

THE ECONOMIC IMPACT OF EXPORT PROCESSING ZONES: A CRITICAL SURVEY

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INTRODUCTION

Since the late 1960s, a growing tendency to establish free trade zones (FTZs) and export processing zones (EPZs) have been observed in many countries. FTZs and EPZs are regions located inside the political boundaries of a country but considered to be outside the jurisdiction of the customs and foreign exchange regulations. These zones consist of limited areas of land and they are separated from the surrounding host country's territory by fences and other barriers.

Since 1971, the United Nations Industrial Development Organization (UNIDO), has been approached by many developing countries seeking various type of technical assistance in establishing or reorganizing EPZs. UNIDO drew up a plan for a model EPZ and several governments have adopted its provisions for zone administration, infrastructure, tax holidays and other incentives. In addition, in February 1978, the World Export Processing Zones Association (WEPZA) was founded in Manila, which is also accredited to UNIDO as a consultant on EPZs. Currently, 19 countries are members of this association, and the Flagstaff Institute (Arizona, U.S.A.) is the permanent WEPZA Secretariat for the 1986-1990 period (WEPZA Secretariat, 1987).

Scope and Purpose

The purpose of this article is to overview the economic impact of EPZs with respect to past experience of developing countries without undertaking any case study. Instead of concentrating on one or two countries, this study intends to make a critical survey of the most recent existing literature in order to highlight lessons of experiences of the EPZ countries for the purpose of identifying the

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factors that are responsible for the successes or failures of these countries. Finally, a brief summary and major findings of this research will be presented in the last part of this study.

The need for the study of the economic impact of EPZs is very important, given the very rapid rate of growth of these zones throughout the developing world especially during the 1980s. Because, information on EPZs published ten or even a few years ago is now becoming out dated; therefore, the topic requires continuous updating. Thus, more updated information and understandings about this subject is needed.

Method and Problems

In spite of very rapid increase in the number of EPZs in developing countries, the knowledge and statistics about the magnitude of the economic impact of these zones is hardly measured. In fact, because of this limited information, concerning not only the economic impact but also the operations of EPZs in developing countries, an analytical evaluation of the experiences of these countries can not be made comprehensively. Thus, this evaluation can only be tentative and of necessity on a selective basis. To analyze this topic the role of EPZs is viewed only for developing countries and their impact analyzed for those where data has been available.

The reader should not expect to find a fully complete assessment of the role of the developmental impact EPZ on any host country. The scarcity of data and the availability of information are the main constraints for a sound evaluation. In spite of these limitations, this study intends to initiate some work and to provide a modest contribution to the literature on this recently developing important subject.

PART I

CHARACTERISTIC AND DISTRIBUTION OF THE EXPORT PROCESSING ZONES

1. Historical Background and Economic Characteristics of Export Processing Zones

A. Historical Background of EPZs

One of the most important development which took place in the world economy during the last two decades is the growth of EPZs in the developing countries. They have been growing in terms of both number and employment. For example, in 1970, there were only 20 EPZs in 10 developing countries. By 1986, in 46 developing countries 175 EPZs were in operation, 85 were under construction, and over 25 were at the planning stage. In addition, employment in these zones increased from 50.000 in 1970 to over 1.3 million in 1986 (1).

(1) ILO (1988) pp. 1-2 and 15.

Before EPZs were established for the operation of export industries FTZs were established in many developing and developed countries in order to handle and speed up the eventual customs clearance of imported materials. Their orientation were/are towards local markets rather than export.

The modern export oriented EPZ can rightly be considered as an Irish invention. The first EPZ was established at Shannon International Airport in Ireland in 1959. That year the Irish Government transformed the airport area into a EPZ by supplying fiscal and non-fiscal incentives to the foreign firms for the establishment of manufactured facilities in the area. Thus, the Government transformed the old-age concept of the free trade zone into the modern concept of an industrial export processing zone (2).

EPZ concept was used secondly by Puerto Rico, when a free zone was established 1962 for the location of manufacturing activities in the Island. Before 1970, a number of developing countries, namely India, Dominican Republic, Brazil and Colombia established their export processing zones. Then, the real growth of the number of EPZs occurred in 1970s, especially in South East Asian, Middle Eastern and North African countries (3).

B. Economic Characteristics of EPZs

The main characteristics of the EPZs lie in the idea of developing such a zone for manufacturing and export purposes, and not just for storage or trade as in the case of free trade zones. Free trade zones which were mostly established in developed countries were used to play mostly a commercial role in the past. Recently, they are also increasingly being used for the manufactured and assembled goods most of which are ultimately imported into the domestic markets. Thus, import orientation of FTZs is a clear contrast to the export oriented nature of EPZs established in developing countries.

In any case the EPZ has two main characteristics: Firstly, it is an "enclave" which enjoys a status that does not extend to the whole territory of the host country. Secondly, enterprises established in the zone must export their production. In EPZs, activities permitted include manufacturing, procesing and assembling for export. In general, each zone is intended to foster economic cooperation and technical exchanges between the host and more developed countries by encouraging foreign investment and to diversify sources of foreign exchange earnings by increasing exports, employment generation and thereby to accelerate economic development of the country (4).

(2) *Ibid.*; UNCTAD (1985), pp. 1-21.

(3) *Ibid.*; O. Kreye et. al. (1987), pp. 6-7.

(4) L. Sklair (July, 1986), pp. 754-755.

In order to reach their goals, EPZs should have sophisticated infrastructure and they should be as open as possible in order to encourage close relations between foreign and domestically owned firms. Thus EPZs should encourage more joint ventures between local and foreign investors.

C. Incentives in EPZs

a) Financial Incentives

Many developing countries offer a number of incentives to attract investment capital and technology to export oriented industries within their zones. In addition to their highly sophisticated infrastructure and subsidized services, they offer tax holidays for 2 to 10 years, depreciation allowances, tax reductions for exports and other rebates and deductions.

In most cases, the time period of tax holidays or exemptions is changed with respect to type of investment. In general, 5 to 10 years tax exemptions are offered companies investing in education, training, health, scientific and technological development, water and power supply, transportation and other infrastructural projects. Enterprises in directly productive activities are usually granted a 100 per cent tax exemption in the first 2 to 5 years and 50 to 25 per cent in the following years (5).

In some cases, such as Hong Kong, the country refrains from offering investors tax holidays and subsidies. Instead, the country attracts investors with an absence of restrictions, including full exemption from import and export duties and exchange controls (6).

Duty free imports of capital goods such as machinery, equipment, spare parts and construction materials, and raw materials as well as packing materials for re-export are also generally granted in each zone.

Export duties are not levied on finished and semi finished products unless they are shipped into the host country's domestic market. If the products are sold within the zone, an exemption or reduction of some of the taxes may be negotiable. Sometimes, duties may be charged at the full rate, reduced or remitted on items needed of those living and working in the zone. In most of the EPZs, exemption from duties, excise taxes and other state and local taxes are also guaranteed (7).

b. Non-Fiscal Incentives

Foreign investment law of each host country guarantees free transfer of capital and profits which are derived from dividends,

(5) For further information about case studies, see W. Dimond and D. Dimond (1988) Volumes 1-3; Germidis (1984), pp. 37-38; SESRTIC (1986).

(6) *Ibid.*, Volume 1, pp. 2-3, Hong Kong.

(7) For case studies, see *Ibid.*, Volumes 1-3; P. Warr (1987a), pp. 221-224.

royalties, interest and other earnings, and other income from the zone operations and compensation in the event of expropriation.

Other non-fiscal incentives are freedom to employ foreign nationals in supervisory, technical or advisory positions, unrestricted degree of foreign ownership, priority in allocation of concessionary government guaranteed loans at subsidized interest rates; simplified import and export documentation; and availability of high level of infrastructure facilities (8).

In addition to above mentioned financial and nonfinancial incentives, availability of sophisticated infrastructure facilities in the zone as well as an efficient labor market and stable political conditions in both host and neighboring countries are the most important prerequisites to attract more foreign firms to the EPZs. Infrastructure facilities include standard factory buildings for production and manufacturing operations, adequate electrical power and water supply facility, highly sophisticated telecommunication systems, roads and drainage, very large warehouse for storage of raw materials and finished products, parking, recreation and dining halls to cater to the needs of employees of zone enterprises, health center and other services facilities (9).

Every one knows that a developing country cannot attract an industrial foreign company unless the country has sufficient physical facilities in the zone. Realization of these infrastructure facilities is very expensive and they mostly have to be financed and supplied at subsidized rate by the public sector of the host countries.

2. Reasons for Increase in the Number of Export Processing Zones and their Global Distribution

A. Reasons for Increase in the Number of EPZs in Developing Countries

One of the main motivations underlying the creation of EPZs in the late 1960s and 1970s was the acceptance of the concept of export-oriented industrialization as a more appropriate development strategy with respect to Import Substitutions (IS) (10).

However, many planners of the developing countries quickly realized that the transition from IS to export oriented strategy was not easy to implement in practice. Because, a sudden transition from high protection to open international competition would probably have created some economic and social damage on heavily protected domestic economy. Then, establishment of EPZs appeared to many developing countries as the ideal solution to start their

(8) *Ibid*; D. Spinanger (1984), pp. 68-71, 75.

(9) P. Warr (1985), pp. 11-13, 21, 26-28; J. Kent (March 1986), pp. 50-51; P. Perry (March, 1986), pp. 36-37; P. Ryan (March, 1986), pp. 54-55.

(10) For further information, see B. Blassa (1981), pp. 5-8; A. Kruger (1984), pp. 528-530; E. Çarıkcı (1988), pp. 6-10; E. Çarıkcı (1987), p. 40.

liberalization attempt as a risk-free experiment. Because if it succeeds, it would bring export revenue and generate additional employment without entailing any detrimental effect for local enterprises, if it failed, its adverse economic and social effects would be at a minimum level due to its isolated character from the local economy. As a result, in late 1960's and 1970's, some of the developing countries declared their intention to open up EPZs as a part of their liberalization programs (11).

In addition to the internal pressures for liberalization in developing countries, external forces have also been a contributing factor for the rapid increase in EPZs. Since 1970's developed countries have lost their comparative advantages in labor intensive manufactured products. Thus, the worldwide process of industrial relocation have started as a result of the decline of a number of labor intensive industrial sectors in the industrialized countries. Through the establishment of EPZs developing countries responded to this new opportunity for attracting direct foreign investment in labor-intensive but export-oriented manufacturing resulting from industrial relocation. Thus, due to combined effect of these two domestic and external factors establishment of EPZs have rapidly been increased during the last decade (12).

B. The Global Distribution of EPZs

Since early 1970's, there has been a steady increase in the number of EPZs established throughout the developing world. Number of EPZ countries and zones themselves have doubled from 1975 to 1986. In 1975, 79 EPZs were in operation in 25 different developing countries, whereas in 1986, this had increased to 176 zones in 46 countries (13).

South East Asian countries took the lead, followed by Central American and North African countries by setting up a number of EPZs in 1970's. The existence of EPZs has nothing to do with the size, population and level of per capita income of the country. It has nothing to do with the economic and political system of the country either. For example, Red China's special economic zones came into existence under a law issued by the government in 1980. Shenzhen, Zhuhai, Shatou and Xiamen zones were established during the early 1980's. Under the 1984 decree, the government allows the four special Economic Zones (EPZs) and the 14 coastal cities designed as potential sites for foreign investment (14).

As regards the regional distribution in 1986, 95 EPZs were in

(11) ILO (1988), pp. 53-54; D. Jayawardena (Sept.-Oct., 1983), p. 440.

(12) E. Lee (1984), p. 6; ILO (1988) p. 68; M. Arif and H. Hill (1985), pp. 23-24.

(13) O. Kreye (1987) p. 6; for 1986.

(14) Dimond and Dimond (1988), Vol. 2, pp. China 5-6.

operation in Asia and Pacific, 56 in Latin America and Caribbean, and 25 in Africa (15). In terms of EPZ employment, again Asia is a leading region. Table-1 shows that total employment in such zones reached to 1.3 million people in 1986. Out of this total 787.7 thousand (60.6 percent) people employed in Asia, 382.3 thousand (29.3 percent) in Latin America and Caribbean, and remaining 131.2 thousand (10.1 percent) in Africa.

In Asia, which accounts 60.6 percent of all EPZ employment in developing countries, five main EPZ countries namely Singapore, South Korea, Hong Kong, Malaysia and Taiwan account for 77.2 percent of total EPZ employment (787.7 thousand) in the region. In Latin America and Caribbean, Mexico and Brazil account for 82.1 percent of total EPZ employment (381.3 thousand) in the region. In Africa, 96.5 percent of this region's EPZ employment were employed in three main EPZ countries namely Mauritius, Tunisia and Egypt (see Table-1).

Table 1
Employment in EPZs in 1986 as a Percentage of Total EPZ
Employment in each Region and Country

Region and Country	Percentage	Total Employees
ASIA	(60.6)	787,700
Singapore	27.4	
S. Korea	17.8	
Hong Kong	11.3	
Malaysia	10.4	
Taiwan	10.2	
Macau	7.9	
Philippines	5.0	
Sri Lanka	4.4	
Others	5.5	
LATIN AMERICAN AND		
CARIBBEAN	(29.3)	381,300
Mexico	65.6	
Brazil	16.5	
Dominican Republic	9.4	
Others	8.5	
AFRICA	(10.1)	131,200
Mauritius	47.0	
Tunisia	30.5	
Egypt	19.0	
Others	3.5	
TOTAL	(100.0)	1,300,200

Source: Derived from ILO, **Economic and Social Effects of Multinational Enterprises in Export Processing Zones**, (Geneva, ILO, 1988), Figure 2, on p. 10.

(15) O. Kreye, et. al. (1987), Table 3, on pp. 8-9.

PART II**THE ECONOMIC IMPACT OF EXPORT PROCESSING ZONES: THE PAST EXPERIENCES WITH EPZs IN DEVELOPING COUNTRIES****1. Objectives and Functions of Export Processing Zones**

EPZs are established by developing countries for the purpose of realization of some of the following objectives (16).

- to create employment and/or reduce unemployment,
- to diversify export base by promoting manufactured exports,
- to increase foreign exchange earnings,
- to attract foreign capital and advanced technology,
- to upgrade labor and management skills,
- to create external economies to the local firms through the linkages between EPZ industries and the domestic economy.

In order to assess the economic impact of EPZs, realization of above mentioned expected objectives have to be evaluated with respect to recent experience of developing countries.

2. The Employment Effects of Export Processing Zones

One of the most important motivations for the creation of EPZs during the last two decades was to increase manufacturing employment and to generate jobs for the large number of newcomers into the labor force.

A. Employment Growth in EPZs

As it is mentioned before, in 1986,46 developing countries were actively involved in the EPZ business, and total employment in these zones reached to 1.3 million people. Out of this total, more than 1.2 million people were employed in 14 main EPZ countries (see Table 2). Table 2 also shows that employment is not distributed evenly among these 14 countries. The largest 6 EPZ countries namely Mexico, Singapore, South Korea, Hong Kong, Malaysia and Taiwan, account for about 2/3 of total EPZ employment (859,000/1,300,000) in developing countries. The Table also indicates that most of the leading countries in terms of EPZ employment happen to belong to the group of Newly Industrializing Countries (NICs).

Second column of the Table 2 also shows that, in each leading EPZ country, total EPZ employment as a percentage of total manufacturing employment varies considerably. Firstly, in some small main EPZ countries such as Macau and Mauritius more than 75 percent of employment in manufacturing sector is accounted for

(16) UNCTAD (1985), p. 4; P. Warr (1985), p. 9; Journal of Flagstaff Institute (February 1987), p. 34; Aleybeyoğlu (1986), pp. 69-70.

EPZ enterprises. Secondly, except Mexico, in larger countries (in terms of both land and population) namely Brazil, Egypt, Philippines, South Korea and Taiwan EPZ employment was less than 6 percent of total manufacturing employment. Finally, in rest of the countries listed in the Table, EPZ employment as a percentage of total manufacturing employment ranges between 9.5 cent and 35 percent. In mid-1980s, this average percentage for 48 developing countries was only 2 percent.

In the large countries, only in Mexico the EPZ employment reached to 10 percent of the total employment in the manufacturing industry. Because, the Border Industrialization Program of Mexico (The Maquila Program) started in 1969 in order to ease the unemployment problem and to develop the border region which is far from the center of heavily populated industrial center of Mexico. In 1969, five thousand employees were employed in Maquila industries. By mid-1980s, this figure had reached to 225,000 (17).

Table 2
The Main Export Processing Zone Countries in 1986 and
Employment in Their EPZs as a Percentage of Total Manufacturing
Employment

Country	Total EPZ Employment (1986)	% of Manufacturing Employment
Mexico	250,000	10.0 (mid-1980s)
Singapore	217,000	35.0 (1980)
South Korea	140,000	5.5 (mid-1980s)
Hong Kong	89,000	9.5. (mid-1980s)
Malaysia	81,700	23.0 (1980)
Taiwan	80,500	4.8 (mid-1980s)
Brazil	63,000	1.5 (mid-1980s)
Macau	62,500	90.0 (mid-1980s)
Mauritus	61,700	78.0 (1984)
Tunisia	40,000	20.0 (mid-1980s)
Philippines	39,000	1.2 (mid-1980s)
Dominican Republic	36,000	22.0 (mid-1980s)
Sri Lanka	35,000	16.0 (1981)
Egypt	25,000	1.5. (mid-1980s)
Total	1,220,400	
Average, 48 developing countries		2.0 (mid-1980s)

Source: Derived from ILO, **Economic and Social Effects of Multinational Enterprises in Export Processing Zones**, (Geneva, ILO, 1988) Figures 1 and 3 on pp. 8 and 21-22 respectively.

(17) For further information, ss G. Ochoa (1986) in **Journal of Flagstaff Institute**, pp. 30-32.

B. The Structure and Length of Employment in EPZs

The recent studies concluded that the employment structure of EPZs in developing countries are very similar and this structure does not change overtime. The main characteristics of zone workers are as follows (18):

- more than 75 percent of zone employment is women;
- predominantly within the age group of 16-25 years;
- around 2/3 unmarried and without previous factory experience;
- predominantly unskilled or semiskilled but they are relatively well educated;
- female workers are paid lower wages than male workers of similar grade and skills;
- employed in monotonous assembly operations as production workers;
- the turnover is very high and average duration of zone employment is less than three years.

The most recent ILO study confirmed that, in early 1980's, the proportion of women in the total EPZ zone employment was 77 percent in Mexico, 75 percent in South Korea, 85 percent in Malaysia, 79 percent in Macau, 90 percent in Tunisia, 90 percent in Indonesia, 80 percent in India, 74 percent in Philippines and 68 percent in Egypt (19).

The ILO study also indicated that, in early 1980's, share of female employment in non-EPZ manufacturing firms operating in the above mentioned countries amounted to: Mexico, 24.5 percent; South Korea, 37.5 percent; Malaysia, 32.9 percent; Macau, 48.1 percent; Mauritius, 10.0 percent; Tunisia; 48.1 percent; Philippines 48.1 percent; Indonesia, 47.9 percent; India 9.5 percent and Egypt 16.5 percent (20).

EPZs continue to demand overwhelmingly un- and semiskilled young women who are entering the salaried labor force for the first time, and who tend to quit their EPZ job a few years after when they get married. Low proportion of women in the manufacturing sector of each EPZ country indicates that very high rate of female participation in EPZ employment is most probably due to the nature of EPZ industries and not to social traditions, economic factors and cultural values of each country.

(18) P. Warr (1985) p. 24; UNCTAD (1985) p. 18; O. Kreye, et. al. (1987) p. 17; ILO (1988) Table 8 on pp. 60-61; M.L. Possas, et. al. (1987) pp. 4 and 13; F. Frobel, et. al. (1980) pp. 344-345 and 350-353.

(19) ILO (1988), Tablo 8 on pp. 60-61

(20) *Ibid.*

Educational level of EPZ workers are quite impressive. It is found that in 1982, in the Bataan EPZ of Philippines, 60 percent of workers were high school graduates and close to 17 percent had received post-secondary education. Similar high education level is also observed in other EPZs of Far Eastern countries (21). Their highly educated workers are easily trainable who are quickly adaptable to a wide range of skills while wages remain relatively low.

C. Working Conditions and Wage Levels in EPZs

Most important reason for the foreign investors to relocate labor-intensive manufacturing activities in EPZs of developing countries are the availability of low-cost, hard working, reasonably well educated and thereby easily trainable manpower. It is the fact that the wages in developing countries are low compared to those in the industrialized countries. For example, in the United States, average wage earning in manufacturings sector increased from \$ 7.27/hour in 1980 to \$ 9.54/hour in 1985 (22). As can be seen from the Table 3, wage earnings per hour in USA is almost equal to daily (8 hours/day) earning of each skilled worker in most of the EPZ countries. This type of wage comparison and a somewhat exaggerated picture of harsh employment conditions are considered as "super-exploitation of the labor-force" in the EPZ industries (23).

Working conditions in EPZs can only be understood in the context of conditions prevailing in the labor markets of the developing countries. Wage levels in EPZs are only a small fraction of wages in industrialized countries. But, wages in EPZs do not generally deviate from that prevailing elsewhere in the EPZ countries (24).

It is also recently stated that wages in EPZs are 10 to 25 percent lower than those found in similar manufacturing sectors in the host country. These variations cannot simply explain the exploitation of labor in EPZs due to the following reasons. Firstly, there is always sharp difference between wages of female and male workers in all countries. Male workers in general are paid around 50 percent higher than female workers in similar industries which are located in both EPZs and host countries (25). As stated before, female workers are always more than 75 percent of work force in EPZs. Secondly, variation in the wage rates is related to the type of work done, by the

(21) P. Warr (1985), p. 24.

(22) ILO (1987), p. 744. Wage earning refers to cash payments received from employees before deduction of taxes and social security payments and include remuneration for normal working hours, overtime pay and all fringe benefits paid by the employee.

(23) For further information, see F. Frobel, et. al. (1980), pp. 350-364.

(24) E. Lee, ed. (1984), pp. 20-21.

(25) M.L. Possas, et. al. (1987), pp. 12-13.

Table - 3
Minimum Wages and Fringe Benefits for Unskilled and Skilled Workers in the EPZs of the Selected Developing Countries
(U.S. Dollar/Hour, Mid-1970s and 1980s)

	Unskilled Mid-1980s	(Mid-1970s)	Skilled Mid-1980s	(Mid-1980s)	Fringe Benefits, Mid-1985 (% of basic wages)
EUROPE					
Greece	1.25-1.50		2.00-2.50		n.a.
Ireland	2.00-2.50		3.00-3.50		16.4
Spain	2.00-2.30		3.00-4.00		33.0
Turkey	0.45-0.60		0.80-1.20		19.0-30.0
Yugoslavia	1.00-1.25		1.50-1.75		n.a.
MIDDLE EAST AND NORTH AFRICA (MENA)					
Egypt	0.50-0.65		0.75-1.00		n.a.
Israel	2.00-2.50		3.00-3.50		26.0-50.0
Jordan	1.25-1.50	(0.50)	2.50-3.00	(1.88)	n.a.
Lebanon	1.25-1.50		2.50-3.00		15.0-20.0
Morocco	0.50-0.70	(0.34)	0.70-1.00	(1.10)	30.0-40.0
Syria	1.00-1.75		2.50-3.20		n.a.
Tunisia	0.75-1.00	(0.39)	1.25-2.00	(0.68)	

	Unskilled Mid-1980s	(Mid-1970s)	Skilled Mid-1980s	(Mid-1980s)	Fringe Benefits, Mid-1985 (% of basic wages)
FAR EAST AND PAKISTAN					
China (P.R.)	0.70-0.80		1.00-1.50		20.0-25.0
Hong Kong	0.45-0.90		1.00-2.10		16.0
Indonesia	0.30-0.60		1.00-1.30		50.0-90.0
South Korea	1.25-2.40		2.50-5.50		50.0-60.0
Malaysia	0.60-0.90	(0.18)	2.00-5.50	(0.42)	n.a.
Pakistan	0.25-0.35		0.60-0.80		n.a.
Philippines	0.30-0.55	(0.15)	1.00-1.50	(0.28)	40.0
Singapore	0.30-0.60	(0.38)	2.00-4.00	(0.72)	25.0
Sri Lanka	0.20-0.30		0.25-0.50		n.a.
Taiwan	0.30-0.40	(0.23)	2.25-3.00		40.0-50.0
SOUTH AMERICA AND MEXICO					
Argentina	3.00-3.50		4.00-4.50		30.0
Brazil	0.40-0.50	(0.30)	1.25-1.50	(1.25)	46.5
Chile	1.05-2.40	(0.39)	3.00-4.00	(1.14)	40.0-50.0
Colombia	0.50-0.75	(0.24)	1.25-1.50		48.2
Mexico	0.50-0.90		1.80-2.50		50.0-65.0

n.a. = not available

Source: Derived from W.H. Dimond and D.B. Dimond, *Tax-Free Zones of the World, Volumes 1-3*, (New York, Matthew Bender & Co. Inc. 1988); For the figures mid-1970s, see F. Frobels, et. al, *The New International Division of Labor*, (London, Cambridge University Press, 1980), Tablo III. 14 on p. 351.

different categories of workers and sector of employment. For example, garment and textile firms tended to pay lower average wages to the unskilled female workers than the electronics firms. Some of the EPZs are concentrated on electronics/electrical machinery as in the case of Malaysia and Mexico, whereas in Mauritius, Dominican Republic, Sri Lanka and Egypt overwhelming majority of EPZ workers are employed in textiles and garments industries (26).

Table-3 proves some data on minimum wages and fringe benefits in most of the EPZ countries. The wage levels have to be considered as a rough indicator due to the disparate nature of the data which meant that hourly wages had to be mostly calculated from the daily wages of EPZs.

It is also important to note that, in many countries of EPZs, minimum wages per hour (per day) differ with respect to the district of the developing country (27). For example, in Mexico, minimum wages range from \$ 6 to 7 per day in the northern part of the country to \$ 5.6 a day in the border zones (28).

Table 3 also shows that in most of the EPZ countries, fringe benefits in the zones range from 20 to 50 percent of the basic wages and salaries. Total fringe benefits usually includes social security contributions, free housing or housing allowance, insurance, payments for national holidays, bonuses and payments from the profit sharing plan (29).

The Table also indicates that the level of wages in Egypt, Indonesia, Morocco, Pakistan, Philippines, Sri Lanka and Thailand are lower than the wages of more developed for Eastern countries such as Hong Kong, Singapore, South Korea and Taiwan. In spite of this, the EPZs of the second group of countries are more successful than the formers due to the following reasons: Firstly they have more stable political and economic systems than the other EPZ countries. Secondly, their labor forces have a higher percentage of educated and technically trained people. In Hong Kong and Singapore some of the educated and skilled are being recruited from India, Malaysia and the Philippines.

In South Korea and Taiwan, the labor force is highly educated and easily trained, but is not as large as in previous years. Because, unemployment in these countries is less than 2 percent of their labor forces. In these countries highly skilled and productive labor force provides an excellent comparative advantage for products manufactured for export in their zones in spite of very rapid increase

(26) ILO (1988), Table 5 on pp. 38-39.

(27) For details in formation, see EIU (1985), pp. 46-213.

(28) Dimond and Dimond (1988), Vol. 2, pp. 3-4, Mexico.

(29) *Ibid.*, 1988-Vol. 1 and 2

in their wage rates during the recent years. For example, in 1987, in South Korea, unskilled workers were paid from \$ 213 to \$ 574 per month while the skilled labor earned about \$ 451 to \$ 996 per month in addition to the fringe benefits ranging from 50 to 60 percent of their basic wages and salaries (30).

3. Industrial and Other Economic Impact of Export Processing Zones

A. Major EPZ Industries and Industrial Impact

Major activities in EPZs are textiles and clothing, electrical and electronic products, footwear and leather products. The secondary important activities are other metal products, sports goods and toys and "other" activities (see Table-4). The other activities include furniture and wood products, plastic and rubber products, chemical products, jewelry, watches and clocks and optical products.

Table-4 indicates that in every EPZ country, there is one dominant industrial activity in the EPZs. Textile and clothing industry is dominating in Mauritius, Bangladesh, Colombia, Dominican Republic, Haiti and Jamaica, electrical and electronic products in Malaysia, Taiwan, Barbados and Mexico, footwear and leather products in Sri Lanka. Similar pattern also prevails in other EPZ countries. For example, in Brazil, Singapore and India the dominant industry is electronic products whereas textile and clothing is in Egypt (31).

The rate of industrial concentration varies from one EPZ country to another. For example, in Mauritius, Bangladesh and Jamaica textile and clothing industry accounts more than 80 percent of employment, in Malaysia, Taiwan, Barbados and Mexico less than 60 percent concentration in electrical/electronic products.

It is recently estimated that in the mid-1980s, the electrical and electronic industries accounted for 42.5 percent of total EPZ employment in the EPZ countries, whereas 26.5 percent for textiles and garments industry, with the remaining 30-31 percent for all other EPZ industrial activities such as footwear and leather products, transportation equipment, furniture and wood products, jewelry and others (32).

(30) *Ibid.*, Vol. 2, p. Korea 5.

(31) ILO (1988) pp. 37-39. Due to the scarcity of data on the production structure of EPZ enterprises, employment or establishments data is used for the approximation of the production structure in EPZs. For further information, see *ibid.*, p. 37.

(32) *Ibid.*, p. 70.

Table 4
Main Industrial Activities in Export-Processing Zones by Product Groups in Selected Countries,
(Various Years)

	Year	Textile and clothing	Footwear and leather products	Electrical and electronic products	Other metal products	Sports goods and toys	Other	Total (percent)
Mauritius (1)	1986	91	1		3	2	3	100
Bangladesh (1)	1986	81		1	15		3	100
Sri Lanka (2)	1981		68		3		29	100
Malaysia (2)	1984	13		58	6	6	17	100
Philippines (2)	1980	30	11	13	12		34	100
Taiwan (1)	1983	17	4	54	6		19	100
Barbados (1)	1985		36	56		8		100
Colombia (3)	1985	46	3	10	23		18	100
Dominican (4)	1985	56	15	4	4		21	100
Haiti (5)	1981	36	7	21	2	23	11	100
Jamaica (1)	1985	89					11	100
Mexico (1)	1980		16	60	9		15	100

(1) By employment

(2) By establishments

(3) By employment (only zona franca de Baranquilla)

(4) By establishments (only four EPZs)

(5) By US imports under tariff item 807.00.

Source: O Kreye, J. Heinrids and F. Frobels, **Export Processing Zones in Developing Countries: Result of a New Survey** (Geneva, ILO, 1987), table 5 on P. 16.

B. The Ownership Structure, Transfer of Foreign Capital and Technology of EPZ Firms

Recent ILO study clearly indicates that contrary to the expectations of developing countries, EPZs are attracting very little foreign capital and investment. In 13 major EPZ countries, the share of fully foreign-owned or largely foreign-owned firms account for only little over 1/3 of all EPZs enterprises in these countries. Domestically owned enterprises and joint ventures account for a 29 percent and 39 percent of total, respectively (33).

The weight of domestic investors should be increased further when we include their share in joint EPZ ventures with foreign investors. In this case, it is estimated that approximately 44 percent of EPZ enterprises are controlled by domestic investors. Therefore, the share of foreign firms does hardly exceed 50 percent (around 55 percent) of all EPZ enterprises in these 13 selected countries (34).

In EPZ industries, both production and employment are concentrated on a small number of branches and product groups, led by textiles and clothing, together with electrical and electronic products. From mid-1970s to mid-1980s there is only minor changes in this concentration, but there has been no market diversification in the structure of industrial activities in the most of the EPZ (35).

It is stated that as a physical, economic and even social enclave in the host country, most EPZ enterprises are not very successful in achieving technological linkages between foreign subsidiaries and the economy of the host country. One of the main factor which discourages the development of these technological linkages is the weakness of their relationship with the local suppliers due to heavy reliance of EPZ firms on imported inputs and machinery.

It is important to note that the possibility of developing such technological linkages is heavily influenced by the level of host country's industrial development level and the competitiveness of local suppliers in terms of price, quality and delivery on time.

In addition, most of the technology of EPZ industries such as garments and textiles which accounts for over 1/3 of all EPZ employment are well known by the host countries which are compelled to import these sophisticated machineries from the industrial countries, and the output of the EPZ firms are mostly exported to the investor's country of origin. Thus, due to the weakness of the backward and forward linkages, EPZs can play at best a very limited role in transferring the technology to the local industry (36).

(33) For further information, see *Ibid.*, Table-1, on pp. 26-27.

(34) *Ibid.*, p. 28.

(35) O. Kreye, et. all. (1987), pp. 14-15.

(36) For further information, see A. Germidis (1984), pp. 50-51; ILO (1988), pp. 107-117.

Nevertheless, observations also show that the EPZ may, in some cases, have a substantial "demonstration effect" both for the local labor force and the managers. The technological, managerial and other practices in the investor's country of origin are demonstrated into host country through the EPZ firms. For example, as the years go by, it is expected that there is probably some transfer of technology, know how, managerial skills, discipline in production, quality control and marketing experience which are gained through the joint venture activities in the EPZs into the host countries, even though documentation of this process is very difficult (37).

C. Export of EPZ Industries and Foreign Exchange Earnings

One of the main motivations for establishing EPZs was to promote the export of manufactured goods by attracting foreign enterprises to invest in these zones. As it is mentioned before, EPZ industries tend to use a very high proportion of imported inputs such as components, parts, raw materials and semifinished goods. Therefore, their real contribution to the host country's trade balance should be measured on the basis of net exports, i.e. total exports minus imports.

As can be seen from the Table 5, the net export performance of EPZ industries varies considerably from one EPZ country to another. The table includes only 11 EPZ countries which account for around 45 percent of EPZ employment in the developing countries. In this sense, it can be considered as a representative table. Currently information on the real (net) export performance of all EPZ countries is not available (38).

The table shows that the net EPZ exports as a percentage of total EPZ exports are more than 50 percent in South Korea, India and Indonesia, but it is around 5 percent in Malaysia and Sri Lanka, and minus figures in Brazil and Barbados.

The table also indicates that after the initial years of the establishment of EPZ, the real export performance of EPZs is increasing, as in the case of South Korea, Malaysia, and Indonesia.

In the case of Brazil, the net export figure has been continuously negative, because there is no fully-fledged EPZ in the country. The Manaus Free Zone of Brazil was originally established as an EPZ, but it was later transferred into an import processing zone (IPZ) in a few years. Because there were no particular incentives in the legislation of this zone for exports. Enterprises in this zone directed their very heavy import oriented production and sales to the domestic market. Consumer electronic, transportation, optical equipment and watches are the main activities of this zone. In 1983, first two activities employed more than 50 percent of the 50,000

(37) *Ibid.*

(38) ILO (1988), p. 44.

employees in the zone (39). In the zone, firms are mostly importing semifinished goods, and transform them for subsequent sale on the domestic market. In this case, the economic contribution of the Manaus Zone to Brazil should not be evaluated with respect to net exports, but in terms of the value added at the processing stage in the zone.

Table 5
Net EPZ Exports as a Percentage of Total EPZ Exports in Selected Developing Countries

Country	Year	Net EPZ exports as % of total EPZ exports
Republic of Korea ^a	1971-73 average	34.3
	1974-76 average	51.1
Malaysia	1974-76 average	- 5.2
	1977-79 average	5.6
Brazil	1968-70 average	- 41.5
	1978-80 average	- 658.0
Mauritius	1983-86 average	24.2
Philippines ^b	1976-78 average	33.6
	1979-81 average	25.7
Dominican Republic	1984	28.0
Sri Lanka	1980-81 average	5.1
India ^c	1974-75 average	59.9
	1976-77 average	
	1977-78 average	52.4
	1979-80 average	
Indonesia	1978	0.8
	1981	50.3
Barbados ^d	1980	- 36.5
Taiwan, China	1972-75 average	14.0

a. Masan EPZ only

b. Bataan EPZ only

c. Kandla EPZ only

d. Figure for textile and electronic industries only

Source: ILO, **Economic and Social Effects of Multinational Enterprises in Export Processing Zones**, Geneva, ILO- 1988, Table 6 on p. 45.

(39) For further information, see M. Possas, et. al. (1987) Tables 1-3 on pp. 4-6.

D. Indirect Employment Effect of EPZs and Domestic Value Added

Establishment of EPZs in some countries aimed initially at setting up a regional development pole and create employment rather than increase in manufactured export and foreign exchange earnings. As in cases of Brazil, Mexico and Philippines, EPZs have become an important source of employment for the underdeveloped regions of the respective countries (40).

The overall impact of EPZs on the employment of host countries is not only directly generated number of jobs by EPZ firms. As a result of the demand of EPZ firms from local labor services and inputs additional income and indirect employment created elsewhere in the host economies. Thus, EPZ firms create a certain amount of value added which includes basically two major items, such as labor and physical inputs. Labor inputs can be generated directly or indirectly. Physical inputs consists of locally purchased raw materials, components, semifinished goods and machineries. They may also purchase some services such as transportation and financial services locally. Consequently, some jobs have been indirectly created in the host economy as a result of the spending of EPZ workers in the local economy as well as through locally purchased inputs by the EPZ firms.

Measurement and/or identification of indirect employment effects of EPZs are very difficult and speculative in nature. Recently, it is estimated that indirect employment ratios of the electronic industry, and the textile and garment industry are 18.2 and 17.6 percent, respectively (41). This means that every directly generated five jobs in the EPZs lead approximately one indirectly generated job in the local supplier industries. It is expected that indirect employment-generating effects of EPZs depend a lot on the nature of each EPZ industry. For example, the food industry is expected to generate indirectly a larger number of jobs than the plastic industry since it purchases most of its raw materials locally.

The most important contribution of EPZs to the host country might be their effects on economic growth or the growth of industrial output. Unfortunately, such data are not available so far. Then, total value added in the manufacturing sector is used as a crude indicator for that purpose.

It is concluded that "between 1973 and 1981, the 12 most important EPZ countries and areas have seen their share of world

(40) For further information about the regional development impact of EPZs in selected countries, see P. Warr (1987a); E. Wong (1987), J. Zaidenweber (1988), pp. 75-77; M. Possas, et. al. (1987), pp. 2-7, Ochoa (1986), pp. 30-33.

(41) ILO (1988), p. 75.

manufacturing value added increased more than that of the other non-EPZ developing countries" (42). It is speculated that the demonstration effects of dynamic EPZs are the most important reasons for this success. As a result of EPZ experiences and influences, most probably in each EPZ country industrial work discipline increased, infrastructural and administrative modernization and the liberalization have been accelerated substantially.

4. Reasons for Successes and Failures, and Final Assessment of Export Processing Zones

A. Reasons for Successes and Failures

There are usually many contributing factors for the successes and failures of an EPZ in every EPZ country. These are political circumstances in the host country and/or in the neighboring countries, the location factor, the level of infrastructure, the local wage level and the quality of the labor force, the competence of the EPZ Authority and the dynamism in the host economy (43).

In most cases, failure or success of any EPZ cannot be attributed to a single negative or positive factor alone. Rather, a number of combined factors affect its failure or success. In the recent EPZ literature, it is concluded that political climate of the host country and its region is the most important factor to determine the failure or success of each EPZ. Political climate includes the political stability of the EPZ or host country and/or its region as well as the attitudes of its government and its people towards foreign investment and the tradition of respect for the government's international commitments. For example, Central American and Caribbean Regions contain a large number of unsuccessful or only marginally successful EPZ due to political disturbances in these regions. It is important to note that potential foreign investors attach the utmost importance to the political stability (44).

Outcome of a recent survey clearly showed that political stability was given a major reason for investing in Malaysia even though wage rates in this country were higher than in all of the neighboring countries with the exception of Singapore. Similarly, foreign investors gave political stability the highest ranks for investing in Hong Kong.

(42) *Ibid.*, p. 132.

(43) For detailed information, see J. Currie (1985), pp. 14, 23-32; P. Warr (1983), pp. 35-36; E. Lee (1984), pp. 76-77 and p. 240; A. Germidis (1984), pp. 22-34; p. Ryan (1986), pp. 54-55; P. Ryan (1985), pp. 63-66; Journal of the Flagstaff Institute (March 1986), pp. 22-23, 34 and 43-44; R. Snape (1987), p. 146; D. Spinanger (1984), pp. 71 and 75; ILO (1988), p. 107, Warr (1985), p. 21.

(44) A. Germidis (1984), p. 32; P. Ryan (1985), pp. 62-63; J. Currie (1985), p. 25.

Other most important factors which affect the success and failure of an EPZ are the location of the zone and the presence of sophisticated infrastructure within the zone and its environment. Each EPZ must be established in a location which has highly developed transportation and communication facilities. For example, the possible reasons for the slow start of the Indian Kandala Zone which was set up in 1965 were the location factor and communication difficulties of this zone (45).

It takes a long time to build an EPZ and its infrastructure is very expensive. The typical way of developing an EPZ is to build roads, ports and warehouses, to install the electricity, the water and sewer systems, and to construct factory buildings and sophisticated telecommunication system. It is important to note that no country can attract foreign investment and industrial firms in its EPZs unless each zone has the physical facilities so that EPZ companies can establish production units within the zone with a minimum costs and delay (46).

The experiences of many EPZ countries have proved that no developing country can assume that generous incentives in the area of tax exemptions; duty free imports and exports and etc. are sufficient to attract foreign firms into recently established EPZs without having sufficient physical facilities within these zones, and political stability and an atmosphere of friendliness towards foreign investment in the host country and/or its neighboring countries (47).

The availability of cheap and disciplined labor force is the next important factor motivating the foreign investors to invest in EPZs. Wage rates in a developing country are more than ten times higher than those of in a developed country. These differences are very important for the general decision of foreign investors to locate labor intensive activities into the developing countries. But, differences in wage rates are less important for foreign investors in their investment decision between one EPZ country and another. Because, in the same geographical area, differences in the wage rates of EPZ countries are not more than 50 percent. These small differences can be more than to offset the combined effect of labor productivity, transport costs, bureaucratic delays and other favorable factors (48).

In each EPZ country an EPZ Agency or Authority has to be responsible for the administration of these zones. The agency has to have high degree of financial and administrative autonomy. Because, whatever the incentive package of the EPZ is, the new investor will ask how the package is administered in practice.

(45) For further information, see J. Currie (1985), pp. 24-28.

(46) ILO (1988), p. 107; E. Lee (1984), p. 70; Journal of Flagstaff Institute (March, 1986), pp. 21-22 and 51-54.

(47) Ibid.; D. Spinanger (1984), pp. 71 and 75.

(48) J. Currie (1985), p. 25.

Administration of the incentive package is very important, because, any delay or confusion in the Zone Authority administration, including frequent staff changes, can also defeat the purpose of incentives. The EPZ authority must be very competent and responsible for the day to day administration and maintenance of the Zone (49).

Most of the successful EPZs in the South East Asian countries have minimized "red tape" by allowing EPZ firms to deal with a single administrative agency or authority. This authority is also working as an intermediary between EPZ firms and the various government departments. Most of the administrative cost of these agencies are expected to be covered from the direct charges (50).

The efficiency of the backup essential services to the EPZ activities such as banking, sea transport, consultancy, legal and accounting services, telecommunications are also contributing factors for the success of an EPZ.

B. Final Assessment and Future Prospect of EPZs

a) Final Assessment

The difficulties of evaluating the performance of EPZs in different EPZ countries are considerable. The most important bottleneck is the scarcity of data on EPZ industries. Because, EPZs or EPZ industries are not treated separately in the national statistics on trade, employment and investment. Available incomplete data gathered mostly from EPZ authorities and/or individual EPZ firms. Unfortunately, these data rarely cover a sufficiently long period of time to be entirely meaningful.

Secondly, until mid-1985 there was no common framework of analysis of EPZs. Most of the case study evaluations were made long before the 1985 methodological guidelines of the UNCTAD and these evaluations are not suitable to make comparative studies (for the guidelines, see Table 6). In spite of this, as seen in this study, some attempts have been made about the beneficial part of EPZs in terms of employment, exports, foreign exchange earnings, transfer of technology, and other macro economic effects of these zones.

Establishment of an EPZ imposes some direct and indirect costs on the host country. The evaluation of direct costs is easier to handle, because they usually involve measurable expenditures such as construction of buildings, roads, ports and public utilities. Main difficulty arises when we want to evaluate indirect costs or subsidies. As mentioned before, all host countries offer some sort of financial incentives to prospective EPZ investors in the forms of tax holidays, duty-free imports of inputs, rental employment creation and training, indirect subsidies for the purchase of local raw materials and depreciation allowances on capital equipment.

(49) E. Lee (1984), p. 70, ILO (1988), pp. 107-108.

(50) P. Warr (1983), pp. 35-36.

Table 6
Main Cost and Benefit Items of Export Processing Zone Projects a/

I Foreign exchange inflows	II Foreign exchange outflows	III Foreign exchange retained by host developing country	IV Economic cost to host developing country (incl. foreign exchange outlays column II.B.)	V Net income gain to host developing country
A. Gross exports of EPZ (excl. reinvested profits out of gross proceeds) B. Foreign capital investment (including reinvested profits out of gross export proceeds)	A. Payments by EPZ firms and their employees 1. Imported production inputs 2. Repatriated salaries 3. Repatriated capital, dividends, royalty payments, etc 4. Depreciation transferred overseas 5. Foreign financing costs of EPZ firms B. Payments by host country 1. Imported components of locally provided traded and non-traded production inputs 2. Imported components of EPZ estate construction 3. Foreign financing cost of EPZ estate construction 4. Overseas EPZ promotion cost to attract foreign investors 5. Foreign exchange cost component of incentives and subsidies C. Repatriated terminal value of EPZ firms	A. Retained out of gross export proceeds (excl. reinvested profits) 1. Locally provided traded and non-traded production inputs (incl. components) 2. Wages for local labour 3. Land lease, factory rent, EPZ maintenance fees 4. Local financing cost of EPZ firms 5. Tax payments by EPZ firms	1. Resource cost of items in column III, A., 1-2 2. Resource cost of EPZ estate construction (land, capital, labour, etc.) and maintenance 3. Cost of host country capital resources 4. Cost of incentives and subsidies (to the extent not already reflected in preferential rates paid by EPZ enterprises, such as concessional land lease, factory rent, electricity supply) 5. Resource cost of investment items purchased locally by EPZ firms	Discounted time-flow of - foreign exchange retained (column III) minus discounted time-flow of - domestic resource cost (column IV-1-3) - economic cost of incentives and subsidies (column IV-4) N.B. Net present value has to be corrected for positive or negative externalities.

a/ As the cost-benefit appraisal would value foreign exchange according to its scarcity value, that is, on the basis of the shadow exchange rate, any income gains accruing from the differential between shadow and official rates are implicitly taken into account.

Source: UNCTAD, **Export Processing Free Zones in Developing Countries: Implications for Trade and Industrialization Policies**, New York, UNCTAD, 1985, p. 26.

Evaluation of these indirect costs or subsidies is very difficult because of the following reasons (51):

- firstly, access to information and the calculation of the full range of incentives on offer can not be solved in practice.
- secondly, rate of incentives or subsidies are changing very rapidly in the short-run.
- thirdly, for each EPZ firms, measurement of the relative value or benefits of these various incentives and subsidies is almost impossible.

As a result, due to unavailability of comparable and up-to-date information on the indirect costs and their complexity, cost-benefit analysis can not be undertaken for this evaluation. Because of this reason, very few attempts have been made to estimate the costs and benefits of EPZs during the last decade. Some empirical evaluations have been attempted for the EPZs of Philippines, Korea, Indonesia, Malaysia and India. But these studies, could not arrive at any firm conclusions on the subject (52).

In short, due to the poor quality of the basic data on the EPZ incentives and activities, and the enclave nature of EPZs, it is very difficult to draw a clear line between the cost incurred by the host country and those incurred by the zone, and between the benefits accruing to the zone and those accruing to the host economy.

b. Future Prospect

As mentioned before, objectives of EPZs varies from one country to another. For example, based on a survey of WEPZA Secretariat, out of 24 questionnaires filled out, 7 indicated only the increase in employment and 3 of them added foreign exchange as an objective. The remainder also included transfer of technology and regional economic development. In one country, after 20 years experience, the principle objective is changed from regional economic development to increase in employment (53).

Discriminatory governmental policies have been used in order to reach intended objectives. These policies are limitations of the role of EPZs and their size, location, import, ownership, nature of product, level of investment and value added per worker (54).

WEPZA Secretariat also estimated that, at present, there are about 100 EPZs in developing countries and this number will increase 10 fold in the next decades. Currently, there are one thousand managers/professional/technical persons managing EPZs and 2.000 managing companies in all EPZs. In the next two decades,

(51) For further information, see ILO (1988), pp. 29, 123-143.

(52) For detailed analysis, see P. Warr (1987a), pp. 234-239; P. Warr (1987), pp. 49-54; P. Warr (1984), pp. 176-184; R. Kumar (1987), pp. 1314-1316.

(53) Journal of Flagstaff Institute (February 1987), pp. 34-35.

(54) *Ibid.*

these numbers will reach to 10.000 and 200.000 respectively (55).

In recent years, wage levels in Bagladesh, India and Sri Lanka have become almost one-fourth that in Far East. In spite of this, Far Eastern EPZs are still more attractive than Sri Lankan and Bangladeshi EPZs due to existence of unrest in these countries. However, recently, Singapore is reaching to saturation point. There is uncertainty in Hong Kong. Now, Indian EPZs have become fairly attractive as offshore investment possibilities (56). Similarly, in the near future, more stable and more developed EPZ countries will have better chance to get more foreign investment into their EPZs.

CONCLUSIONS

Establishment of EPZs represents a partial movement towards free trade by many developing countries in order to promote manufactured exports, generate employment, increase foreign exchange earnings and create linkages between EPZ industries and the domestic economy. EPZs have been operating more or less like "enclaves" with duty-free access to imported inputs, while at the same time enjoying a variety of investment and export incentives.

This study shows that EPZs have become increasingly prominent in the developing countries, even though their share in aggregate manufacturing employment, exports and output remain small. Their importance also varies considerably from one EPZ country to another. Ironically, the EPZs have played a far less important role in the labor surplus countries of Egypt, India, Indonesia, Pakistan and Philippines than the relatively high-wage countries of Ireland, Hong Kong, Malaysia, Singapore and South Korea.

Criticism of EPZs by some writers has generally focused upon employment conditions and low level of wages provided in these zones. But, this criticism has not always reflected familiarity with the employment conditions and wages elsewhere in the EPZ countries concerned. Employment conditions such as wages, benefits, working hours, health and safety etc. in EPZs are very similar to those prevailing elsewhere in the host economy.

Contrary to widely held belief, the labor cost advantage is not necessarily the most important factor for a firm's decision such to invest in an EPZ. Other factors as the political stability of the host country and its region, the superiority of its infrastructure and the overall quality of the country's labor force are more important than the cost of labor.

Main EPZ activities are textile and garments, electrical and electronic products, footwear and leather products. Thus, the major portion of production in EPZs is associated with consumer good industries which involve assembly-type operations and simple

(55) *Ibid.*, p. 32.

(56) *Journal of Flagstaff Institute* (March 1986), p. 22.

processing. Establishment of the strong linkages between the EPZ industries and the rest of the economy depends on the level of industrial stage of the host country and its competitiveness in supplying inputs to the EPZ firms. Establishment of more joint ventures in each zone might increase the backward and forward linkages between EPZ firms and local economy.

EPZ in South East Asian countries are more successful than EPZs in other countries. Because, the very success of EPZs depend on the existence of certain preconditions like political stability, sophisticated infrastructure, availability of low wage but well-educated labor force and dynamism in the host economy. It is also important to note that all EPZ countries offer a wide range of financial and nonfinancial incentives to be prospective investors in EPZs. But, these incentives do not appear to play a major role in the investment decision of foreign firms without having the above mentioned prerequisites in the EPZ country.

In EPZ literature, only a few evaluations of existing EPZs have been undertaken, but these studies could not reach firm conclusions on the subject due to the absence of common standards of evaluation and reliable data concerning EPZ activities. It is only generally accepted that demonstration effects of EPZs represent the most important macroeconomic contribution to the host country's economy.

In conclusion, the economic and social importance of EPZs varies considerably from one EPZ country to another. As a result of differences in objectives and discriminatory governmental policies, one can conclude that there is no EPZ model which is suitable or might be generalized for all countries. In practice, each EPZ in an **ad hoc** establishment and its structure might be changed with respect to the circumstance of time and place of its location even in the same host country.

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