country's exports of oleo-chemicals. Table 4-4 shows recent trends in exports and domestic sales by five companies which

are members of the Philippine Oleo-chemical Manufacturers' Association (POMA). Production volumes in recent years were estimated from these data and information from industry sources as no statistical data on oleo-chemical production were available. The production volume in 1988/89 reached an estimated 110,000 -- 120,000 tons and grew to 220,000 -- 250,000 tons in 1998/99.

Table 4-3 Oleochemicals Export Trends

(tons)

	1998			1999		
	Export	Local	Total	Export	Local	Total
Fatty Acids	14,000	11,000	25,000	18,800	7,400	26,200
Fatty Alcohol	32,000	33,000	65,000	36,000	31,400	67,400
Methyl esters	1,000	1,000	2,000	*	*	*
Glycerin (Crude and Refined)	10,000	8,500	18,500	10,400	9,600	20,000
Alkanolamides	2,000	900	2,900	2,000	1,300	3,300
Amines	5,500	100	5,600	5,500	100	5,600
Others	4,000	1,000	5,000	4,000	1,000	5,000
Total	68,500	55,500	124,000	76,700	50,800	127,500

Note: Methyl esters in 1999: included in fatty alcohol
Source: POMA

Table 4-4 Exports and Domestic Sales by Selected POMA Member Companies

(tons)

	1988	1989	1990	1998	1999
Fatty Acids	21,710	19,128	20,396	14,000	18,800
Fatty Alkohols	54,443	41,926	39,040	32,000	36,000
Metyl esters	16,748	18,199	16,634	1,000	*
Glycerine (Crude and Refined)	13,126	11,173	11,638	10,000	10,400
Alkanolamides	2,038	1,263	1,278	2,000	2,000
Amines	-	-	-	5,500	5,500
Others	19,796	3,261	4,365	4,000	4,000
Total	127,861	94,950	93,351	68,500	76,700

Note: 1) 1988 - 1990: Aggregate of exports of BOI registered firms
2) 1998 - 1999: Aggregate of exports of POMA's 5 member firms
3) *Metyl esters in 1999: included in fatty alkohol
3) Others in 1988 - 1990: Sulfonic acid, Acid Oil, Amines, etc.
4) Others in 1998 - 1990: Fatty alkohol beads, mono-alkyl phosphate, soap base, etc.

Source: 1988 - 1990: BOI (quoted from the Previous Study Report)
1998 - 1999: POMA

Thus, the production volume doubled during the past decade while manufacturers declined in number. This indicates that some manufacturers launched capacity expansion in response to growth of domestic demand.

Oleo-chemical export trends (on a value basis) are shown in Table 4-5. The value of exports increased steadily up to 1994, then it gradually fell to the 1993/94 level in 1998, partly because export volumes declined due to intensive competition in the export markets and partly because export prices, which were on the rise up to 1995, remained flat or dropped for some products.

Table 4-5 Oleochemical Export Trends

	Exports (US$ million)
1988	73
1989	67
1990	49
1992	85
1993	82
1994	90
1995	114
1996	100
1997	105
1998	86

Source: BOI
(1988 - 90: Quoted from the Previous Study Report)

Exports as a percentage of total oleo-chemical sales declined from 80% in 1990 to around 60% at present, reflecting sluggish exports and increased domestic sales. In fact, the domestic market expanded appreciably compared to the previous study period, for two reasons. First of all, a government order (No.259) to promote consumption of local palm products spurred oleo-chemical demand to substitute for alkyl benzene, a petrochemical product used for detergent production. Secondly, domestic detergent demand expanded to encourage local production. In addition, the industry is gradually expanding into other product segments, especially high value added downstream products. Thus, product development should be directed to the domestic market as well as the export ones.

4.2.6.2 Competitiveness in the Export Markets

The industry strengthened competitiveness in the technology area compared to the previous study period. Previously, most companies, except for foreign-owned, did not achieve a particularly high level of productivity. Recently, they have made significant improvements in capacity utilization and productivity through equipment renovation and upgrading, better production techniques, and vigorous production management and quality control efforts.

Nevertheless, price competitiveness of oleo-chemicals is chiefly governed by the price of its primary material, palm oil. Export competitors such as Malaysia and Indonesia are using palm kernel oil that is produced from large oil palm plantations. On the other hand, coconut trees in the Philippines produce a relatively small amount of oil due to the lack of breed improvement and production volumes vary with weather conditions. As a result, supply is unstable and prices are relatively high. These unfavorable conditions are directly reflected in availability and pricing of palm oil for the oleo-chemical industry.

In fact, the industry manages to absorb the rise in palm coil cost through the increase in capacity utilization and productivity. Thus, basic oleo-chemical products made in the Philippines are gradually losing competitiveness in the export markets. On the other hand, the industry has been diversifying products by developing high value added downstream products and is capable of supplying high quality products that meet world-class standards, including downstream products that must meet strict quality requirements.

As oleo-chemical manufacturers are either local large enterprises or joint ventures with foreign companies operating overseas plants, they maintain well-established distribution channels, through which marketing activities are made for both export and domestic markets.

4.2.6.3 Competitive Advantage of Production Factors and Constraints

Oleo-chemical products made in the Philippines have previously enjoyed a strong competitive edge as the major producer of palm oil. However, the once-dominant position is being threatened partly due to the emergence of low-cost, volume producers of an alternative material (palm kernel oil) in Malaysia and Indonesia, and partly due to increased competition with low-cost petrochemical products in some segments. As discussed earlier, palm oil in the Philippines is unstable in supply and its price is on the rise, eroding the industry's competitiveness. Imports of low-cost palm kernel oil from Malaysia and Indonesia are not feasible due to high tariff to protect local palm production. So long as the industry has to rely on the local material, it must find a way to secure stable supply of palm oil or to stabilize its price.

The second factor is an impact of energy costs on the industry that utilizes diverse energy resources including electricity and fuel oil. Although cost effectiveness has

been improved to some degree compared to the previous survey period, the industry has still to gain any competitive advantage in this cost factor. Also, transportation costs have a major influence on profitability of the industry's operation that involves the movement of palm oil and chemical products in large quantities. As roads and port facilities are not fully developed for economic transportation, transportation costs serve as a disadvantage for the industry.

To address the issue, industry-wide efforts have been made to construct the Coconut Agro-industrial Estate in Batangas under the government assistance. Related infrastructure is under construction and a project is underway to concentrate downstream production capacities of different companies for economies of scale, although it will take some time to produce tangible results.

The industry consumes a variety of chemical products as sub-materials, which have to be imported due to the absence of local suppliers. Previously, these materials were subject to high tariff and had additional cost impacts. Recently, import tariff has been abolished or reduced and the industry is now virtually free from the financial burden.

For production of downstream products, advanced plant operation and maintenance skills are required but are limited at present. Manufacturers are providing extensive education and training for employees to introduce latest production management and quality control systems (most companies have obtained the ISO 9000 certification), and engineers and operators having high skills are being produced.

4.2.6.4 Future Challenges

For the oleochemical industry to maintain sustainable growth, it must tackle the following issues:

(1) To establish a market mechanism to assure stable supply of high quality palm oil at a competitive price, in cooperation with the government and related industries;
(2) To encourage individual companies to work on development of high value added downstream products and promote local industries that consume them; and
(3) To make industry-wide and individual efforts to strengthen competitiveness.