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TOWARDS LINKING EXPORT PROCESSING ZONE FIRMS WITH THE DOMESTIC ECONOMY. THE CASE OF THE REPUBLIC OF THE PHILIPPINES*

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Preface

Within its study programme, the Regional and Country Studies Branch of UNIDO carries out country level research on policies and strategies pertaining to the progressive development of the industrial sector in developing countries in the present rapidly changing international environment. These issue-oriented studies are primarily undertaken with a view to serve as analytical input to UNIDO's technical assistance programming in the industrial sector as well as to improve the information base for industrial policy measures to be taken by concerned authorities at the national level.

One area to which special attention has been given is the strategies and approaches used in the promotion of export-oriented manufacturing. The present study, related to the Philippines, is part of a series of analyses in selected Asian countries concerning the development contribution of export processing zone (EPZ) activities, particularly, through linkages with the domestic economy.

The present study provides an analysis of actual and potential linkages between enterprises in two selected export processing zones - Baguio City EPZ and Mactan EPZ at Cebu - and domestic Philippine enterprises. Against the background of the perceived role of EPZs in the country's economic and social development, the study considers factors influencing the development of such linkages. For reasons of comparison special attention is also given to linkages in regard to non-EPZ export-oriented industries, including manufacturing under bonded warehouse system.

The study has been prepared, under UNIDO consultancy contract, by Lorenzo B. Castillo, Manila, in co-operation with staff of the Regional and Country Studies Branch.

In preparing the study the consultant had extensive contacts with the management of the Export Processing Zone Authority (EPZA) and that of the EPZs in Baguio and Cebu and was greatly assisted in the clarification of issues and the provision of data. A large number of managers and officials of export processing zone firms and other export-oriented industries contributed importantly through responding to survey questionnaires and personal interviews. In acknowledging their great interest and excellent co-operation, it is hoped that the findings and recommendations of the study will contribute to further strong development of the export industry activities of the Philippines in a well integrated manner with the various sectors of the national economy.

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Abbreviations used

ARTEP	Asian Regional Team for Employment Promotion
ASEAN	Association of South East Asian Nations
BEPZ	Bataan Export Processing Zone
BCEPZ	Baguio City Export Processing Zone
CBMW	customs bonded manufacturing warehouses
CTA	customs tariff area
EEC	European Economic Community
EPZ	export processing zone
EPZA	Export Processing Zone Authority of the Philippines
EPZCEM	Export Processing Zone Chamber of Exporters and Manufacturers
GSP	Generalized System of Preferences
GTEB	Garments and Textile Export Board
MEPZ	Mactan Export Processing Zone
NEDA	National Economic and Development Authority
NIEP	National Industrial Estate Programme
RIT	reduced income tax
TVI	total value of inputs
UP	University of the Philippines

Executive summary

The Philippine export processing zones (EPZs) have been subjected to successive analyses and evaluations since the first EPZ in the Bataan Peninsula started shipping out its manufactured exports to the world. It its formative years, it was generally accepted for its role as a catalyst to industrialization, adding new products such as watches, tennis balls, aluminum cables, electric motors, optical lenses, car-body parts, pleasure boats and a host of mass-produced semi-finished and consumer items to the country's manufacturing output.

As the EPZ expanded, so did the criticisms. The accomplishments of Bataan were examined and the almost unanimous verdict was that the programme has not achieved its objectives. The objections to the EPZ were that net foreign investments were small, foreign exchange generated was marginal, employment was insignificant, transfer of technology and skill was superficial and linkages with domestic industries were negligible.

The present study has been undertaken in the specific purpose to verify claims of poor linkages of EPZ industries with local economic activities and to identify the factors that influenced their creation or discouraged their establishment. The study discusses the constraints of linkage creation, points to the areas where potential is great, and proposes the means to realize it. Based on its findings, policy recommendations are put forward to concerned authorities aimed at enhancing the domestic value added (in the form of local raw material inputs) in exports.

The industries at the Baguio City and Mactan EPZ are examined, as are some selected industries at the Bataan EPZ. Selected export industries outside EPZs are also studied to determine the influence of location and investment incentives on the utilization of domestic intermediate goods.

The Baguio City and Mactan EPZs recorded better performances than the Bataan EPZ. The rato of foreign investment and foreign exchange generated to public investment was much higher than that of the Bataan EPZ. Industrial peace and envisaged levels of employment were maintained. Social problems, although present, were not as volatile as Bataan's.

Existing linkages of industries in the two EPZs studied are measured in terms of percentages of domestic to total value of inputs: 0 to 10 per cent was considered "insignificant"; 11 to 30 per cent "modest"; 31 to 60 per cent "commendable" and 61 to 100 per cent "excellent". Most industries fell under the category "insignificant" while garments linkages were "commendable". The wood and food processing firms posted "excellent" ratings.

The performance of EPZs with regard to integrating Philippine products in exports was influenced in varying degrees by any of, or a combination of the following major factors:

- the EPZ concept
- preferential tariffs in the export markets (such as GSP)
- industrial branch of activity
- nationality and equity structure of investment
- lack of linkage promotion
- flaws in EPZA procedures.

In spite of easy access to imported inputs through free trade, EPZ industries were generally more than willing to use local materials if these were constantly available at competitive prices and acceptable quality. Wood and seaweed products, yarn, thread, zippers, plastics and cardboard packaging materials were among those locally sourced, with resource based industries posting the highest integration potentials.

Subcontracting a part of the production process is widely used in EPZs and has created some form of permanent linkage with the community surrounding the EPZs in at least two industries.

With proper incentives (like bonded warehouse facilities) EPZ-style manufacturing could be undertaken outside EPZs. But this would not necessarily mean that for these industries location per se would enhance linkages.

The recommendations submitted have been limited to factors within the control of EPZ management and may therefore be implemented without involving complex administrative procedures. The proposed policy measures include:

(a) Opening the EPZ facilities to firms producing similar or related products for the domestic market in order to develop support capabilities in the area and to encourage complementation with other production within or outside the zone. This would be consistent with the Philippine Development Plan for 1987-1992. The EPZ incentives may be extended to such firms to the extent of their sales to EPZ industries or their direct export activities;

(b) the decentralization of decision functions involving all movement of materials to and from EPZs in order to guarantee a fast and comprehensive delivery of services;

(c) adoption of procedures eliminating the system of tax credit. In its place, a mechanism for outright exemption from taxes and fees on sales to EPZ firms should be established;

(d) subcontracting by EPZ firms should be accepted freely provided that the intention to engage in such practice is announced at the time of the project proposal;

(e) EPZ marketing efforts should be geared towards attracting more resource-based industries. If warranted, EPZA should be ready to extend reasonable fiscal incentives;

(f) there should be a regular programme for the introduction of zone-made products to the public in order to encourage market encounters between the EPZ firms and local suppliers of intermediate goods; and

(g) EPZ firms should be encouraged to co-operate with technical schools to help disseminate technology and conduct skills training suitable to the needs of EPZ firms.

Important factors which were touched upon in the study but which were not discussed exhaustively, like general economic stability, efficient delivery of services, import liberalization, achievement of a reasonable peso-dollar exchange rate, lower power costs, higher labour productivity and industrial peace are also determinants of linkage creation. They are, however, considered as general prescriptions for an overall efficient economic environment that affect all industries and fall outside the framework of the study recommendations.

I. Introduction

1.1 OBJECTIVES OF THE STUDY

The broad objectives of the study are:

(a) to conduct an analysis of the operations of industries at the export processing zones in Baguio City and Mactan, and linkages generated with domestic industries in the surrounding areas and the country as a whole;

(b) to determine the factors and motivations that have brought about such linkages, if any; and

(c) to put forward action-oriented recommendations to encourage closer integration between EPZ production and the national economy.

1.2 SCOPE AND LIMITATIONS

Owing to the limited number of industries operating at the two EPZs, the findings have at times been compared with the performances of selected industries at the Bataan EPZ, particularly those which have longer operating experiences.

A special aspect of the study involves an analysis of the extent of the local sourcing of selected export-oriented industries ouside of EPZs. Its aim is to determine whether the site or location of industrial operation is material to the promotion of linkages. This includes the review of existing laws and procedures to the extent they are promoting or detering such linkages.

The role that the Philippine EPZs have so far played in the total economic picture of the Philippines will likewise be touched upon as perceived by various sectors of Philippine society, international institutions and scholars.

Data have been collected primarily from personal interviews with EPZ officials, experts, enterprise managers and staff. They were mostly unstructured but points raised were meticulously analyzed as to their relevance. A survey on existing linkages involving the use of local materials, parts processing and incentives availment was also made.

Most of the figures used in the study have been retrieved from raw data at the EPZA Head Office and in the field. Since EPZA does not prepare statistics for the study's precise needs, maximum efforts were put into examining available reports for purposes of extracting useful information.

During the research, it was observed that EPZA does not strictly enforce compliance by EPZ firms and field offices with reporting requirements and deadlines. As a result, inconsistencies were encountered in many areas of interest even from official sources. Comparisons were made of published data with records on file, in order to arrive at reasonable figures. There were instances when statistical information from the fields was incomplete because the transactions were not reported to EPZA, as in most local purchase cases. They were, however, reported as inputs in quarterly and annual reports prepared by EPZ firms which became a major source of information for the study.

The difficulty in data gathering was greater in the study of selected industries outside of EPZs for reasons of confidentiality. Herein lies the limitations on the study's conclusion or trends in selected industries outside EPZs.

The figures used are rounded to the nearest thousand. Data denominated in US dollar, when converted from Pesos, used the prevailing ₱ to $ conversion rate for a given year. Where figures are measured in real terms, the consumer price index used is based on 1978 prices, unless otherwise indicated.

Secondary data sources, including laws, rules and regulations, policy pronouncements, published studies and reports, and other relevant publications were used as references.

1.3 ORGANIZATION OF THE STUDY

Chapter I contains a brief background of the study and its objectives, scope, limitations and organization.

Chapter II is an overview of the Philippine export processing zones and their role in the country's economic and industrial development.

Chapter III analyzes the Baguio City EPZ and includes a general overview of its performances, measured in terms of the objectives of the EPZ programme. It also touches on linkages established by its client industries with those based in the customs territory (CTA) and the factors that influenced or deterred such linkages.

Chapter IV deals with Mactan EPZ and its performance measured in terms of its overall objectives and other aspects touched in Chapter III and some comparison with Baguio City EPZ.

Chapter V shows the various types of linkages created and the interplay of different factors influencing or detering linkage creation based on the experience and performance of EPZ firms.

Chapter VI touches on the performance of selected export industries outside of EPZs with emphasis on the effect or influence of location on the promotion of linkage between export producers and domestic manufacturers of intermediate materials. This Chapter gives a comparison of incentives available to export manufacturing inside and outside EPZs.

Chapter VII relates the conclusions drawn to the objectives of the study, discusses the perceived role of EPZs in the Philippine developmental framework and presents recommendations for its attainment.

II. Role of EPZs in the economic and social development of the Philippines

2.1 PROFILE OF EXISTING EPZs

The present EPZ system of the Philippines consists of four regular EPZs, namely, Bataan (345 ha.), Baguio City (62 ha.) and Cavite (275 ha.), all located in the island of Luzon, and Mactan (119 ha.) at Cebu in the Visayas Island. In addition, there are six factory zones.[1] These factories produce copper cathodes, fertilizers, liquified petroleum gas or are engaged in shipbuilding and repair and mineral roasting. Another area in Luzon (Pampanga, with 72 ha.), has been provided with basic infrastructure for an industrial estate/EPZ, but is still inoperational.

The regular EPZs feature the standard infrastructure and other support facilities common to industrial estates. They were built at the expense of the government (EPZA), with funds drawn from the General Fund and official development assistance programmes like those of the Overseas Economic Development Fund of Japan (OECF). Bataan, Baguio City and Mactan have ready-to-occupy standard factory buildings. More than 0.8 million square meters of industrial land were developed for self-built factories and warehouses. Power and water are provided by government or private utility companies, while transport and communications are adequately serviced by international carriers.

Total equity investments as of end-1985 in all the EPZs, including special zones, amounted to ₱3.3 billion. Because of substantial capital requirements, the government, through the state-owned National Development Company, has considerable investments in the special EPZs (that is, the above-mentioned six factory zones) in joint venture with private entities. In the three major regular EPZs, Philippine nationals dominate investments, in Bataan followed by Japanese interests, while American investments prevail in Baguio City and Mactan EPZs. By end-1986, there were 50 enterprises operating at the country's regular EPZs (Table 2.1), employing 23,000 persons.

Foreign equity investments in the country's EPZs amounted to ₱1.6 billion by end-1985. The major sources of investments were the United States and Japan. Other sources were the Federal Republic of Germany, France, Pakistan, Switzerland, Canada and the Netherlands. There are 24 enterprises wholly-owned by foreign investors. Fifteen enterprises are fully owned by Filipinos. The rest are joint ventures. The Philippine government has substantial equity interests in two companies at the special EPZ in Leyte, and 40 per cent of the shipbuilding and repair facility in Zambales. The liquified petroleum gas (LPG) terminal in the Batangas special EPZ is fully foreign-owned.

For the period 1980-1985, the major sources of imports of equipment and raw materials of the EPZ enterprises were also the United States and Japan. Some members of the European Economic Community (EEC), Hong Kong, Taiwan Province of China and other ASEAN countries likewise figured prominently as suppliers of raw materials.

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[1] A designated area, usually a whole plant or factory located outside of EPZs but bestowed with full EPZ privileges and incentives under Sec. 2, EO 567.

Table 2.1 Number of registered firms by manufacturing sector in regular zones and status as of end-1986

Zone	Activity	As of end-1985	Registered 1986	Ceased operations	Under construction	Not yet operating	Temporary ceased operation	Operating
Bataan (BEPZ)	Food	-	-	-	-	-	-	-
	Textiles	2	-	-	-	-	-	2
	Wearing apparel	13	-	-	-	-	-	13
	Footwear	2	-	-	-	-	-	2
	Wood & wood & cork products	-	-	-	-	-	-	-
	Paper & paper products	2	-	-	-	-	-	2
	Rubber products	1	-	-	-	-	-	1
	Plastic products	2	-	-	-	-	-	2
	Fabricated metal products	-	-	-	-	-	-	-
	Electrical machinery	5	-	1	-	-	-	1
	Transport equipment	1	-	-	-	-	-	1
	Watches and clocks	1	-	-	-	-	1	-
	Others	5	-	-	-	-	-	5
	Total	34	-	1	-	-	1	32
Baguio City (EPZ)	Food	-	-	-	-	-	-	-
	Textiles	-	-	-	-	-	-	-
	Wearing apparel	4	1	-	-	-	-	5
	Footwear	-	-	-	-	-	-	-
	Plastic products	1	1	-	-	-	-	2
	Fabricated metal products	2	1	1	-	-	-	2
	Electrical machinery	2	-	-	-	-	-	2
	Watches and clocks	-	-	-	-	-	-	-
	Others	1	-	-	-	-	-	1
	Total	10	3	1	-	-	-	12
Mactan (MEPZ)	Food	-	1	-	-	-	-	1
	Wearing apparel	2	2	-	-	-	-	3
	Wood and wood & cork products	-	1	-	-	1	-	-
	Electrical machinery	1	-	-	-	1	-	1
	Other equipment & instruments	-	-	-	-	-	-	-
	Watches and clocks	1	-	-	-	-	-	1
	Others	-	-	-	-	-	-	-
	Total	4	4	-	-	2	-	6

The EPZ operation for 1980-1985 resulted in the export of a wide range of products. Garments and electronics head the lists. Other items were optical lenses, pleasure boats, artificial flowers and foliage, musical cards, wood veneers, watches and clocks, copper concentrates, fertilizers, liquified gas, package materials, footwear and appliances. During the same period, dolls, food products such as cocoa powder and mushrooms, electric motors and car-body parts were also produced at EPZs, but have since withdrawn from the EPZ or have ceased operation.

The United States and Japan have remained the major markets of the above products. Table 2.2 shows the relative position of exports of regular EPZs compared with total Philippine exports of non-traditional manufactured products.

Table 2.2 Philippine non-traditional manufactured exports vs EPZ exports, 1981-85

Year	Non-traditional manufactured exports: Value (US $million)	Non-traditional manufactured exports: Growth rate (per cent)	EPZ exports: Value (US $million)	EPZ exports: Growth rate (per cent)
1981	2,556	—	241	--
1982	2,456	-4.3	251	4.1
1983	2,588	5.4	237	-5.6
1984	3,136	21.2	246	3.7
1985	2,857	-8.9	173	-27.6
Total	13,604		1,153	

2.2 ECONOMIC PERFORMANCE

Much has been said and written about the Philippine EPZ programme since the start of operation of its first facility in 1972. Results of various studies and evaluation of its performance to date have not been very encouraging. The country's new economic managers have called for the re-evaluation of the EPZs programme. It has, among others, been maintained that the costly infrastructural facilities in particular at Bataan are underutilized (or overdimensional). This has aggravated the unusually high costs of the Zone's development, estimated in one study[1/] to amount to $192 million. The EPZ at Mactan was also cited as another case of excess capacity. The $8.79 million EPZ in Cebu Province was predicted to host some 30 companies that would employ some 8,000 workers when fully operational.[2/] By end of 1986, only 6 firms

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1/ G. Peter Warr, Export Promotion via Industrial Enclaves and the Philippine EPZs (unpublished), November 1984.

2/ EPZA Corporate Plan, 1983-1987.

were operating with about 3,200 employees. Baguio City EPZ is in a similar predicament. The 62 hectare EPZ built at the cost of $10.1 million was the site of 12 industries by end-1986 employing about 3,300; whereas EPZA forecasted 17 companies and 4,600 workers 5 years from its establishment.

It has been suggested in recent discussions that EPZs are costing more in terms of dollar importations by firms situated in the zones than the foreign exchange they generate. EPZA figures, relating only to trade, show, however, a positive balance (Table 2.3).

Table 2.3 Net trade balance of regular EPZs: 1981 to 1985
(US $ million)

EPZ	1981	1982	1983	1984	1985
BEPZ	73,933	76,753	37,260	41,884	33,965
BCEPZ	12,271	10,771	-2,216	14,755	17,411
MEPZ	5,688	9,186	15,473	21,916	7,846
Total	91,892	96,710	50,517	78,555	58,952

Source: EPZA.

The 1985 UNCTC/ESCAP report,[1] which concentrated on Bataan EPZ, integrated elements of various other studies[2] to bring into focus the costs and benefits of EPZs in the Philippines. It noted, inter alia, that linkages with the domestic economy had been limited and the direct investments for creating the zone (infrastructure, etc.) had been very high. The latter totalled ₱705 million or approximately ₱32,000 (or US $4,000) per worker employed in direct manufacturing activity. This figure is over and above the usual figure for fixed investment per worker (i.e. private investment by firms). There was a high import dependence and the net exports were very much lower than the gross exports.

The UNCTC/ESCAP report cited several reasons for BEPZ's failure:

(a) The site was an isolated, undeveloped mountainous coastal area that required expensive infrastructural development, including the construction of housing and social amenities;

(b) The high infrastructural overhead cost required a minimum occupancy rate. BEPZ never achieved more than 50 per cent of projected occupancy. The low occupancy rate naturally involved a higher than normal operational cost;

1/ UNCTC/ESCAP, An evaluation of EPZs in selected Asian countries, ESCAP/UNCTC Publication Series B., No.8, 1985.

2/ Peter, G. Warr, ibid; J. Castro "The Bataan Export Processing Zone", Working Paper of the Asian Employment Programme, ILO-ARTEP, Bangkok 1982.

(c) A policy change after the establishment of BEPZ made the EPZ redundant. Customs bonded manufacturing warehouses (CBMW) administered by the Bureau of Customs were authorized to be established even in urban areas contrary to earlier policy statements. EPZs and CBMW operate similarly in many respects. The measure effectively defeated the incentive to locate within the EPZs;

(d) The high cost of operating in the BEPZ has badly eroded whatever fiscal incentives were offered to industries locating at the zone. The fees charged were not commensurate to the services. Utilities and facilities needed repair and upgrading.

The UP Institute of Social Works and Community Development, in its preliminary report[1/] on its study on the regional and socio-economic impact of EPZs in the Philippines, also found that the effect of the EPZ, on the economy was insignificant. It points to the meager share of EPZs in the country's non-traditional manufactured export which at best reached (in 1979) 9 per cent of total export of non-traditionals. Employment generated constituted only from 0.6 per cent to 1.4 per cent of total manufacturing employment. Linkages with producers of domestic materials were found to be minimal on account of the great dependence of EPZ industries on imports of non-labour inputs (83 per cent to 93 per cent of the total).

In the ILO-ARTEP study,[2/] it appeared that out of eleven evaluated BEPZ firms, three financed their investments mainly from foreign sources - one from its parent company and the other two from foreign borrowings. Six of these firms financed more than 50 per cent of their investments from domestic sources. Thus, foreign firms at BEPZ drew heavily on domestic capital.

In other studies[3/] initiated by or conducted for EPZA in the course of its move to improve its services in the zones, the findings were the same - that EPZs, despite 13 years of operation, have not achieved their goals and objectives.

A factor which has greatly contributed to the failure of EPZA to sustain investments is the export industry's vulnerability to fluctuations in prices and to trade policy changes in development economies. It became increasingly difficult for some of those companies operating in the EPZs to maintain their operation during the 1980-1982 world-wide recession following the second round of oil price increases in 1979 that resulted into a major slump in the world markets. This was followed by the Aquino assassination in August, 1983, that further aggravated the political instability already pervading in the

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1/ Guerrero, S., The Regional and Social Impact of EPZs in the Philippines, Preliminary Report, UP Institute of Social Works and Community Development, September 1986.

2/ Castro, J., Philippines: The Bataan EPZ, in Eddy Lee, ed., Export Processing Zones and Industrial Employment in Asia, Bangkok, ARTEP/ILO, 1984.

3/ Bataan Export Processing Zone Project II - conducted by Nippon Jogesuido Sekkei Co., Ltd., October 1985, and separate studies, Mitsubishi Research Institute, Inc., SGV & Co.

country. Its aftermath was a massive capital flight. Also, the heavy borrowings of the Philippine government to finance its development efforts and stimulate business activities did not perk up the economy as projected. It only led to huge foreign indebtedness. The government declared a moratorium on payments of principals on its foreign exchange liabilities and imposed foreign exchange restrictions, stopping all dollar trading and requiring export revenues to be constituted into a foreign-exchange pool. The immediate effect of the foreign exchange control was to restrict the flow of imported material inputs to many industries. Moreover, payments of maturing obligations were withheld or suspended. During this period, a total of 22 EPZ industries folded up.

Those which remained operational shifted from letters of credit (L/C) and other modes of payment involving foreign exchange to consignment basis or no-dollar imports. Materials and supplies were sent to the EPZ industries from principals and buyers abroad as "advances" or on consignment basis to companies which had established performance and reliability.

EPZA reported that these issues had greatly affected its promotional efforts contributing to the low occupancy of the different EPZs. The association of zone users,[1] in its report to the Ministry of Trade and Industry[2] on Bataan EPZ, cited several factors that contributed to the decline of investments. They were:

- inadequate facilities;
- political uncertainty and high risks;
- unstable trade policies;
- labour unrests,
- bureaucratic red tape;
- world-wide recession and depressed world market;
- the development of competing EPZs in other areas of the country and in neighbouring countries.

2.3 SOCIAL IMPACT AND LABOUR MATTERS

The companies in the EPZs have to a large extent been employing mostly young, single, inexperienced female workers. In the case of Bataan the workers were recorded to have migrated mostly from the rural areas of Region III and adjoining regions. While it has not drawn much migration from Metropolitan Manila, it has helped prevent more migrants to the urban centre. However, Mariveles - the host locality - was not ready for the increase in population from 16,000 to 48,000. Inflation set in and brought prices of commodities at least 10 per cent higher than normal market price. The EPZA-provided housing units were not adequate to accommodate the migrant

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1/ Export Processing Zone Chamber of Exporters and Manufacturers (EPZCEM).

2/ EPZCEM report dated 22 March 1986.

workers. The town was not ready to meet the housing needs resulting in congestion, shanties, poor sanitation and other social problems.

These problems of Bataan did not occur at Mactan and Baguio, which were built near urban centres. Living quarters and basic needs of workers were supp'ied either in the host communities or in nearby centres of Mandaue or Cebu City in case of Mactan. Moreover, migration to the two later EPZs was almost limited to the host provinces or within the regions.

While there appear to be many workers who are satisfied with their present jobs at EPZs, they have little job sectority.[1] EPZ companies, by the very nature of their products and their markets, are vulnerable to fluctuations and protectionism in their export markets. Employment as regular workers in EPZ firms does not guarantee stability as evidenced by the closure of 45 companies at Bataan since it started operation, 3 in Baguio and 3 in Mactan.

The frequency of strikes in EPZs, particularly in Bataan during the 1981-1986 period, largely contributed to the reluctance to invest in the area. It is on record in the Bataan EPZ that at leat 2 companies[2] withdrew from the EPZ primarily because of labour problems, notwithstanding their good export performance. The enterprises were particularly wary about the tendency of labour strike on indirect issues and the inability of the government to prevent such strikes. A publication[3] of the Ministry of Labour and Employment reported in 1984 that sympathy strikes comprised 51.6 per cent of all the strikes in 1982, while violation of labour standards was the issue in 26.7 per cent of the strikes, unfair labour practice and deadlocks in bargaining covering the rest of the 21.7 per cent strikes held that year. For the period 1983 to 1986, there were 53 strikes at BEPZ, 2 in Baguio City, one in Mactan, one in Tabangao Special Zone and one in Leyte Special Zone involving 4.3 million man hours lost.[4]

2.4 DELIVERY OF SERVICES

EPZA, which manages the various EPZs in the country, appears to have failed in its task of promoting a wholesome investment climate in the zones, particularly the trouble-plagued Bataan EPZ. Manufacturers had to contend with poor facilities, frequent breakdown of utilities and administrative bottlenecks brought about by lack of funds and constant changes in policies and procedures.

The difficulties set in at the outset of the 1980's when the country felt the consequences of its heavy developmental spending. Because the flow

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1/ Guerrero, S., Endencia, D., and Bautista, G., The Regional and Socio-Economics Impact of EPZs in the Philippines, preliminary report, Institute of Social Work and Community Development, University of the Philippines, September 1986.

2/ Astec Electronics (1984) and Wilson Philippines, Inc. (1985).

3/ The Bataan Export Processing Zone Employment, Labour Relations and Working Conditions, Ministry of Labour and Employment, 1984.

4/ Industrial Relations Office, BEPZ.

of investors to EPZs suffered a downturn, projected revenues were not realized, yet expenditures remained high. Table 2.4 shows the result of EPZA operations from 1978-1985 which indicates that except for 1980 and 1981, EPZA has consistently been losing from operating the various EPZs. Nevertheless, EPZA made no effort to consolidate, and proceeded with its development of Cavite and Pampanga EPZs. It continued to hire personnel which in 1985 reached more than 1,500 with a total salary of ₱34 million. Meanwhile, facilities and utilities at Bataan EPZ started to deteriorate, as the government reduced its development budget support for EPZA operations by 50 per cent starting 1983, from ₱100 million to ₱50 million.

In July 1986, the zone users' effort to check the deterioration of basic services and realization of the promised one-stop shop operation was heeded by EPZA with the decentralization of management functions. Also, studies were conducted for the rehabilitation of BEPZ facilities and improvement of non-infrastructure services and streamlining EPZA organization, for inclusion in the 12th Yen Loan Package (OECF) from Japan. It was estimated that the rehabilitation and improvement would need ₱348 million.[1]

Table 2.4 Result of EPZA operations (1978-1985) (₱'000)

Year	Gross income	Net income (loss)
1978	19,850	(1,415)
1979	28,450	(816)
1980	34,124	2,347
1981	48,048	657
1982	61,710	(2,057)
1983	73,485	(6,095)
1984	108,757	(14,301)
1985	126,071	(16,740)
Total	500,459	(38,420)

2.5 MATERIALS LINKAGE WITH LOCAL INDUSTRIES

Most studies were consistent in their conclusions that no significant linkage has been developed between Bataan EPZ industries and the domestic economy to encourage raw material sales to the former. The import incentive given to EPZ industries was put to maximum use, partly due to the failure of local suppliers to meet the quality and quantity required by zone enterprises. Estimates for domestic resource utilization of firms in EPZs is only about 5 to 6 per cent of value added.[2]

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[1] Final Report, Bataan Export Processing Zone II, Nippon Jugesuido Sekkei Co., Ltd., October 1985.

[2] BEPZ Project II, pp.2 to 53.

The BEPZ experience alerted zone planners to the pitfalls of establishing EPZ of such size and magnitude away from existing utility and infrastructural support and urban amenities. Thus, when Baguio City and Mactan EPZs were conceived, the experience in the first EPZ played a major influence in the planning.

III. Baguio City Export Processing Zone

3.1 PROFILE

The Baguio City EPZ (BCEPZ) is located 250 kilometers north of Manila. It is in Baguio, a mountain city resort of 5,000 feet above sea level that enjoys a year-round temperate climate. Established in 1979 at the cost of $10.81 million on a 62 hectare site, it was not until April 1980, that its first client, a US multinational semi-conductor company started operation. By the end of 1986, a total of 12 companies have settled at the zone.

Baguio is accessible by four major land routes that connect it with the rest of Region I and onwards to Manila, and an airport that serves commercial flights to and from the Philippine capital. In terms of amenities, the city is host to first class hotels, apartments and lodging houses, recreational and sports facilities, 6 colleges and universities, 16 secondary schools, hospitals and medical clinics.

Region I is the economic and political zone where Baguio City is situated. Its main industry is agriculture, fishing and forestry which employ 58 per cent of its labour force of 1.46 million, followed by governmental and personal services. The next group consists of wholesale and retail trade (8 per cent), manufacturing (7 per cent), transportation (4 per cent). The region's resources include gold, copper, chromite and timber. Sixty-nine per cent of land is planted with tobacco, rice, vegetables, cotton, corn, garlic, beans and coffee. A deep water international sea port is located at Poro Point, San Fernando, La Union, one hour away by land from BCEPZ.

The Baguio City EPZ operates like the Bataan zone. It offers the same incentives and services, foremost of which is the tax and duty free importation of equipment, supplies and raw materials for export production purposes. It also rents out factory spaces. However, BCEPZ offers only a total of 19,764 sq.m. of factory space compared with 102,032 sq.m. in Bataan EPZ (BEPZ). Just like BEPZ, industrial lands are available for self-built owner-designed factories. BCEPZ has 29 hectares of industrial land, while Bataan has 268 hectares.

As of year end-1986, the factory spaces were fully leased to 10 export companies. Three firms constructed their own buildings in leased areas covering 182,000 sq.m. representing 60 per cent of land space available. By 1985, BCEPZ generated a total net income of ₱144 million from the operations consisting of receipts from lease rentals and administrative services, against total losses of ₱13.3 million incurred in 1980 and 1983.

Management is run by a Zone Manager with support from some 150 EPZA personnel providing control, maintenance and security. Unlike in Bataan EPZ, relationships with enterprises are generally cordial. Common problems and issues are threshed out in regular consultative meetings. The process of decision-making is bolstered by the relative autonomous powers exercised by the Zone Manager, hardly achieved by its counterpart in BEPZ.

Labour matters in the zone essentially have been settled within individual firms with the unions, although there were two strikes in 1986 which led to a withdrawal of foreign capital and sale of the company in question to Philippine interests.

3.2 ECONOMIC PERFORMANCE OF BAGUIO CITY EPZ

Table 3.1 gives an overview of the performance of BCEPZ measured in terms of various economic indicators. Six years of operation have given enough data to gauge the EPZs' performance based on the objectives[1] set forth for putting up such facilities in various sites in the Philippines, namely:

- to stimulate and promote exports;
- to strengthen the foreign exchange position;
- to hasten industrialization;
- to reduce domestic unemployment; and
- to accelerate the development of the countrysides.

3.2.1 Investments

Public investments at BCEPZ grew at an average 1.8 per cent per year since 1981. By 1985, a total of ₱85.1 million was spent by the government for infrastructure and utilities.

On the other hand, the private sector registered an 8.8 per cent decline from its ₱703.2 million investment in 1984. Nevetherless, the annual growth rate for the period 1981-85 averaged 55.8 per cent (Table 3.2).

At BCEPZ foreign investments which constitute foreign equity and foreign loans of firms established there, accounted for 99.85 per cent of total equity contributions and 99.03 per cent of total loans as of 1985. This meant that the zone irms had drawn very little from the domestic capital market, unlike industries at the Bataan EPZ[2]. Foreign exchange was in the case of BCEPZ substantially infused in the economy. It is believed that this development was influenced by the domestic credit squeeze that started in the early 1980's. As foreign exchange became scarce, export producers were compelled to obtain needed foreign exchange from their own sources to finance their imports. This would perhaps help explain the closure of three EPZ companies at BCEPZ (predominantly Philippine capital) during the period.

3.2.2 Number of firms/types of industries

At present, there are 12 manufacturing firms operating at the BCEPZ. The number is 5 firms short of the optimum occupancy of 17 firms by 1986 as projected by EPZA.[2] There was a total of 16 registrations and 4 closures during the period.

By product category, the industries are - electronics (2), garments (5), handicrafts (1), metal (1), plastics (2) and precision machinery (1). The food sector and footwear's operation in EPZ were shortlived (1 year each).

As shown in Table 3.4, US companies are the leading investors in the BCEPZ with full control of 4 firms and one joint venture (with the Republic of

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[1] Section 2, Pres. Dec. No.66.

[2] EPZA Corporate Plan, 1983-1987.

Table 3.1 Economic performance of the Baguio City EPZ for the period 1981-1985

Economic indicatiors	1981	1982	1983	1984	1985	Average growth (%) 1981-85	Percentage change 1984-85
Number of firms	3	4	7	10	10	37.5	-
Employment	753	1,175	1,571	2,551	3,383	45.6	32.6
Salaries and wages (₱'000)							
a. Current prices	5,551	9,108	18,315	42,988	72,899	90.4	69.6
b. Constant prices	3,216	4,607	8,206	15,575	20,763	59.4	33.3
Export ($'000)	62,287	64,027	76,499	117,023	91,402	10.1	(-21.9)
Import ($'000)	50,016	53,253	78,715	102,268	73,991	10.3	(-27.6)
Net trade balance	12,271	10,771	(2,261)	14,755	17,411	9.1	18.0
Public investment (₱'000)	79,369	79,766	80,294	81,200	85,179	1.8	4.9
Private investment (₱'000)	137,617	200,663	483,454	703,214	640,803	55.3	(-8.8)

Table 3.2 Private investments (equity investments plus loans) of Baguio City EPZ firms (1981-1985)
(₱'000)

	Equity investments			Actual borrowings					
Year	Foreign	Local	Total	Foreign	Local	Total	Cumulative total	Total investments	Growth (%)
1981	17,391	2	17,393	120,224	-	120,224	120,224	137,617	-
1982	31,216	160	31,376	48,450	613	49,063	169,287	200,663	45.8
1983	259,242	2,198	261,440	51,660	1,067	52,727	222,014	483,454	140.9
1984	372,424	3,665	376,088	103,612	1,500	105,112	327,126	703,214	45.4
1985	312,397	499	312,896	781	-	781	327,907	640,803	(8.8)

Average annual growth: Equity investment: 210%
Loans: 29.8%
Total private investment: 55.8%

Table 3.3 Equity structure of BCEPZ enterprises, 1986

Equity structure	1981	1982	1983	1984	1985	1986
Wholly Filipino	-	-	1	2	1	3
Wholly foreign (incl. foreign joint ventures)	3	3	3	5	6	6
Joint venture with Filipino	-	2	5	5	3	3
Total	3	5	9	12	10	12

1/ EPZA Corporate Plan, 1983-1987.

Table 3.4 Ownership by nationality of BCEPZ firms, 1986

	Full ownership %	Joint venture %
Philippines	3	3 and (2)
US	4	1
Italy	-	(1)
Switzerland	-	(1)
Republic of Korea	-	(1)
Malaysia	1	-
Canada	-	(1)
FRG	-	(1)
Total	8	4

(1) denotes minority partner in joint venture.

Korea). Filipinos own 3 firms and have majority partnership in joint ventures with Canadian, FRG and American firms in three separate companies. The last company is an Italian/Swiss/Philippine joint venture. Of total private equity invested in the EPZ, the Americans control 98.57 per cent because of the big share of the semi-conductor firm (93 per cent). The next three biggest companies in terms of equity are also US companies.

3.2.3 Export/import performance

Notwithstanding the decline of 22.3 per cent in 1985, the export performance of EPZ firms during the period 1980-1986 reached a 42.8 per cent average growth. In 1986, export reached $143 million. The leading exporter was the electronics sector (93 per cent), followed by garments (4 per cent). For the period 1981-1985 the United States was consistently the major export market of BCEPZ electronics (69 per cent) and garments firms (44 per cent). ASEAN countries, notably Singapore, was the next major electronics market (16 per cent), followed closely by EEC countries (14 per cent). The EEC was the second major market (24 per cent) for the garments sector, followed by

Australia (8 per cent), Canada (5 per cent), Japan (3 per cent), and Hong Kong (3 per cent).

In terms of imports, the BCEPZ firms posted a postive yearly growth of 28.6 per cent, although imports in 1985 declined against the 1984 total by 25.1 per cent. In 1983, imports exceeded exports (see Table 3.1), but for the whole period, BCEPZ posted a net trade balance of $52.9 million. For 1986, BCEPZ has imported $137.73 million, an 85 per cent growth over 1985. This was due to increased manufacturing activity in electronics sector.

For the 1981-1985 period, the leading country among the sources of raw materials imported in BCEPZ was the United States (49 per cent). This was followed by Japan (26 per cent), the EEC countries (23 per cent), Taiwan Province of China, Hong Kong and the Republic of Korea. On an industry-wide basis, US and Japan were the main suppliers for the electronics sector averaging 51 per cent and 26 per cent in that order. In the garments sector, the EEC led at 79 per cent followed by Japan (10 per cent). Handicrafts give Hong Kong and Taiwan Province of China an equal share (50 per cent) with Japan in supplying the raw materials.

At least 4 companies were observed to make extensive use of inter-company open account (O/A) system and consignment mode of importations. Under O/A, goods were imported from parent companies on charge basis and paid for in terms of value of goods produced. Of course, consignment denotes non-payment of materials as they are owned by the shipper. The company gets paid for labour applied on the goods produced.

In terms of export target projections of EPZA,[1/] the BCEPZ fared favourably in the 1983-1985 period. But the expected margin in the balance of trade (30 per cent of export) was never achieved. The entry of 9 new firms that imported capital equipment and raw materials pulled down the gains arising from the increases in exports of existing industries. There was also the 26 per cent decline in the value of exports from the electronics industry attributed to a slack in the market demands.

The three leading EPZ firms failed to attain their targeted yearly export sales based on their own projections. The average achievement rations were 43 per cent for handicrafts, 65 per cent for garments and 78 per cent for electronics. Overall, actual exports in all the three sectors posted an average growth of 16 per cent for handicrafts, 46 per cent for garments and 12 per cent for electronics.

3.2.4 Employment generation

The industries at the BCEPZ registered an average growth of 45.9 per cent in terms of employment since 1980. As of September 1986, employment in the 12 companies reached 3,300. This is short of the 1986 EPZA projected occupancy of 17 firms providing 4,600 direct jobs.[1/] The number would increase if those employed in the subcontracting activities of at least 2 EPZ firms were included. These firms have made extensive use of homeworker groups in areas in the peripheries of the zone and in the adjoining provinces to undertake assembly operations using basic tools. It is estimated by EPZA to be about 360, based on 30 registered contractors.

1/ EPZA Corporate Plan, 1983-1987.

The BCEPZ provides for 3.5 per cent of total Region I employment in the manufacturing sector. The workers are mainly from the Baguio and adjcining provinces. The largest grop of migrants to Baguio came from the province also leads other major sources of migrant workers to Bataan EPZ.

As in Bataan, female workers outnumber the male ones by six to one.[1] The largest employers are the electronics and garment industries employing 61 per cent and 22 per cent respectively in 1985. Handicrafts and plastics constitute 15 per cent. The metal precision/machinery sector which is dominated by men, employs 2 per cent. For the period 1981-1985, total salaries and wages generated at BCEPZ was ₱148 million, at an annual average growth rate of 90 per cent. In real terms, however, the average growth rate was only 59 per cent.

3.2.5 Value added

EPZ industries' contribution to the economy is also gauged in terms of value added. It is the difference between the value of goods and the cost of materials and supplies used in producing such goods. All sales, whether export or local, represent output while the value of inputs combines imported and local raw materials used, factory supplies and utilities consumed.

Table 3.5 shows the actual value added of BCEPZ exports, its growth and the average value added ratios. The value added ratio has been consistently above the standard 0.25 set by the National Economic and Development Authority (NEDA).

3.2.6 Linkages with domestic industries

(a) Subcontracting

The practice of some BCEPZ firms to subcontract segments of production outside BCEPZ helped bridge the EPZ enclave and the domestic economy. The programme virtually expands the area of manufacturing activity to 50 km. radius from the zone and employs hundreds of homeworkers on a regular basis. Subcontracting was repeatedly availed of and has become an integral part of a particular firm's operation. This form of linkage will be illustrated in one of our case studies in Chapter V.

(b) Local purchase

In 1983, an arrangement existed in the food firm at the BCEPZ where raw materials (mushrooms) were cultured and developed in various growing farms around the zone and brought inside for further processing and packing, preparatory to exports. A significant linkage was established between the local growers and the EPZ firms until the operation was stopped because of lack of capital (see para 3.1).

1/ Guerrero, S., The Regional and Social Impact of EPZs in the Philippines, Preliminary Report, UP Institute of Social Works and Community Development, September 1986.

Table 3.5 Value added of all BCEPZ industries (1981-1985) including ratios of imported and local raw materials, supplies and utilities to total value of input (TVI)
(₱'000)

Year	Total value of output	Raw materials used (RMU) Imported	Raw materials used (RMU) Local	Factory supplies used (FSU) Imported	Factory supplies used (FSU) Local	Utilites used	Total value of inputs (TVI)	Value added	Value added coeffi-cient (9/2)	% of imported RMU/FSU to TVI	% of local RMU/FSU to TVI	% of utilities used to TVI
1981	442,916	339,714	162	1,344	930	3,637	345,787	97,129	21.93	98.63	0.31	1.05
1982	534,193	`78,654	807	1,743	1,127	4,577	386,908	147,285	27.57	98.17	0.50	1.18
1983	1,004,251	715,628	603	231	557	7,760	724,779	279,472	27.82	98.77	0.16	1.07
1984	1,908,151	,308343	4,566	13,342	4,140	19,428	1,349,819	558,332	29.26	97.92	0.64	1.44
1985	1,539,916	1,063,902	8,841	6,905	2,502	19,746	1,101,896	438,020	41.17	97.17	1.02	1.79
Total	5,429,427	3,806,241	14,979	23,565	9,256	55,148	3,909,189	1,520,238	27.99	97.96	0.62	1.41

The above is a most ideal linkage of EPZs with domestic industries as it enhanced the relationship of EPZ firms and local producers even as it helped promote domestic production for exports. The extent of the linkage is determined by computing the ratio of local materials and supplies to the value of inputs to production. The BCEPZ performance in this respect is disappointing when the local purchase for the 1981-1985 period versus total value of output is reviewed. The resultant percentage share indicates the limited extent of local materials usage by EPZ firms (see Table 3.5).

The degree of local raw materials utilization varies depending on the industry. It is greater in the garment industry with 31 to 60 per cent of total inputs. This is perhaps explained by one firm's extensive use of local yarn in its production of outwear garments. Other sectors like handicrafts and metals posted an average of 8.19 per cent and 12.78 per cent local raw materials utilization to total value of inputs. Electronics account for 0.19 per cent, but being the dominant industry in terms of exports registering more than ₱5.2 billion sales during the 1980-85 period, it naturally pulled the BCEPZ average down.

(c) <u>Local sales</u>

Local sales were recorded at BCEPZ starting 1983 at ₱0.30 million. In 1984 and 1985, sales reached ₱2.37 million and ₱3.80 million. The biggest seller was electronics which sold its products to its local affiliate which in turn exports the product to neighbouring countries or sells it to domestic industries, creating a sort of linkage between the EPZ firm and local producers of electronic products. As regards the other industries, however, their products, being in the consumer category, did not undergo further processing outside the EPZs. There was no linkage established except with traders marketing such products.

(d) <u>Transfer of skills and technology</u>

A total of 94 employees in BCEPZ were trained abroad in parent companies or subsidiaries on new technologies at the cost of $0.431 million. Other skills training programmes were conducted in-plant at BCEPZ which involved the teaching of basic skills to operate machineries and equipment in such industries as garments, plastics and electronics. There is no known training co-ordination between BCEPZ firms and technical/vocational schools in the area.

The assembly nature of EPZ industries precluded major skills or technology transfer. However, to a large extent, Filipino managers were introduced to the ways and techniques of international production and marketing, skills that may be used even outside EPZs and in other industries. Recently, the entry at the BCEPZ of a high-tech machinery firm paved the way for the transfer of the latest engineering technology in machinery and shop mathematics to local engineers.

3.2.7 Social impact

BCEPZ being located near an urban centre, the problems of housing and dearth in social and recreational facilities that prevailed at Bataan EPZ were not experienced. Moreover, the relocation of tenants in the EPZ site was not in the magnitude of Bataan where a whole community was uprooted. Very few families were directly affected with the establishment of the BCEPZ in 1979. They were transferred to a relocation site with provision for basic facilities and were given some form of monetary assistance. This scene was repeated in 1984 with the development of another 20 hectare site for a new industry.

By and large, workers at the BCEPZ expressed satisfaction with their jobs and wage levels in the companies they were working for. Eighty-seven per cent of workers perceived some measure of improvement in their lives since working in the zone. However, due to a relatively higher educational attainment, many BCEPZ workers perceived little or no opportunity for promotion in the companies where they are presently working.1/ BCEPZ workers were not as zealous as their Bataan counterparts in unionism.1/

1/ Guerrero, S., Ibid.

IV. Mactan export processing zone

4.1 PROFILE

The EPZ located in the historic island of Mactan, Cebu Province, Region VII, was established in 1979. It was built alongside an international airport and 14 kms. from the port of Cebu - the Philippine's second busiest seaport - and designed primarily to attract light manufacturing export operations. It is equipped with such utilities and facilities that characterize a complete industrial estate. It also offers the usual fiscal incentives that are extended to EPZA registered enterprises.

MEPZ features 710,000 sq.m. of industrial land and two standard factory buildings that have a total rentable area of 19,836 sq.m. As of December 1986, a total of 95,000 sq.m. land area have been rented to three companies. The factory buildings are fully occupied by another five enterprises.

During 1980 to 1985, EPZA generated a total income of ₱112 million from the operation of MEPZ. Cost of operations was ₱103 million thereby reflecting an overall income of ₱9 million from operations.

Region VII is predominantly an agricultural region where industry employs 56 per cent of the region's workforce of 1.6 million. Other major employers are the community and government services (13 per cent), trading (10 per cent) and manufacturing industries (9 per cent). In 1986, the region's four leading exports were rattan furniture, coconut oil, marine products and copper concentrates. The Metro Cebu which includes Lapu-Lapu City, Mandaue, Danao and Cebu City is home to 757,000 people.

4.2 ECONOMIC PERFORMANCE OF MACTAN EPZ

The overall performance of MEPZ is shown in Table 4.1

4.2.1 Investments

MEPZ was built by the government at the cost of $9.4 million or 87 per cent of the investment in Baguio EPZ in 1980. Public investment until 1985 grew at an average of 3.8 per cent a year, which indicates that no substantial infrastructure was introduced after it opened in 1980 (Table 4.2).

In 1986, EPZA attracted four new companies to the MEPZ, bringing the total number of companies to eight. Private investments was increased by ₱36 million which improved the registered investment of ₱503 million in 1985.

4.2.2 Number of firms/types of industries

Industries at the MEPZ as of 1986 may be categorized into - electronics (1), garments (4), watch and clocks (1), food processing (1) and wood processing (1). Four companies have since stopped operations. Two US firms in the electronics industry (telecommunications equipment and terminals) closed in 1983. A Hong Kong firm (work gloves) moved out of the EPZ in 1985. A Japanese firm that makes buttons out of shells folded up in 1985 (Table 4.3).

Table 4.1 Economic performance of MEPZ EPZ for the period 1981-1985

Economic indicators	1981	1982	1983	1984	1985	Average growth (%) 1981-85	Percentage change 1984-85
Number of firms	5	5	6	4	4		
Employment	1,211	1,778	2,088	3,785	3,240	27.9	-(14.4)
Salaries and wages (₱'000)							
a. Current prices	18,252	22,724	46,679	61,646	82,118	45.6	33.2
b. Constant prices	10,575	11,494	20,914	22,336	23,389	22.0	4.7
Export ($'000)	19,392	27,347	39,086	52,803	26,836	8.5	-(49.2)
Import ($'000)	13,704	18,161	23,613	30,887	18,990	8.5	-(38.5))
Net trade balance	5,688	9,186	15,473	21,916	7,846	8.4	-(64.2)
Public investment (₱'000)	68,900	69,156	69,443	69,800	80,136	3.8	14.8
Private investment (₱'000)	78,104	215,604	473,642	503,672	503,165	75.4	-(0.1)

Table 4.2 Private investments (equity investments plus loans) of Mactan EPZ firms (1981-1985) (₱'000)

	Equity investments (cumulative)			Actual borrowings					
Year	Foreign	Local	Total	Foreign	Local	Total	Cumulative net total	Total cumulative investments	Growth (%)
1981	36,203	2,000	38,203	39,601	300	39,901	39,901	78,104	-
1982	92,790	2,000	94,790	80,913	-	120,814	215,604	215,604	176.8
1983	145,789	2,000	147,789	205,039	-	205,039	325,853	473,642	119.6
1984	168,593	2,000	170,593	7,226	-	7,226	333,079	503,672	6.3
1985	144,473	9,940	154,413	15,673	-	15,673	348,752	563,165	-(0.1)

Average annual growth: Equity investment: 52.5%
Loans: 94.88%
Total private investment: 75.4%

Table 4.3 Euqity structure of MEPZ enterprsies, 1986

Equity structure	1981	1982	1983	1984	1985	1986
Wholly Filipino	-	-	-	-	-	2
Wholly foreign (incl. foreign joint ventures)	3	3	4	3	3	3
Joint venture with Filipino	2	2	2	2	2	3
Total	5	5	6	5	5	8

Filipinos were active investors in MEPZ industries, particularly in 1986. They are involved in garments and food processing as principals and in joint venture in wood processing. US companies are in electronics (semi-conductors) and watch and clock assembly for Italian company is in wood processing while an Australian and Swiss joint venture is in work gloves (Table 4.4).

Table 4.4 Ownership by nationality of MEPZ firms, 1986

	Full ownership	In joint venture
Philippines	2	3 a/
US	1	(1)
Japan	1	-
Hong Kong	-	(1)
Italy	-	(1)
Australian	-	1 b/
Switzerland	-	(1)
Total	4	4

a/ Separately with US, Italy and Hong Kong.
b/ With Switzerland.

4.2.3. Export/import performance

As in BCEPZ, exports of industries in MEPZ also suffered a decline (of 38.5 per cent) in 1985, compared with the previous year's records. The decline brought down the average growth of export of the zone to 8.5 per cent yearly. It recovered in 1986 as exports hit a record of $76.9.

The major destination of MEPZ products was the United States (76 per cent), followed by Hong Kong (9 per cent). Exports were dominated by the electronics and watch industry. In 1985, the US was the electronics' major market with 84 per cent share. The watch firm also sold 67 per cent of exports to the US. The garment sector which ranked third in exports, also exported to the US (64 per cent) and the EEC countries (34 per cent). Hong

Kong had been consistently importing from the semi-conductor firms and also emerged as a major market (15 per cent).

In 1986, the export merket of MEPZ expanded, as the garment sector grew by 500 per cent. Markets were diversified to include Japan, New Zealand and Australia. The food and wood processing firms sell mainly to Europe.

In the period 1980-1985, MEPZ firms imported raw materials and supplies from the US (66 per cent), Hong Kong (18 per cent), and the EEC countries (7 per cent). Other sources were Taiwan Province of China, Holland, Singapore and Japan. Following a decline in exports, imports in 1985 decline by 38.5 per cent compared with 1984. Nevertheless, the average percentage of growth in imports during the period was 8.5 per cent.

Like in BCEPZ, the intercompany open account and consignment modes of import financing were widely used. As in export, the leading importers were the electronics and watch industry which sourced their raw materials from the United States (83 per cent and 55 per cent). The Netherlands supplied 9 per cent (average) of raw materials import of the semi-conductor firm and 4 per cent were sourced from Hong Kong. In 1985, Hong Kong supplied the watch industry with 18 per cent of its raw materials and supplies. The garments sector sourced 100 per cent of its imported raw materials and supplies from Hong Kong.

Except in 1985, MEPZ surpassed its projected export target set by EPZA.[1/] The decline in 1985 was caused by a slowdown in production of the electronics firm. Export sales decline by 59 per cent from 1984.

Unlike in the BCEPZ, two firms surpassed their own export target projections in the first three years of operation by an average growth of 76 per cent for electronics and 74 per cent for watch products. On the fourth and fifth year of operations, however, the watch industry exports declined by 27 per cent and 35 per cent, after a substantial growth in 1984. The three other operating firms during the period did not come anywhere near their export targets, although all registered positive growths in export for at least two successive years of operation after which declines were experienced in two firms. The two have since withdrawn from operation (telecommunications and electrical parts). The third, a garment factory is still operational and has posted an average export growth of 43 per cent.

The growth in exports in the electronics and watch industry in the first three years of operation could be attributed to strong export demands in the early 80's and the companies' decision to expand production capacities in MEPZ. The 53 per cent decline in exports in electronics in 1985 was dictated by the slump in the market as experienced by the same sector at BCEPZ.

The total net trade balance of MEPZ for 1981-1985 is $60.1 million.

4.2.4 Employment

As of October 1986, there were a total of 23,204 employed in the firms at MEPZ or 38 per cent of the EPZA target[1/] for 1985. Like in BCEPZ, the

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1/ EPZA Corporate Plan.

work force consists of more female workers than male. In the first year of MEPZ, it was able to attract workers mainly from Cebu province. The biggest employer was the watch company averaging 1,055, followed by electronics - 700, and garments - 350. The wood and food processing firms employ the rest.

MEPZ employment constitute 1.9 per cent of the total employment for the manufacturing industry in Region VII. Total salaries and wages generated since the operation of MEPZ until 1986 is ₱231.4 million for an average annual growth of 45 per cent. In real terms, however, the growth was only 22 per cent computed at constant 1981 prices.

4.2.5 Value added

In terms of value added, Table 4.5 presents a fair idea on the value added ratios and growth in MEPZ per year in accordance with the EPZA formula (see para 3.2.5 of the preceding chapter). The average percentage share of local materials and supplies in the total value of input is 4.09 per cent.

On a sectoral basis, electronics posted the lowest local materials and supplies content at MEPZ with 1.91 per cent of total value of inputs (TVI) added. Watch and clocks registered 10.2 per cent and garment posted a high 49.6 per cent share in TVI.

Particular attention may be given to the wide disparity in the local material contents of the electronics semi-conductor industries in Baguio EPZ and Mactan, with the latter showing a higher percentage local content (+1.74 per cent). An analysis of inputs showed that the MEPZ semi-conductor firm has a higher amounts of local supplies that went into production at a ratio of 65:35 against the BCEPZ firm. The MEPZ watch industry likewise reported higher amounts in local supplies for the period.

At the MEPZ, two firms have big power generating sets installed in their respective premises. Such generators are frequently used by the companies either because of power fluctuations or when the limits allocated to the industries approximates the guaranteed maximum demand. In the later case, the companies use the generators to avoid penalties. Considering that the nature of their operations require a dust free round the clock temperate climate, the cost of power generation was substantial. In comparison, the electronics industry at BCEPZ does not need airconditioning system because of the temperate climate of the area.

Supplies in this above case pertain to supplies used in the generation of power to facilitate production.

4.2.6 Linkages

(a) Local purchases

MEPZ has accumulated a total of ₱145.7 million in local purchases of materials and supplies for the period 1981-1985, at an average annual growth rate of 92 per cent. At constant prices, however, the growth rate is only 36 per cent.

Table 4.5 Value added of all MEPZ industries (1981-1985) including ratios of imported and local raw materials, supplies and utilities to total value of inputs (TVI)

(₱'000)

Year (1)	Total value of output (2)	Raw materials used (RMU) Imported (3)	Raw materials used (RMU) Local (4)	Factory supplies used (FSU) Imported (5)	Factory supplies used (FSU) Local (6)	Utilities used (7)	Total value of inputs (TVI) (8)	Value added (9)	Value added ratio (9/2) (10)	% of imported RMU/FSU to TVI (11)	% of local RMU/FSU to TVI (12)	% of utilities used to TVI (13)
1981	167,617	82,421	228	5,954	3,527	5,991	98,131	69,486	41.46	90.06	3.83	6.11
1982	359,347	89,443	381	10,910	6,355	4,093	111,182	248,165	69.06	90.26	6.06	3.68
1983	191,366	106,101	218	8,348	4,331	9,621	128,620	62,746	32.79	88.98	3.54	7.48
1984	824,290	536,256	3,583	45,462	16,513	28,635	630,449	193,841	23.52	92.27	3.19	4.54
1985	413,221	218,180	2,465	11,307	13,149	27,230	272,331	140,890	34.09	84.27	5.73	9.99
Total	1,955,841	1,032,402	56,832	81,981	43,875	75,570	1,240,731	715,128	36.56	89.81	4.09	6.09

The higher proportion of local purchases to inputs in MEPZ was brought about by the higher utilization of local materials in the garments sector and as explained in paragraph 4.2.5 - the electronics and watch industries' high dependence on fuel oil for self-generated power (approximately 40 per cent). Other purchases went to company service cars and utility vehicles, construction materials and other factory and office supplies, and equipment and packaging supplies.

MEPZ will improve its 36.50 per cent average value added for all industries with the entry of the wood and food processing industries in 1986 and the three garment firms on account of the high local content of the garment industry. On the other hand, the handicraft (shellcraft) which utilizes 90 per cent local materials have since ceased operation in 1985, and is now expected to re-open.

(b) Local sales

Watches made in the MEPZ were sold regularly in the local market, pursuant to the authority granted by EPZA in its registration agreement. By 1985, a total of ₱ 17 million has already been sold locally after payment of the appropriate duties and taxes. Other products worth ₱0.35 million were likewise sold in the local market during the period 1980-1985. In all these instances, the buyers were either traders or end users and no further processing was applied on the products sold. Therefore, the linkage created was limited.

(c) Transfer of technology

Like the Bataan and Baguio EPZs, the mass production methods introduced by electronics, watches and garments firms at the MEPZ precludes the much desired technology transfer that was generally believed to accompany foreign investments. On the worker's front, the skills transferred are limited to assembly of parts or components of a product. Management staff learned techniques in areas like materials monitoring, logistics, import and export, sourcing, marketing, human behaviour, discipline and the other rudiments of conveyor type manufacturing. Nevertheless, these industries in MEPZ spent ₱5.6 million in training programmes for its workers held in-plant or abroad. Modern machining and tooling techniques are definitely imparted in the watch industry.

However, there is a promise for real technology transfer in a recently registered food firm at MEPZ. The company will train and employ local chemists and technicians in the process of bio-technology for the purpose of extracting enzymes from seaweeds and locust beans which are products indigenous to the country.

The MEPZ firms' relationship with the government's regional manpower training centre was, however limited to the latter's approval of labour training programmes for incentive availment purposes. No instructional courses were conducted at the centre to complement the skills required by EPZ firms.

4.2.7 Social impact

The move to locate MEPZ near an urban centre such as Cebu proved to be a wise decision, if it is to be related with the experience at Bataan. The cost of putting up the facility was dramatically scaled down since amenities, utilities and other services were already in place. Land acquisitions and relocation of familities were implemented on a phase by phase, need only basis.

The gain achieved in providing employment opportunities were also significant. There is a general perception of greater improvement in the lives of workers and their families as a result of employment in the zone.[1]

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[1] Guerrero, S., Ibid.

V. Factors influencing linkages

5.1 TYPES OF LINKAGES

This chapter will review the various forms of linkages between EPZ firms and local industries, aside from existing business relations with cargo forwarders and brokers, telecommunications, banking and other services indispensable to an off-shore manufacturing operation. An important linkage is the integration of domestic products into EPZ exports. Other linkages include the sale of EPZ products to users in the customs tariff area (CTA) or local sales. There is also the trading between EPZ firms and export producers based on the CTA known as constructive exports. Finally, there is the sub-contracting by EPZ firms of a portion of production to outside industries.

5.1.1 Local purchases

Aggregate local raw materials and supplies purchases of the firms in BCEPZ and MEPZ in 1985 at current prices, decreased by 7 per cent compared with 1984 figures. In real terms, the decrease was 25 per cent. Overall, local purchases made by firms in the two zones from 1981 to 1985 at constant prices grew by 92 per cent and 53 per cent for BCEPZ and MEPZ respectively, indicating a positive trend towards the use of locally sourced raw materials and supplies. Tables 5.1 and 5.2 also reflect a higher volume of local raw materials and supplies used at MEPZ compared with BCEPZ even though there are more industries and higher investments at the Baguio City Zone. The main dfference lies in local supplies used by MEPZ firms which is 374 per cent more than the ₱9.2 million purchased by BCEPZ during 1981 to 1985 period.

Table 5.1 Local purchases, 1981-85
(₱'000, at current prices)

EPZ	1981	1982	1983	1984	1985	Annual growth rate 1984-85 (%)	Annual growth rate 1981-85 (%)
BCEPZ	1,092	1,934	1,160	8,706	11,343	30.0	179.0
MEPZ	3,755	6,736	4,549	20,096	15,614	-(22.0)	92.0
Total	4,847	8,670	5,709	28,802	26,957	-(6.4)	110.0

Table 5.3 shows the extent of integration of locally produced goods in EPZ exports for the same period. It is compared with (a) the total value of output of the EPZ (value added plus imported and local inputs); (b) the total value of inputs (local and imported raw materials and supplies and cost of utilities); and (c) local value added (total value of output less imported raw

materials and supplies). It is clear that the sha... local goods in EPZ products was almost nil, due to the extensive use of imported materials and supplies by EPZ firms. Mactan EPZ firms posted a better slightly ratio of integration of local materials, compared with BCEPZ.

Table 5.2 Local purchases
(₱'000, at constant 1978 prices)

EPZ	1981	1982	1983	1984	1985	Annual growth rate 1984-85 (%)	Annual growth rate 1981-85 (%)
BCEPZ	677	1,080	557	2,512	2,783	10.0	92.0
MEPZ	2,330	3,763	2,187	5,799	3,831	-(33.0)	36.0
Total	3,007	4,843	2,744	8,311	6,614	-(20.0)	50.0)

Table 5.3 Percentage share of local raw materials and factory supplies to (a) total value of output, (b) local value added and (c) total value of inputs
(₱'000)

Year	Local raw materials & factory supplies (1)	Total value of output (2)	Per cent (1)/(2)	Total value of input (3)	Per cent (1)/(3)	Local value added (4)	Per cent (1)/(4)
BCEPZ							
1981	1,092	442,916	0.24	345,787	0.31	101,858	1.07
1982	1,934	534,193	0.36	386,908	0.50	153,796	1.25
1983	1,160	1,004,251	0.11	724,779	0.16	288,392	0.40
1984	8,706	1,908,151	0.45	1,349,819	0.64	586,466	1.40
1985	11,343	1,539,916	0.73	1,101,896	1.02	469,109	2.41
Total	24,232	5,429,427	0.44	3,909,189	0.62	1,599,621	1.5
MEPZ							
1981	3,755	167,617	2.2	98,131	3.8	79,242	4.7
1982	6,736	359,347	1.8	111,182	6.0	258,994	2.6
1983	4,549	191,366	2.3	128,620	3.5	76,916	5.9
1984	20,096	824,290	2.4	630,449	3.1	242,572	8.2
1985	15,614	413,221	3.7	272,331	5.7	183,734	8.4
Total	50,750	1,955,841	2.5	1,240,713	4.0	841,458	6.0

Locally sourced materials purchased by the different sectors fall under the following dominant categories:

(a) yarns and fabrics including threads and accessories
(b) plastic and paper packaging materials
(c) handicraft items and raw shells
(d) oil products
(e) lumber and agricultural products
(f) chemicals
(g) office supplies and equipment
(h) automotive equipment and supplies
(i) tools, hardware and construction materials

Most of the above items were sourced away from the EPZs, in Greater Manila area. The handicraft and food sector also requisitioned materials from the localities where the materials were produced or extracted, which were not necessarily from the EPZ area. Isolated purchases of hardware and tools from immediately surrounding areas of the EPZs were however recorded.

5.1.2 Local sales

There were instances when an EPZ transaction involved the sale of EPZ products to consumers in the CTA. As a matter of policy, EPZ firms may sell in the local market up to 30 per cent of their annual production or 30 per cent of their export sales, provided that the sale will not adversely affect the operation of any domestic industry.

Local sales were treated as ordinary importations and therefore the goods were levied with the applicable tariff but only on the local value added.

In 1985, EPZ firms in the regular zones sold locally a total of ₱48 million which is a 7 per cent increase over the ₱45 million sales in 1984. Local sales activity in these two years constituted an average 1.2 per cent of the total $422 million exports generated from the regular EPZs during the period.

Tables 5.4 and 5.5 present the local sales performances of the two EPZs under review compared with Bataan Zone. At indexed prices, local sales of the regular EPZs consistently posted a negative growth (except for BEPZ in 1983) brought about by closures of many companies at the BEPZ and the generally depressed market at the CTA after 1983 as a result of the economic crisis.

In especially designated export factory zones, however, with companies in which the Philippine Government has extensive investments, local sales up to 50 per cent of production is allowed. These capital intensive companies produce copper, phosphate fertilizers and liquified petroleum gas. In 198- and 1985, local sales totalled ₱881 million and ₱1.3 billion against exports of $146 million and $270 million respectively. Local sales constituted 36 per cent and 26 per cent of exports in 1984 and 1985.

Except for such products as copper and polyvariable condensers and semi-conductor devices and components, the local sales of EPZ firms constituted consumer end products and did not entail additional processing in the customs territory. The electronics components were sold under re-export bonds which either implies that the final product will eventually be exported

Table 5.4 Local sales
(₱'000, at current prices)

EPZ	1981	1982	1983	1984	1985	Annual growth rate 1984-85 (%)	Annual growth rate 1981-85 (%)
BEPZ	61,831	75,303	98,525	41,674	47,043	13.0	-(7.0)
BCEPZ	NDA	NDA	309	1,494	468	-(68.0)	NDA
MEPZ	11,438	3,660	1,384	1,924	799	-(58.0)	-(49.0)
Total			100,218	45,092	48,310	7.1	-(8.3)

Source: NEDA NIEP Report, National Industrial Estate Programme, February 1987.

Table 5.5 Local sales
(₱'000, at constant 1978 prices)

EPZ	1981	1982	1983	1984	1985	Annual growth rate 1984-85 (%)	Annual growth rate 1981-85 (%)
BEPZ	39,358	43,477	51,719	14,551	13,342	-(8.3)	-(23.0)
BCEPZ	NDA	NDA	162	522	133	-(74.0)	NDA
MEPZ	7,281	2,113	727	672	227	-(66.0)	-(58.0)
Total			52,608	15,744	13,701	-(13.0)	-(26.4)

Source: As Table 5.4.

after some processing or that it will be sold in their original condition by a marketing arm based in the CTA. Copper was sold to domestic industries.

We do not have the figures to form an opinion over the extent of the share of EPZ sourced materials in the production inputs of the domestic industries. But since, over two years' sale is substantial at ₱2.2 billion (including those produced in special zones), we assume that the contribution is significant.

5.1.3 Constructive exports

Under EPZA procedures, an EPZ firm may sell its products to bonded warehouses of export-oriented manufacturers and export traders. The sale to the exporter in the CTA is tax and duty free, but covered by a re-export bond.

EPZA enterprises doing constructive exports are those engaged predominantly in the manufacture of packaging materials like corrugated cartons, polypropolene bags or plastic tubes for semi-conductors.[1] The products are not subject to further processing outside of EPZ but form part of the export products of the local firms as containers of such products.

The paper and carton producers in Bataan EPZ has made extensive sale to export-oriented industries outside of EPZ equivalent to 71 per cent and 92 per cent of capacity in 1984 and 1985. Domestic linkage is therefore very evident in the industry. However, the practice drew adverse reactions from domestic manufacturers of the product with complaints that the EPZ firm had encroached in their market.

5.1.4 Subcontracting

As stated earlier, the aspect in EPZ operation that has generated substantial linkage with domestic industries is subcontracting or farming-out of production process. This involves an act of the principal manufacturer (the EPZ firm) of assigning materials and supplies (and sometime equipment) to another entity outside the EPZ to execute certain processes of manufacturing at a specified cost. The practice of subcontracting by EPZ firms gained prominence after the EPZA laid down the following guidelines in 1983:

(a) the work to be undertaken outside of the EPZ shall involve specialized work not normally undertaken by the EPZ firm; or

(b) when the required volume of work exceeds the production capability of the EPZ firm and deadline to meet export commitments cannot be met.

The transaction is not allowed when it will result in the reduction of EPZ firms' employees or its authorization will interfere with the employees' right to self-organization.

The practice of subcontracting is prevalent with firms at Bataan EPZ where there is a concentration of garments enterprises. The garment industry takes to subcontracting more often because of existing capacities in the CTA. These enterprises resort to subcontracting because it serves as a convenient solution to their operational problems. Subcontracting enables the firms to avoid additional investments in putting up facilities or maintaining employees for specialized works. On the other hand, use of idle or excess capacities of industries outside the EPZs is maximized. Technical skills are transferred and quality standards are upgraded at the contractor's plant.

In 1985, 23 enterprises at the EPZs engaged in 335 subcontracts involving 58 contractors in the domestic territory. The processes covered ranged from those performed in the EPZs (30 per cent) to those that are not normally integrated in their production (70 per cent). The Bataan EPZ subcontractors are all located within the surrounding areas of Metro Manila, or 160 kilometers away from the EPZ.

1/ The EPZ firm producing plastic tubes for packaging of semi-conductors supplies the requirements of the electronic firms at BCEPZ and MEPZ, as well as a number of industries in the CTA.

At Baguio City, two enterprises extensively engaged in subcontracting activities. These consist of sending materials to homeworkers employed by the contractor to perform the job at home. The sites are located within 50 km. radius from BCEPZ. One company (artificial flowers) has been consistently using the scheme which indicates that the system has become an integral part of operation. In Mactan EPZ, subcontracting is being undertaken by the semi-conductor firm for non-critical or minor processes to the nearby Cebu area (7 kms.). The company supplies the raw materials and equipment to the contractor where the same is processed by an average of 16 persons. The subcontracting cost an average of $10,000 per annum.

It is unfortunate that the EPZA was not concerned (until this study) with tracking or recording the impact of sub-contracting on the domestic economy. In the past, no earnest effort was made to look into direct employment generated and the value of work performed by the various subcontractors. But judging from frequency and observations in the course of the study research the linkage in terms of employment generation is substantial. One subcontractor who was interviewed was recently (1986) organized near the Bataan EPZ in view of the new policy at EPZA encouraging the promotion of support industries near the zone. The subcontractor receives work from BEPZ garments factories and employs 68 people. Five other subcontractors were identified in the Bataan area, generating employment of 186 people. For a one and one-half months' job, total contract price distributed among the 5 contractors was ₱1.1 million.

5.1.5 Technology transfer

The processes employed in the two EPZs studied are technically simple operations that make use of unskilled labour. As in typical production-sharing arrangements, technology is retained in home bases where technological lead still gives a trade advantage. It is expected that in due time, the other processes shall be transferred to third world countries, like the Philippines, following the maturity of the product. As the process becomes more standardized, comparative advantage would shift to wage cost. Advanced labour skills would be devoted to the development of better and more complex products. This is already occuring in the semiconductor firms in EPZs where the plants are set to perform more processes transferred from other plants.

There were also considerable strides in the area of bio-technology, and machinery and tool making introduced by industries involved in this. Strict adherence to exacting international standards also helped develop Filipinos' awareness to quality control and "just-in-time" study of production management. Some skills were also transferred from company sponsored in-house and overseas training at parent company's plant. Subcontracting is another area where some skills were transferred to domestic industries.

5.1.6 Another type of linkage

It may not be deemed as part of integration, but equally significant is the opportunity for commerce developed by the opening of an EPZ. The jobs generated create a new demand for consumer goods and services. For the period 1981 to 1985, the two zones under study came up with total salaries and wages of ₱379 million. This does not include the income of indirect jobs created as a result of the multiplier effect of EPZ jobs.

The resultant increase in consumer spending in the areas of the zone is by itself a linkage created by EPZs with domestic producers of consumer goods.

5.2 FACTORS AFFECTING LINKAGES

Consistent with other studies' observations, it was found that linkages of EPZ industries with those in the CTA in terms of integration are generally insignificant. For the period 1981 to 1985, the share of domestic in total materials used in the two EPZs ranged from only 0.62 to 4 per cent. Their share in local content of 1.5 and 6 per cent from Baguio and Mactan respectively, is not encouraging either.

An effort was made to examine probable reasons that account for such poor results and correlate them with actual experiences of zone enterprises. Factors which are conducive to investment like political stability, efficient nationwide infrastructure support system, productive labour, etc. which could not be influenced by EPZs alone were not included in the evaluation, as they are matters which should be addressed at the macro level. Only matters which are directly related to the subject matter were discussed.

Based on interviews and analyses of the firms' operations, the conclusion was arrived at that following factors influenced, in varing degrees, the EPZ firms' performancee in the area of integration:

- the EPZ concept
- preferential tariffs in the export markets
- industrial branch of activity
- nationality and equity structure
- lack of linkage promotion
- flaws in EPZA procedures.

5.2.1 EPZ concept

An EPZ is projected as a heaven for an industrialist facing increasing labour costs and stiff competition at home and in the world market. It offers such opportunities as cheap labour, tax and duty free importation of equipment, raw materials and supplies, tax holidays, 100 per cent foreign ownership, support facilities and infrastructure and a host of other fiscal and physical incentives including a relative freedom from the usual government bureaucracy. This is how EPZs are promoted almost uniformly by host countries in their efforts to attract foreign investments. Even advanced economies like Australia adopted this concept in its first free manufacturing zone, launched in September 1985, at its northern territory.[1] This was (and still is) the Philippines' position when it first entered the competition for foreign investments through EPZs in 1972.

The transnationalization of production by multi-national corporations provided the impetus for the establishment of EPZs or similar facilities in developing countries.[2] Following the product life cycle theory, a company

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1/ Business Trading, October 1986.
2/ Kumar.

whose market and competitiveness are threatened at home, expands its export market by first using home-based production. For further cost cutting, it transfers a portion of production off-shore in a facility such as an EPZ. As capability is developed, the whole operation is transferred to the off-shore location. Finally, the company satisfies itself with importing its product and selling in developed economies, while establishing its share in the host country's market.

Because of free trade, the company could send raw materials and supplies tax and duty free to the off-shore plant from other affiliates located elsewhere or wherever they may be sourced, not necessarily from the host economy. This is also known as networking of production or production sharing. The convenience offered by inter-company open account and similar arrangements for payment of materials, including consignment, strenghtens the argument in favour of their importation.

5.2.2 Preferential tariff structures in the export markets

Products of the Philippines are eligible for some incentive tariffs in the export market like those offered by US Tariff Article 806/807 and the Generalized System of Preferences (GSP). Both schemes feature the use of imported components, although GSP encourages the use of wholly obtained products of the preference receiving country. EPZs help facilitate the enjoyment of these incentives by providing an atmosphere of free trade, withdrawn from the usual red tapes and bureaucracies of import/export trade in the CTA.

(a) US Article 806/807

Several companies have seen the advantage of applying US Article 807 in their operations. Article 807 permits US goods to be sent abroad for assembly, and upon its return to the US, only the added value shall be assessed with customs duties. This has been widely used in the textile/garments sector. US Article 806 provides for similar treatment for articles of metal. The watch industry in the MEPZ qualifies for such incentive, as its main source of raw materials and export markets is the US.

The EPZ semi-conductor industry is another user of Article 806/807. Although the product is covered by GSP, the industry failed to post the minimum 35 per cent value added and its products exported to the US are therefore taxable. However, since the main source of raw materials is the US, its exports are entitled to reduced tariff to be based on their value added upon entry in the US.

(b) Generalized system of preferences (GSP)

Industrialized countries like the US, Canada, Japan, the European Economic Community (EEC), Australia, New Zealand, the USSR and other advanced economies in Europe, extend duty free or preferential treatment for imports of manufactured products from the Philippines, a benefit-receiving country under the GSP scheme.

GSP eligibility is generally tested by either the process criteria or the percentage criteria or both. The process criteria calls for a substantial transformation of a product from its original form. The percentage criteria requires the addition of a minimum value added (labour and/or material) to the product in the benefit-receiving country.

In both criteria, the product needs not be indigenous to the benefit-receiving country. It may be imported in its unmanufactured form irrespective of source, or obtained in finished or semi-finished form from either the preference-giving country itself (preference-giving country content) or from another benefit-receiving country (cumulation). Under the GSP schemes of EEC, Japan and the US, benefit-receiving countries belonging to an association of countries which contribute to comprehensive regional economic integration among its members may be considered as one area for the purpose of meeting the rules of origin requirements. This refers to such country economic groupings like ASEAN, Central American Common Market, the Andean Group, etc.

The advantages offered by GSP are probably the reason for the common observation that investors usually determine whether raw materials and semi-finished goods may be competitively imported from neighbouring countries. Imported products, if used as inputs to produce a different product category, are treated as local content for purposes of value added computations in applying for GSP treatment in the US and other countries.

The Philippine semi-conductor electronic industry, in its bid to improve its position in the EEC market is seeking the attainment of GSP status for its products through the relaxation of foreign content allowance and the application of preference-giving country content rule.[1] The industry is a heavy importer of inputs.

5.2.3 Industrial branch of activity

As shown in Table 5.3, the use of local raw materials and supplies in EPZ products during the reference period was limited. Exports were dominated by the electronics industry which accounted for 87 per cent of the total. The industry involves assembly components or high technology materials which were not locally available. Other EPZ firms like garments used high quality fabric and textile i.e., acrylic polyester (wool/nylon), animal skin (sheep, goat and furskin), which are not indigenous to the country. The handicraft sector used polyester fabrics, polyetheline and pigments as major materials. The metal sector imported brass ball valves and tubings. The plastic firm used imported PVC pellets as raw materials.

The Philippines is yet to reach that stage of industrialization where intermediate goods could be produced to suit export production. Its industry is basically domestic oriented, as a result of an import substitution programme adopted since World War II. Until recently, the domestic industries remained protected and opened to additional investments only in terms of demand-supply gap (measured capacity), resulting in high prices for its products.

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[1] From a position paper of the Association of Semi-conductor Electronic Industry of the Philippines, 1986.

On the other hand, the country's export manufacturing industry is still in its infant stage and depends largely on imported inputs for production. They are found mostly in bonded manufacturing warehouses and in EPZs. It is hoped that with the recent adoption of an import liberalization programme, the competition from imported products shall move the local industry to improve their quality and prices in order to be competitive. The programme calls for the gradual lifting of quantitative limiations on imported raw materials and other intermediate products in favour of tariff controls over a two year period until April 1988.

This should be a welcome development to EPZ firms. In interviews conducted, the firms signified their willingness to use more local materials. The often cited reasons include better chances for the product for GSP eligibility, low inventory to maintain, facility of contact and consultations with suppliers and less monitoring of material (international) movements, and faster delivery time. With the right motivation, export firms no doubt will patronize local materials. The experience in the garment industry (outerwear), which utilizes about 90 per cent local yarn in their exports supports this position. This is in spite of about 5 per cent price differential over imported yarns.

Mactan EPZ has been successful in attracting resource-based industries, particularly in the wood and food processing sectors. Having been fully operational in 1987, the industries' potential for linkage generation is obvious. The wood firm shall convert local timber into wood veneer and furniture using the latest technology in the industry. The food industry will be taken up in the latter part of this study.

5.2.4 Nationality and equity structure

Global production sharing is fairly evident in Philippine EPZs. Parent companies or affiliates of EPZ firms take charge of orders and marketing, design and product specification, production and/or procurement of intermediate goods while the Philippine subsidiary produces the final product (e.g. tennis balls, garment, frames, etc.), or semi-finished goods for export to another affiliate (e.g. capacitors, condensers, chips, watch movements, etc.).

When the import patterns in EPZs was examined, it was observed that the influence of equity structure was strong. In almost all sectors, the tendency was to source materials from the home base of the major investors. The US-owned electronic firms in both EPZs under study, import heavily from the US under inter-company open account. The Republic of Korea firm at the Bataan EPZ uses mostly consigned Korean products. The French optical company there uses chemicals and lenses from France. The Malaysian company producing plastic shipping tubes imports pellets from Malaysia. Even woodchips were imported from Singapore while there were abundant logs and sawdusts by a defunct company at Baguio. The chemicals used in the resource-based food industry came from Ireland. The Japanese lighter manufacturers and other electronic parts' firms received consigned goods from sister companies in Japan.

There were, however, also consistent purchases from countries other than the home base of investors. This proves that materials will be sourced where trading advantages exist.

Table 5.6 show the relationship between equity/nationality, imports and exports of representative industries at the Baguio and Mactan EPZs in 1985.

Production sharing should not entirely be blamed for the mininal linkage of EPZ firms with domestic industries as even export firms owned by Philippine nationals source production materials abroad. This only emphasizes the inability of Philippine industries to supply competitive intermediate inputs for export production. As gathered from the interviewees, EPZ firms will use competitive local materials when available. This has been observed in certain foreign-owned garment and footwear industries which used wholly imported materials in their initial years of operation. As production stabilized and contacts were established, local materials were integrated in production.

Table 5.7 shows the percentage share of local raw materials and supplies to total value of inputs of selected industries at Bataan EPZ for the period 1981 to 1985.

5.2.5 Lack of linkage promotion

There is no existing programme nor discernible efforts on the part of the EPZA administration to encourage the interaction of EPZ firms and local businesses. The EPZ firm is left on its own to establish business contact with suppliers.

It is observed that EPZA's promotional efforts have been limited to the attraction of investments and inviting public awareness to the EPZ performance and image. The annual EPZ trade fairs are geared primarily towards the opportunity for unloading excess production and inventory, not for linkage promotion.

5.2.6 Flaws in EPZA procedures

While EPZs are so structured that they are independent of the CTA, it is desirable from the development point of view to get maximum technology transfer from enterprises in the EPZ to those outside of the zone. The practical way to realize this is to develop a supplier-buyer relationship or linkage between EPZ firms and local manufacturers beyond the presently existing supplier-trader-consumer set-up of local sales. Technology fall-out from EPZs cannot be expected unless there is a commerical relationship with local producers. To a limited extent, subcontracting has achieved this.

However, the procedures covering these transactions are too cumbersome and restrictive. Local sales need to be authorized on a case by case basis and the impact of such sales to domestic manufacturers must first be evaluated in order to avoid adverse effects of such sales. By policy, local sales are limited to 30 per cent of production. On the other hand, the local subcontractors are subjected to 4 per cent contractor's tax, totally ignoring the fact that the EPZ firms which are the primary contractors for export production are exempt from such tax. There is also the tendency to require subcontracted materials to touch base first with the zone before they are farmed out to subcontractors, which is a circuitous procedure considering that EPZs like Bataan are away from the ports of entry.

Table 5.6 Relationship of equity, raw material imports, exports and local material usage of selected industries

Industry sector	Ownership	% share	Home base of affiliation	Imports (US $ million)	Sources of imports	% share	Exports (US $ million)	Export markets	% share	% share of local materials to total value of inputs
A. BEPZ (1985)										
a. Electronics	US	100	USA	54	USA	51	80	USA	69.7	0.13
					Japan	26		ASEAN	15.0	
					EEC	21		EEC	14.6	
b. Garments (1984)	Italian	90	Italy	1.2	Italy	89	0.33	USA	58.9	2.66
	Swiss	10			Japan	6		Canada	22.7	
					Italy	16.4				
c. Handicrafts	US	100	Taiwan Province of China	0.45	Japan	49	1.28	USA	93.5	6.16
					Hong Kong	33		EEC	3.2	
					Taiwan Province of China	16				
B. MEPZ (1985)										
a. Electronics	US	100	USA	5	USA	85	16	USA	84	2.51
			Hong Kong		Netherlands	9		Hong Kong	15	
					Hong Kong	5				
b. Watches & clocks	US	92	USA	3.0	USA	55	8.8	USA	68	12.1
	Filipino	8			Hong Kong	19		Canada	5	
					EEC	11				
					Taiwan Province of China	8				
c. Garments	Filipino	70	Hong Kong	0.67	Hong Kong	100	0.67	USA	64	76.75
	Hong Kong	30						EEC	33	
								Austria	2	

Table 5.7 Percentage share of local raw materials and supplies to total value of inputs (TVI) of selected industries at BEPZ

Industry	Ownership	1981	1982	1983	1984	1985
Footwear	Republic of Korea	18	14	8	NDA	NDA
Garments	Federal Republic of Germany	78	79	87	78	84
Garments	British	72	63	34	32	53
Garments	Filipino	4	4	10	NDA	NDA
Plastic packaging	Filipino-Japanese	9	10	16	8	6
Plastic toys	US	31	34	25	NDA	NDA

In the area of backward integration, the existing procedures are equally restrictive. While all materials introduced in EPZs are exempted from all taxes, outright exemption is available to imports only. Local purchases are taxed at point of sale and tax credits may be obtained only upon the exportation of the product using such locally produced materials. Tax credit certificates are not transferrable and may be used only for the payment of national taxes duties and fees. It could not be used for the payment of property taxes to which all EPZ firms are liable. Many EPZ firms entered into private arrangements with local suppliers to the effect that the selling price of goods they purchase should be net of taxes. This is not institutionalized and applicable only if the supplier is entitled to tax credit incentives under other incentives laws

5.3 FACTORS IN LINKAGE DEVELOPMENT: ILLUSTRATIVE CASES

The relative freedom to import raw materials and supplies, tax and duty free under the EPZ concept shall be a common denominator in the actual cases discussed below. The EPZs and industries involved will not be identified. However, certain indispensable information is indicative of the location and the industry itself.

5.3.1 Case I: Application of US Tariff Article 806/807

The industry involves the assembly of highly technical components which were primarily imported from the United States. It is owned by American nationals and 70 per cent of production is exported to the United States. It employs an average of 1,000 employees over the 1981 to 1985 period. In the same period, its production performance is reflected in Table 5.8.

In current terms, the company had contributed 51 per cent to total output in value added. Outside of value added which constituted wages and salaries, rent and profit, the local contents were made up only of local factory supplies (10.2 per cent) and utilities (15.0 per cent).

There was no transaction recorded in the column of local raw materials used. This is attributed to production sharing (the company imports high-tech components from the US on consignment basis) and the non-application of the US

GSP on its product. Its main market, the US, excluded the company's product category from its GSP scheme.[1/] Hence, even if its value added would make up for 51 per cent of output (over 35 per cent is required in the US), its entry into US would not receive preferential treatment under GSP. But the product is eligible under Article 806/807, which means that it will taxed only on the 51 per cent added value, not 100 per cent since materials came from the US.

5.3.2 Case II: GSP: Substantial transformation of raw materials

The company started operations in 1976 with 100 per cent American capitalization. It expanded from the initial 400 employees to 1,200 employees in 1985. Its market for its GSP eligible product is the United Sates (85 per cent) and the EEC countries. Raw materials and supplies are consigned from Hong Kong (67 per cent) and the USA (33 per cent).

Its production performance for the period 1981 to 1985 is shown in Table 5.9.

The company's export is entitled to GSP treatment in the US because the component imported materials from Hong Kong and the USA are included in the computation of the 35 per cent value added requirement. It is considered substantially transformed into a new and different material by US standards. Since it constitutes 9.8 per cent of the total output (sales), its value helps meet the value added requirement together with the direct cost of processing work in the Philippines, including labour but excluding profit.

5.3.3 Case III: GSP: Extensive use of local materials

This Federal Republic of Germany-owned company produces outer garments for the mail order market of the FRG. It started operations in 1977 and produced its exports with 100 per cent imported components. It gradually shifted to locally produced yarn finding the product acceptable, although the local yarn cost by an average of 5 per cent mor than the CIF price of imported materials. The company cited its desire to integrate more local products and faster delivery time as the main reasons for patronizing local yarn producers.

Lately, however, the company had encountered delays in deliveries which it attributed to increased demand and operational problems of the suppliers. Colouring was not consistent due to water problems at the supplier's plant site. If this continued to be the case the company intended to resume importation of materials. The company's production statistics for the period 1981 to 1985 is shown in Table 5.10.

Please observe that the percentage share of local inputs to TVI is 81.64 per cent. However, its product qualifies for GSP treatment under the EEC scheme not because of its huge local content but because it was able to

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1/ Preferences are granted for approximately 3,000 agricultural and industrial products under the US scheme. Among industrial products not eligible are the following: textiles and articles of apparel subject to textile agreements; most types of footwear; certain leather products; watches and certain import sensitive articles.

Table 5.8. Case I. Production performance
(₱'000)

Year (1)	Total value of output (2)	Raw materials used (RMU) Imported (3)	Raw materials used (RMU) Local (4)	Factory supplies used (FSU) Imported (5)	Factory supplies used (FSU) Local (6)	Utilities used (7)	Total value of inputs (TVI) (8)	Value added (9)	Value added coeffi- cient (9/2) (10)	% of imported RMU/FSU to TVI (11)	% of local RMU/FSU to TVI (12)	% of utilities used to TVI (13)
1981	45,433	5,293	-	1,054	2,273	3,813	12,433	33,000	72.63	51.05	18.27	30.68
1982	45,497	1,115	-	2,207	4,161	4,003	11,486	34,011	74.75	28.92	36.23	34.85
1983	54,817	20,140	-	1,380	1,878	4,445	27,843	26,974	49.21	77.29	6.74	15.96
1984	152,290	53,243	-	14,980	7,792	9,681	85,696	66,594	43.73	79.61	9.09	11.30
1985	161,531	57,362	-	11,307	6,949	11,818	87,436	74,095	45.87	78.53	7.95	13.52
Total	459,568	137,153	-	30,928	23,053	33,760	224,894	234,674	51.06	74.73	10.2	15.01

Table 5.9. Case II. Production performance
(₱'000)

Year (1)	Total value of output (2)	Raw materials used (RMU) Imported (3)	Raw materials used (RMU) Local (4)	Factory supplies used (FSU) Imported (5)	Factory supplies used (FSU) Local (6)	Utilities used (7)	Total value of inputs (TVI) (8)	Value added (9)	Value added coeffi- cient (9/2) (10)	% of imported RMU/FSU to TVI (11)	% of local RMU/FSU to TVI (12)	% of utilities used to TVI (13)
1981	12,898	1,358	-	-	-	221	1,597	11,319	87.75	86.00	-	13.99
1982	16,593	1,242	-	-	-	235	1,477	15,116	91.09	84.09	-	15.91
1983	16,934	1,346	-	-	-	347	1,693	15,241	90.00	79.50	-	20.50
1984	34,966	3,797	-	-	-	809	4,696	30,360	86.83	82.84	-	17.56
1985	42,947	4,498	-	-	-	1,403	5,901	37,046	86.26	76.22	-	23.78
Total	124,338	12,241	-	-	-	3,015	15,364	109,082	87.73	79.67	-	19.62

effect a change in tariff heading from the manufacture of yarn into another product falling under a different tariff heading under the Customs Co-operation Council Nomenclature. In this case, therefore, the comapny could have used 100 per cent imported yarn and still qualify under the GSP of the EEC. But it opted to use available local yarns for the above stated reasons.

5.3.4 Case IV: Resource-based industry

The most desirable linkage condition is illustrated in the following case:

Company A, which is 100 per cent Filipino-owned, has been producing refined carageenan in its marine farms in the seaweeds belt of a province embraced by a region hosting an EPZ. The seaweeds are harvested and undergo simple processing, and are then packaged and exported to USA, Canada and Australia.

The Philippines account for 84 per cent of Asia's dried seaweed production and 38 per cent of the world's. It is a ₱300 million a year industry with production 23,000 tons per annum. Prior to 1986, seaweeds were exported abroad for further processing into products used in the food, pharmaceutical, cosmetics and other industries.[1/]

In mid-1986, Company B was established at the region's EPZ to undertake the processing of the seaweeds into final products using bio-technology. The firm is Filipino-owned but affiliated with an Irish company which shall provide the technology and absorb the company's production. The raw materials will be supplied by Company A. The EPZ was chosen because of the facility to import tax free consigned equipment and materials, the existing infrastructure and the proximate international airport through which the goods are shipped.

This case demonstrates the backward and forward integration that promotes a completely processed indigenous product from the Philippines from seeding to growing and processing into final form.

5.3.5 Case V: Subcontracting a production process

The company was established in 1980 for the production of a GSP product involving intensive labour. It employs an average 176 workers in its 1,000 sq.m. self-built factory in the EPZ. The company is 100 per cent US-owned. It imports its raw materials from Japan (49 per cent), Hong Kong (36 per cent) and Taiwan Province of China (16 per cent). It exports 94 per cent of its products to the United States. Its average local raw materials utilization is 6.16 per cent of total inputs. It involves handicraft items which add native flavour to the product. Its value added, however, reaches an average of 51.64 per cent (principally labour value added and profit).

A big portion of the labour value added involves indirect employment. The company subcontracts the assembly part of its production to some 30 subcontractors within the 50 kms radius of the EPZ. This involves the daily delivery and receipt of subcontracted items consisting of pre-cut pieces

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1/ IBON Facts and Figures.

Table 5.10. Case III. Production performance
(₱'000)

Year (1)	Total value of output (2)	Raw materials used (RMU) Imported (3)	Raw materials used (RMU) Local (4)	Factory supplies used (FSU) Imported (5)	Factory supplies used (FSU) Local (6)	Utilities used (7)	Total value of inputs (TVI) (8)	Value added (9)	Value added coeffi- cient (9/2) (10)	% of imported RMU/FSU to TVI (11)	% of local RMU/FSU to TVI (12)	% of utilities used to TVI (13)
1981	20,398	1,449	9,084	451	57	610	11,651	8,747	42.88	16.31	78.47	5.24
1982	19,975	1,307	8,027	321	37	461	10,115	9,820	49.16	16.03	79.43	4.54
1983	24,965	864	10,923	223	52	530	12,592	12,373	49.56	8.63	87.15	4.20
1984	37,516	2,828	14,147	-	127	1,094	18,196	19,320	51.49	15.54	78.44	6.01
1985	33,613	2,567	15,768	-	221	432	18,988	14,625	43.51	13.52	84.20	2.28
Total	136,467	9,015	57,949	995	496	3,127	71,582	64,885	47.54	13.98	81.64	4.36

and accessories that are turned into a finished product by putting the pieces together. The homeworkers are paid on piecework basis. Per EPZA estimate, the process employs some 360 homeworkers.

The practice demonstrates the potentials of this type of EPZ industry in developing linkages in surrounding areas of the zones in terms of employment generation.

VI. Linkages in non-EPZ export industries

6.1 EXPORT MANUFACTURING OUTSIDE EPZs

Philippine laws offer an alternative to EPZ activities to entrepreneurs who wish to engage in export manufacturing within the incentive laws[1] administered by the Board of Investments (BOI). The BOI is a major governmental agency which is in charge of planning and implementing programmes to encourage foreign and domestic investment in the country. Unlike EPZA, it is not limited to inducing the flow of investments to an EPZ. Under BOI regulations, equity structure, areas of investments and market are major factors for the grant of incentives. Thus, for export manufacturing purposes, non-EPZ enterprises may qualify for registration with incentives under the following general guidelines:

(a) preference for registration and incentives are given to enterprises where the degree of ownership and control of Philippine nationals is greater;

(b) majority shares of an enterprise may be owned by foreigners if it is engaged in a pioneer activity;[2]

(c) majority share may be owned by foreigners even if the activity is in a non-pioneer area provided 70 per cent of its products are for exports;

(d) joint ventures with maximum 40 per cent foreign participation may receive incentives, if the export activity is listed in the Investment Priorities Plan;

(e) joint ventures with maximum 40 per cent foreign participation may also receive incentives, if 50 per cent of sales are export sales in activities not listed in the Investment Priorities Plan.[3]

As shown in Table 6.1 (Comparative Investment Incentives), export firms registered with BOI enjoy the incentives listed depending on the applicable law prevailing at the time of registration. The most relevant incentives for purposes of this study, however are:

1/ Principally, Export Investment Incentives Act and the Omnibus Investments Code, as amended by BP 391.

2/ Areas of investments that (a) produces goods that are not produced in the Philippines; or (b) uses new or untried technology in the country; (c) pursue predetermined services or projects in agriculture and food industry that are considered feasible and highly essential to the attainment of national goal taking into account the risk capital involved; or (d) produces non-conventional fuels or such equipment which utilizes non-conventional sources of energy or the operation itself uses non-conventional fuel or source of energy, provided that in any of the foregoing circumstances, there is substantial use and processing of domestic raw materials, when available.

3/ Article 28, BP 391.

Table 6.1 Comparative investment incentives for export enterprises

	EPZs	R.A. 5186 (Investment Incentive Act)	R.A. 6135 (Export Incentives Act)	P.D. 789 (Omnibus Investments Code)
1. Tax exemption	Tax and customs duty-free importation of machinery, equipment, raw materials and operating supplies Export tax exemption Municipal and provincial tax exemption Exemption from property tax on movable production equipment Exemption from contractors tax on gross receipts Wharfage fees exemption Economic stabilization tax exemption	Capital gains tax exemption Exemption on sale of stock dividends of pioneer enterprises	Export tax exemption Exemption on imported capital equipment and machinery Exemption on importation capital equipment Exemption of pioneer firms from all taxes except income tax	Full tax and duty exemption on imported capital equipment Exemption from export tax, duty, impost and fee (including wharfage fee) Capital gains tax exemption on sale of capital assests and invested in capital stock of the firm

Table 6.1 (continued)

	EPZs	R.A. 5186 (Investment Incentive Act)	R.A. 6135 (Export Incentives Act)	P.D. 789 (Omnibus Investments Code)
2. Tax deductions	Net operating less carry-over for first 10 years to next 6 years Accelerated depreciation of fixed assets 50 per cent deduction for labour training expenses 10-year deduction for organizational and pre-operating expenses	Deduction for investment in pioneer enterprises 10-year deduction for organizational and pre-operating expenses Accelerated depreciation of assests Net operating loss carry-over Deduction on profit used for expansion of firm's fixed assets 5-year reduced income tax equivalent to production inputs Deduction for labour training expenses	Deduction on profit used for expansion of fixed assets Deduction for labour training expenses Reduced income tax on direct labour materials used as production inputs Net operating loss carry-over, or, 1% tax deduction on export sales if firm uses a new brand name differnt from imported brands Double reduced income tax if establishment of plant is in a priority area for development	10-year net operating loss carry-over for next 6-years 10-year deduction of organizational and pre-operating expenses Accelerated depreciation of fixed assets Deduction from expansion re-investment of surplus profit for machinery and equipment 50 per cent deduction for labour training expenses

Table 6.1 (continued)

	EPZs	R.A. 5186 (Investment Incentive Act)	R.A. 6135 (Export Incentives Act)	P.D. 789 (Omnibus Investments Code)
3. Tax credits	Credits on sales, compensating specific taxes and duties on local purchase of supplies and raw materials	100% credit on purchase of domestic capital equipment Credit for taxes withheld on foreign loan interest payments 7% credit on cost of raw materials and supplies	10-year credit on raw materials supplies and semi-manufactured products used as production inputs	Credit on domestic capital equipment 5-year, 5% credit on net value added 5-year, 10% credit on net local content of exports 5-year credit on witholding tax on foreign loan interest
4. Foreign exchange investment incentives	Priority in the allocation of foreign exchange for the importation of merchandise, equipment and raw materials Repatriation of foreign investment and remittances of profits and dividents at any time in full at the prevailing exchange rates	100% repatriation of investment for foreign investors Remittance of earnings for foreign investment Remittance of earnings for foreign loan obligations		100% repatriation of foreign investment Remittance of earnings in the original currency and at prevailing exchange rates Remittance of sums to meet foreign loan obligations

Table 6.1 (continued)

	EPZs	R.A. 5186 (Investment Incentive Act)	R.A. 6135 (Export Incentives Act)	P.D. 789 (Omnibus Investments Code)
5. Credit incentives	Financial assistance through loans credits, guarantees or other forms of financial accommodations from government financial institutions	Preference in grant of government loans Private financial assistance GSIS/SSS 5-year, 6% loans for investment in firm's shares of stock		Preference in grant of government loans 5-year, 6% GSIS/SSS loans for investment in shares of stock of the firm Private financial assistance whereby insurance companies are authorized to invest in firm's new issues of stock

(a) Tax credit for taxes and duties on raw materials:[1] Export firms outside EPZs may apply for this incentive for an amount equivalent to the taxes and duties paid on local materials and supplies used in their production activities.

(b) Reduced income tax (RIT):[2] Within 5 years from registration, export producers are entitled to deduct from their taxable income, an additional amount equivalent to the direct labour cost of the product and the local raw materials utilized in production.

A further deduction for direct labour cost shall be allowed if the area of investment is declared by the BOI as necessary for the dispersal of industry or if the business will locate in areas deficient in infrastructure and utilization. The deduction shall not exceed 25 per cent of export revenues. Moreover, RIT is only forthcoming to the extent of the taxable income for the year, otherwise the incentive is forfeited.

(c) Tax credit on net local content of exports:[3] Within 5 years from registration, export firms shall be entitled to tax credit equivalent to 10 per cent of net local content of exports. The incentive may further be extended for another 5 years. The amount includes labour and profit and local raw materials which are available under clearly more favourable terms in the world market.

(d) Access to the domestic market:[4] Depending upon the equity structure and areas of investments, export producers registered with BOI need only to export 50 to 70 per cent of its production to be entitled to this incentive.

The incentives cited in paragraph (b), (c) and (d) are not available at EPZA. Their influence in promoting linkages with domestic manufacturers and suppliers of intermediate goods will be discussed in the latter part of this chapter.

As regards the incentive granted in paragraph 9(a), the same is available in both BOI and EPZA laws, except that a tax credit obtained under BOI is transferrable to another BOI registered industry, while that obtained from EPZA is not transferrable unless the transfer is by hereditary succession or by operation of law. Tax credit certificate obtained under these incentive laws may be used to pay taxes, duties, charges and fees due to the national government only.

EPZ firms do not have any real need for these incentives, since they could freely import their inputs tax and duty-free. EPZ firms could use these incentives only if purchases from domestic suppliers were made. Only firms registered with BOI are constrained to use the incentives since taxes and

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1/ Article 48(a), PD 1789 as amended.

2/ Article 48(b), PD 1789.

3/ Article 48(d), PD 1789 as amended.

4/ EPZ firms may be allowed to sell part of up to 30 per cent of production in meritorious cases provided that no domestic industry is adversely affected.

duties must be paid upon importation of the raw materials and supplies and such payments may be recovered only as tax credits upon exportation of their products. They still have to suffer the administrative difficulties and delay that accompany tax credit applications, and shoulder the cost of financing the tax money. Thus, EPZA has an advantage over BOI firms in the importation of materials and supplies.

6.2 EXPORT MANUFACTURING UNDER BONDED WAREHOUSES

When the customs bonded manufacturing warehouses scheme (CBMW) became accessible to many export manufacturers in 1979, the above advantages enjoyed by EPZA over BOI firms were eroded. CBMWs may import intermediate goods tax and duty free for export manufacturing purposes after posting a re-export bond.[1/] Many firms registered with BOI obtained CBMW licenses. Smaller export firms, mostly garments, were also authorized under similar schemes[2/] to import their inputs sans taxes and duties. These export manufacturers outside of EPZs are practically operating just like an EPZ firm, with better incentives and in more advantageous locations, quantified in terms of available economic and social infrastructure that are present in urban settings.[3/] Just like in EPZs, subcontracting involving imported raw materials is also authorized in CBMWs.

6.3 EXTENT OF LINKAGES

Does EPZ style manufacturing outside the zone improve linkages with domestic supplies of raw materials and intermediate goods? The locational factor may be tested for linkage generation by examining parallel export industries that enjoy both BOI and CBMW incentives. Because of the confidentiality of data on actual value added or percentage of local materials and supplies to total input, it may not possible to obtain exact figures. Instead, the degree of linkage was measured by the extent of the firm,s availment of the BOI incentives earlier mentioned, which was available. Furthermore , the insights of BOI officials interviewed were given much weight in forming conclusion as their observations were based on actual knowledge and experience over a particular industry's behaviour in relation to the incentives administered.

1/ Secs.608, 2001 ar.. 20(of the Tariff and Customs Code of the Philippines, or amende. by PD 34 and PD 1464, CAO No.2-79.

2/ Imports made through the bonded warehouse facilities of Philippine International Trading Corporation, NCD-NACIDA Raw Materials Corporation, Philippine Integrated (Mftrs.) Exporters, Inc., Mindanao Textile Corporation.

3/ In the Metro Manila area, there are over 200 bonded manufacturing warehouses under the miscellaneous category that caters to different industries except garments. Eighty-five are active. Garment industry is the other bonded manufacturing category where materials may be imported tax and duty free under the firm's own CBMWs or through other arrangements. - Sec. 8, GTED, Circular No. 004, CAU 3-78.

6.3.1 Effect of incentives granting tax credit for duties and taxes paid on raw material inputs and reduced income tax (RIT)

Case No.1: The best example would be a former EPZ firm which transferred its entire operation near Manila after more than five years in the zone. The company is 100 per cent foreign-owned and manufactures an eligible GSP product with an annual average value added of 57 per cent, with 24 per cent utilization of locally produced materials in its export production. Its main source of imports was Hong Kong. The major export market is the USA.

For the duration of its operation in the EPZ, the firm did not apply for any tax credit covering the locally sourced materials in its products. The local goods, mainly packaging materials and thread, were obtained net of taxes from the local BOI registered suppliers which assumed the burden of applying for tax credit for the goods sold to the EPZ firm.[1] During the firm's last year in the EPZ, it used about ₱34 million of local products.

After moving out of the zone, it obtained RIT incentives in the total amount of ₱50 million from its BOI registered bonded manufacturing operation for the same products. Like in its EPZ operations, it did not apply for any tax credit covering local purchses.

The firm's operation outside the EPZ did not improve its local materials utilization even as it obtained a ₱50 million additional tax deduction. The export sales of the firm for the year was closed to ₱200 million (₱183 million net sales).[2] Considering that the average value added is 57 per cent the value of the raw materials, supplies and utilities inputed to the export was ₱86 million. Since the percentage of locally sourced materials was establihsed at 27 per cent of total inputs, the value of local materials will not exceed ₱24 million, which was 29 per cent less than its previous years' consumption inside the EPZ. Moreover, further inquiry revealed that the RIT inventive consists mainly of direct labour.

Case No.2: The second example is a BOI gloves and garment manufacturer which operates a CBMW in Metro Manila. It is a foreign company which receives its major materials under consignment from its principals abroad. The major market is the USA, as shown in the 1984 export quota allocation[3] released by the Garments and Textile Export Board (GTEB). In 1984, it recorded net sales of ₱34 million.[4] The non-EPZ firm was compared with an EPZ glove manufacturing company which has similar equity structure and trading patterns. However, the EPZ firm is smaller in size with sales of ₱34 million and is engaged in gloves export only, not in other garments trade.

1/ LOI 942 treats sales to EPZ industries as export sales. The seller is qualified for tax credit on taxes and duties paid on the products sold in the Article 48(a) of PD 1789 if it is a BOI registered export producer, otherwise, drawbacks may be obtained under Sec. 199 of the Internal Revenue Code.

2/ As reported in IBON Facts and Figures, No.190/14, July 1986.

3/ Bulletin Today, 3 February 1987

4/ IBON, Ibid.

The analysis was limited to 1984 where enough data was available. During the year, the non-EPZ firm obtained incentives in the form of special tax credits of ₱0.15 million and additional tax deduction (RIT) of ₱2 million. The local purchase consists mostly of packaging materials. Applying a 20 per cent sales tax rate,[1/] the local purchase should be about ₱0.765 million for the entire year, or 0.55 per cent of its net sales. Even assuming that ₱2 million RIT deduction is made up entirely of local raw materials (which was not the case, as per inquiry), it will constitute only 1 per cent of net export revenues for the year.

Significantly, the EPZ firm has not purchased raw materials and supplies locally during its last five years of operation, all materials being supplied under consignment basis from its parent company.

Case No.3: The semi-conductor firm examined in this case availed of special tax credit for raw material purchases in the amount of ₱1.206 million for 1985. Based on a 20 per cent sales tax, the value of the raw materials purchased was pegged at ₱6.03 million. In 1985, the firm's gross export is $208,068 million. Converted into Peso, its total export would amount to ₱3.83 billion. The locally purchased materials would then constitute about 0.15 per cent of output, which approximates the EPZ average of 0.12 per cent.

In this connection, the average local value added performances of EPZ and non-EPZ semi-conductor firms were compared. The 28 member firms of the Association of Semi-conductor Electronics Industry of the Philippines (ASEIP) have a total local value added of 21.54 per cent in 1984 and 21.18 per cent in 1985, against the two EPZ firms' average performances for the period 1981 to 1985 of 27.06 per cent and 21.96 per cent, indicating better integration.

6.3.2 Tax credit on net local content

This incentive was introduced in 1983 as an improvement of RIT (reduced income tax). Net local content is defined by BOI as the value of export less depreciation of capital equipment and value of imported raw materials and supplies and indigenous inputs which are not available in the world market under favourable terms.

The incentive is not expected to result in significant linkage between export firms and domestic industries considering the import dependency of non-traditional exports production. The incentive even penalizes the use of indigenous materials in export production as it removes such materials from the components of net local contents. Moreover, the intent of the incentive is to consider as raw materials only those used in the processing of the indigenous raw materials. Again, it is the labour component of the product that constitutes the bulk of local content.

The advantage offered by this incentive over RIT is the preservation of the additional deductions in the form of tax credit over a period of 5 years (or more). RIT provides only for additional labour cost deduction during the taxable year and only to the extent of taxable income. A loss during the year forfeits the RIT. Unlike in RIT, the amount of net local content incentive is not limited to a maximum of 25 per cent of export revenue.

1/ Average percentage for intermediate goods.

6.3.3 Access to the domestic market

Non-EPZ export producers registered with BOI may sell in the local market its production in excess of the ceiling pegged for exports which is 50 per cent of production in case it is a Philippine national firms and 70 per cent of production for foreign controlled firms. This may work well for the concerned industries in terms of flexibility and corporate planning, like building a local manufacturing base for competitive export pricing, or weathering adverse economic conditions at the world markets. This incentive is not automatically available to EPZ industries.

6.4 IMPORT CONTROLS

Local sourcing by domestic export manufacturers is also induced by government policies that regulate imports of certain raw materials. These regulations[1/] have been introduced for various reasons vis: to assist local industry reach full capacity, to encourage local content of domestic production, to help conserve foreign exchange, and for public health and safety and national security, etc.[2/]

These regulations call for a prior clearance from the pertinent government agency before one could import the regulated products, say - synthetic yarns, fibres and threads. For intermediate inputs and production materials, the clearance involves a certification that there are no locally available competitive product that could substitute for the article sought to be imported. If substitutes were available under these conditions, then the clearance will be withheld compelling the producer to use the local product. EPZ manufacturing is exempted from this procedure.

The extent by which such restraints has fostered linkages is not available. However, it is the perception that as a result of protection obtained, the domestic products are not at par quality-wise and price-wise with those offered in the world markets.

For example, the Tariff Commission estimates that synthetic fibres produced in the Philippines is 169 per cent more expensive than the same product made in Taiwan Province of China, or that plastic buttons cost more than 3,000 per cent more than those foreign made.[3/]

A case in point is the paper packaging industry. Most exporters outside EPZs source their carton box requirements from domestic manufacturers which in turn buy materials from local paper board producers. When EPZA authorized an EPZ firm producing carton boxes from imported kraft paper to serve local exporters, the move elicited positive response from exporters.[4/] In effect,imported boxes were made available duty-free, but covered by re-export

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1/ CB 1029 and Amendments PD 1206, EO 609, 537 & 823.

2/ Primer on Import Procedures of Philippine Exporters - 1985, Ministry of Trade.

3/ IBON Facts and Figures, Vol.196, 5 October 1986.

4/ Letter of Foreign Buyers Association of the Philippines, 9 January 1984.

bond. They cited the reasonable price and high quality standard of the EPZ product compared with many local suppliers. Such factors enhanced their products' competitiveness with exporters in the Far East. As could be expected, the intrusion of the EPZ firm in their traditional market drew protests from the protected local industry as demands were displaced and under-utilization of existing capacities were aggravated.

6.5 EFFECTS OF LOCATION

It appears from the foregoing that export producers located outside of EPZs follow the same pattern of raw materials sourcing exercised by their counterparts in EPZs. Heavy dependence on imported inputs and the nature of incentive structure have reduced linkages with local raw material suppliers. Where local materials are used, sectoral groups from both ends buy materials of the same category: thread and yarns, plastic and carton packaging materials, fuel, industrial gases and office supplies.

In the case of thread and yarns which are regulated items, it is noted that those locally produced were used by EPZ firms even if they could be freely imported, indicating international acceptance of the products. This is also true in plastic and paper containers, although the products of EPZ firms producing such containers have gained headway with exporters, both inside and outside EPZs over local producers.

Location, per se, is therefore not a major factor in enhancing linkages of export industries and domestic producers of materials, although conditions outside of EPZs may have attracted more investments. It is the producers' availability in steady supply and consistent quality and price that guarantees patronage. This is supported by local purchases of the above products by EPZ firms in spite of their exemption from restrictions.

Simplified procedures is a factor that influences local sourcing. The procedures at BOI are well in place compared with EPZA. It facilitates early enjoyment of incentives or offers flexibility to BOI firms. EPZA procedures covering tax credits are constricted. Tax credit incentives for local purchase may be enjoyed only if the materials purchased form part of the product and only after they were exported. The tax credit certificate is not transferrable, and although the law provides for tax free purchases, there are no implementing rules. Tax free purchases from BOI firms were the result of private negotiations, not by established procedures. This could be the reason of consistent tax credit availments at BOI while EPZA managed to have only two applicants.

RITs and net local content incentives may make investments outside EPZs more attractive, but they do not generate significant linkages owing to the limitations on the type and price of local raw materials suited as inputs for export production.

VII. Conclusions and recommendations

7.1 FINDINGS AND CONCLUSIONS

As noted earlier, the linkages developed between EPZs and the domestic economy has been insignificant in most industries. Some of the reasons have been structural. The EPZ facility for free flow of intermediate inputs and export products sans taxes, combined conveniently with the investors' desire to lower production costs to better serve the markets. The primary lure was the inexpensive labour available. Because of the EPZ concept, investors enjoy the option to source their materials anywhere. In many cases, production specifications and procurement were undertaken by parent companies.

There was an evident bias in favour of sourcing materials from the parent company country, but nationality gives way to comparative advantages. Firms do not import only from parent companies. This is gleaned from the pattern of importations of the EPZ firms in the two zones. Despite the predominance of firms owned by US companies, 1985 imports from the US constituted only 49 per cent of total for BCEPZ and 65 per cent for MEPZ. For the Bataan EPZ garments firms (13 in all) which are controlled by diverse nationalities, Hong Kong and Japan, were the favourite sources of raw material imports.

EPZ firms will use local materials if they are constantly available at competitive prices and at acceptable quality. Among the reasons cited were (a) better chances for qualifying for GSP treatment; (b) faster delivery time; (c) low inventory to maintain; (d) proximity for consultations with suppliers; and (e) less monitoring functions.

The type of industrial activity of EPZ firms - taken together with the present state of Philippine industrialization has worked against the greater integration of local inputs. The inward looking domestic industries has been more concerned with their protected share of the local market resulting into high prices of output and low quality of products. On the other hand, the export markets served by the EPZ firms require the highest standards and competitive prices. The EPZ firms also used high technology materials or materials which were not made or grown in the Philippines at all.

EPZ industries recognize the importance of preferential tariffs in the export market. The GSP scheme was a dominant factor in sourcing raw materials especially for those whose main market is the US.

There is no official programme promoting linkages with domestic industries. The present procedures and incentives structure are deemed ineffective to encourage the purchase of local inputs over importation. Those who actually purchase local materials considered the procedures involving tax credits too cumbersome, leading to non-availment or entering into special arrangements with qualified local suppliers to acquire the input net of taxes.

EPZ style operations may be undertaken in the CTA through the facilities of bonded manufacturing warehouses. Outside EPZs, linkages are encouraged with incentives (often coupled with import restrictions) but only to the extent that locally available inputs are competititve in price and quality. Location by itself, does not enhance linkages in export industries.

The greatest potential for linkage lies in resource-based industries, particularly in the agro-industrial sector. Subcontracting production is another area which should be encouraged for its potential linkage development with CTA industries.

7.2 PERCEIVED ROLE OF EPZs IN THE PHILIPPINE DEVELOPMENT FRAMEWORK

The 1987-1992 Philippine developmental framework aims at the attainment of economic recovery. The plan calls for the revitalization of existing industries that are economically viable and the development of world-competitive industries to complement the projected growth of agricultural output and rural income. All efforts to increase in foreign exchange earnings shall likewise be pursued in order to finance imports (including those required for industrial expansion) and to meet foreign debt obligations.

Consistent with the plan's objectives, facilities of existing EPZs shall be made available to domestic industries, preferably to those which are labour intensive and local resources oriented. Linkages of trade and industry with the agricultural and natural resources sectors shall be improved in order to enhance their contribution to national development and increase domestic value added. The other objectives of EPZA's creation, promotion of employment, foreign exchange generation, technology transfer, industry dispersal, shall be pursued with renewed vigour.

Under the plan, the enclave nature of present EPZs shall be abandoned. EPZ industries must be encouraged to interact with domestic oriented industries paving the way for forward and backward integration. The EPZ industries shall remain to be based on factors such as the country's low wage labour force and comparative advantage for specific types of products, while the domestic industries shall be assisted to serve both the domestic and international markets. The latter shall provide subcontracting services and other support services to the EPZ firms within a particular regional industrial centre. The programme not only promises integration but probable achievement of economies of scale from revenues generated from concentrated industrial activities. This would lead to the build-up of enough resources to maintain and/or upgrade infrastructure and services.

7.3 POLICY RECOMMENDATIONS

The improved role perceived for EPZs under the 1987-1992 developmental plan, particularly in the promotion of linkages, may be further enhanced with the adoption of additional measures which are within the control of the EPZ authorities. Of course, the overall success of the programme on linkages hinges on the existence of an efficient environment nationwide that features (a) political stability; (b) highly improved delivery of services; (c) the upgraded capability of domestic industries to produce raw materials and intermediate goods expected to result from the import liberalization policy; (d) rationalized power and water costs; (e) a realistc peso-dollar exchange; and (f) prevalence of industrial peace and improved labour productivity.

The proposed measures are as follows:

(a) Decision functions particularly those involving movement of materials to and from the zones should be decentralized at the zone level in order to guarantee a responsive delivery of services. The zone administration should be equipped with adequate administrative and financial support to implement policy measures. It should be more dynamic in its role and establish more linkages with other government agencies and private entities that are involved in various aspects of zone operations.

(b) The EPZs should under specific circumstances (e.g. in specific new fields of production, etc.) be able to accept domestic market-oriented industries with export potentials in order to maximize existing facilities and to create more opportunities for forward and backward integration. Firms catering to the needs for intermediate inputs of EPZ firms should be extended duty free incentives in the importation of raw materials for their production. If this is not feasible, the EPZ firms should be authorized to import such materials to be "farmed out" to the domestic market in the EPZ under suitable and less bureaucratic arrangements.

(c) Instead of tax credit, an outright exemption from local taxes and fees for local purchase will encourage both EPZ firms and suppliers to establish permanent linkages. This is possible under the tax-free privileges attached to goods entering EPZs and exemption from sales and export tax provision of the internal revenue law applicable to export sales (sales to EPZ firms are treated as export sale). A supplier's accreditation scheme approved by the international revenue authorities and EPZA could simplify the task. The supplier need only to submit specialized documents as evidence of the sale and receipt at the zone of the materials.

(d) The EPZ firms should be allowed to subcontract certain production processes (without requirement of special permits) if conditions calling for such transactions exist. A system of accreditation of subcontractors should be adopted in order to avoid the tedious verification processes and case by case approval presently prevailing at EPZA. For newly registered firms, the intention to subcontract work processes must be disclosed to EPZA at the time of project application.

(e) EPZ firms should be authorized to sell in the CTA without further EPZA approval if the goods involved are included among the items liberalized for importation, subject of course to the payment of the appropriate duties and taxes.

(f) While selectivity is not practical because of the present low occupancy of the EPZs, its marketing and promotional efforts should be geared to attracting more resource-based industries. The potentials of the country's vast natural resources, particularly in the agro-industrial sector is great. Foreign firms processing raw materials grown or indigenous to the country should be identified and encouraged to establish in the EPZs with reasonable incentive packages, like premium on lease rentals or tax incentives commensurate to the value of local materials used and labour applied thereon.

(g) Sponsorship of market encounter programmes where the EPZ firms' raw material requirements are announced or published and assistance extended to both buyers and producers to ensure legitimate wholesome business relationship. This may be achieved in a marketing and promotions unit at EPZA with tasks such as the development of data, management of trade fairs, etc.

(h) Establishing tie-ups with trade and vocational schools in the regions hosting the industrial centre for purposes of harmonizing the EPZ skills requirements with the institution's curriculum. The participation of an EPZ firm's foreign expatriate technician, in the instruction, imparting administrative supervisory and technical skills in a programme approved by EPZA, should be considered substantial compliance with the required understudy programme. Materials and equipments used in training provided by EPZ firms should be treated as part of deductable labour expenses.

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