
GUIDEBOOK
ON
FREE ZONES

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FOREWORD

Recognizing the need to promote private sector initiatives within economic development strategies, the U.S.D.A. Graduate School sponsored the preparation of the GUIDEBOOK ON FREE ZONES for the U.S. Agency for International Development, Bureau for Private Enterprise. Less developed countries can strengthen their economic base by adopting the free zone concept. This Guidebook will serve as a manual for both the public and private sectors in their pursuit of free zone development. Beginning with an overview of the free zone concept, the Guidebook proceeds to outline a series of activities to be followed to bring about the successful implementation of a free zone project. A separate volume of annexes accompanies this Guidebook, presenting additional technical information as well as three studies on country specific zone development experiences.

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I. INTRODUCTION

A. What is a Free Zone?

Free zones create "climates of opportunity" for industry and trade in geographically defined areas. A variation of the free zone, the Export Processing Zones (EPZs), is a useful policy instrument to develop export-oriented manufacturing industries and to stimulate overall economic development. EPZs have enabled many less developed countries to begin the shift from import-substitution-based industrialization to export-oriented manufacture.

In contrast to traditional long-term governmental assistance efforts to aid businesses, free zones offer to all firms within their boundaries immediate cost savings in the form of tariff, tax and regulatory deterrent reductions. Free zones are especially well-suited for stimulating smaller enterprises, the source of most private sector jobs and investments in developing countries. Conventional programs usually require substantial paperwork skills, political contacts, and/or proven track records for applicants to negotiate assistance. Many small, new enterprises do not fare well in a bureaucratic process, but can grow in the free zone setting where cost advantages are extended to all firms.

The term "free zone" refers to any contiguous area within which private firms enjoy automatic, immediate entitlement to reduced tariff, tax and/or regulatory burdens. It does not refer to areas offering incentives to specific firms on an individually negotiated "customized" basis because customized incentives create delays, complications, and uncertainties for business enterprises that are especially detrimental to small and new firms.

Several specific types of free zones exist. The "free port" and "free trade zone" are the classical forms of this developmental mechanism. Established by the Phoenicians about 3000 years ago, freeports were storage and transshipment points where traders landed their goods without payment of taxes or duties. Today, free ports may be limited to port areas or expanded to include entire cities that offer duty-free conditions both to companies and individuals. Free trade zones are smaller, fenced-in areas with the same function, as free ports, however, usually serve only companies engaged in import, export and wholesale distribution.

Freeports and free trade zones played important roles in the emergence of Mediterranean, Northern European, and Far Eastern commercial powers. A number of Italian trading cities--notably Leghorn--provided free zone benefits to commercial enterprises during the Renaissance. Along the Baltic, freeports such as Hamburg, Lubeck, and Copenhagen established the duty-free trading community known as the Hanseatic League. Britain established free ports in Singapore, Hong Kong, and Gibraltar to facilitate its commercial expansion. A U.S. version of free trade zone, known as the "foreign-trade zone", was enacted by Congress in 1934 and offered comparable tariff relief to commercial firms.

Modern free port and free trade zone characteristics vary widely. For example, physically, free port size ranges from 16 square miles in Hamburg to 400 square miles in Hong Kong. Incentives vary and have expanded beyond simple provision of duty-free rights for storage and transshipment operations in order to attract manufacturing activities. For example,

Singapore offers tax holidays of up to 10 years for export manufacturing enterprises.

In 1950, a highly significant evolution in free zones occurred with the establishment of the first formal Export Processing Zone (EPZ) in Shannon, Ireland. Like its free port and free trade zone predecessors, the EPZ (also known as "industrial free zone") offered complete tariff exemptions to firms engaged in import and export of goods. However, unlike other types of zones, the EPZ established its incentives to benefit preferentially manufacturing rather than warehousing operations.

The original EPZ in Shannon, Ireland reflects distinctive features of other projects of this genre. First, free zone incentives include an attractive corporate income tax holiday as well as customs duty relief for export manufacturers. Second, the free zone incentives applied to an industrial park made the first combination of such incentives with a developed physical site available to manufacturing and assembly firms.

Export processing zones have become an important tool for promoting the export manufacturing sector in many developing countries. Zone sizes range from 20 to 600+ acres; zones are served by road, water, sewer, and electrical power networks that are planned and developed specifically for industrial users; and zone incentives include duty exemptions on goods imported for manufacturing and subsequent re-export. Additionally, most EPZs offer tax holidays ranging from 5 to 15 years. Many EPZs also offer substantial regulatory relief to zone-based firms. Key regulatory incentives include exemption from controls on foreign exchange transactions, free repatriation of invested capital and profits, automatic visas for expatriate personnel, and sometimes, relief from restrictive labor codes.

Other types of free zones also have emerged in the past two decades. With the growth of the Euromarket, a vast pool of stateless currencies, countries such as Singapore, The Bahamas, and Panama have become key international "free banking zones." Typically these zones encompass an entire community or country within which financial enterprises may accept deposits and make loans free of customary reporting requirements, reserve requirements, and taxes upon either the banking institutions or their clients.

Finally, free zones known as "enterprise zones" have been established to stimulate indigenous entrepreneurs rather than to attract foreign investment. In the past two years more than 200 communities in the U.S. and over two dozen municipalities in Great Britain have activated such zones in economically distressed urban and rural areas. Enterprise zone size ranges from 100 to 1500 acres; they encompass areas with a mix of residential, commercial, and industrial land uses. Zone incentives focus on tax and regulatory relief rather than tariff relief.

B. What Contributions Do Free Zones Make to Development?

1. Benefits To Host Countries

Governments derive a number of economic and financial benefits from the development of free zones. For example, enhancement of foreign exchange earnings is a financial benefit of free zones. Although the zones are con-

sidered to be outside the country's boundaries from the exchange control standpoint the zone enterprise contributes to improving the national balance of payments because export income is in a hard currency. Also, to the extent that a country can foster efficient domestic industry and otherwise promote the establishment of strong backward linkages by the zone, the country's foreign exchange earnings may be increased commensurately.

A number of countries have realized substantial foreign exchange earnings from the EPZs --most notably Taiwan, Malaysia, Mauritius, the Dominican Republic and Mexico. In Taiwan and Malaysia, high unit foreign exchange earnings are attributable to the substantial use of domestic inputs in the manufacturing process and to the sheer volume of EPZ exports. Malaysia, the Dominican Republic, Mexico and Mauritius also boosted foreign exchange performance as a result of minimizing public sector foreign exchange outlays for infrastructure and building construction by shifting such responsibilities to foreign investors to some extent. In the Dominican Republic, foreign exchange earnings were further enhanced by requiring that the foreign exchange equivalent of the domestic value-added of exports be converted at the Central Bank official, rather than market rate. This approach ensures that even if domestic sales are permitted, the LDC will not be penalized unduly with respect to foreign exchange.

Employment is a major economic benefit to host countries. Slightly less than one million people are directly employed in EPZs worldwide. About 63 percent of these employment opportunities have been created in the Far East, primarily the People's Republic of China, Taiwan, Malaysia, Singapore and South Korea. Approximately 27 percent of EPZ employment has been generated in Caribbean/Central American countries, of which Mexico represents about half of the total for the region. Employment in the Africa/Middle East EPZs is less than three percent and South America represents less than five percent of the total.

Indirect employment generated by EPZ industries in the domestic services economy is also considerable. Employment in the service industries include transportation, housing, canteens and food preparation, warehousing, general construction, laundry and dry cleaning, training staffs, etc. However, the greatest potential for indirect employment generation is through the purchase of domestic raw materials and intermediate goods from local suppliers. It is estimated that indirect employment generation linked to EPZ industries is 350,000. This figure is derived from two job-generating components. The first is an allowance for indirect employment generation in service industries at a conservative ratio of 1:6, i.e. one job in the service sector for every six jobs in EPZs. The second component is an additional allowance for jobs created in firms that supply domestic raw material to zone users.

Employment generation in EPZs is particularly important in LDCs that have been traditionally dependent on agriculture. Seasonal unemployment is particularly severe in one-crop economies. In at least three instances, the EPZs have substantially eased the unemployment problem created from either a depressed market for their agricultural commodities, or, the shift to more capital-intensive production. At present, EPZs account for over 45 percent of total manufacturing sector employment in Mauritius, 75 percent in Barbados, and 14 percent in the Dominican Republic.

Further benefits to the host government consist of technology transfer

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by zone-based companies to indigenous firms and institutions. Much technology transfer occurs informally, through reading publications and trade journals, personal contacts and meetings and seminars. More formal methods of transferring technology include direct foreign investment, sub-contracting, patent licensing and less focused activities such as training seminars and direct contracting of individual experts. EPZs are a particularly suitable mechanism of technology transfer in terms of process design and production efficiency. The relevant skills involved are plant engineering, production flow, sheet design and controls, quality control and plant maintenance. Such skills are basic to the operations of any factory operation, regardless of whether the final output is simple apparel or complex electronic products. The dissemination of skills to middle level management in EPZ industries -- which are usually staffed with indigenous personnel within a year or two of inception for sound cost-benefits reasons-- also has been encouraging. In addition to plant and process technology, the capabilities needed to operate any factory include accounting and cost control, short- and long-term planning, training and labor relations, personnel services and sales and marketing. Skill acquisition occurs through on-the-job training in both host and home countries and through formal courses in foreign industrial development centers. Because of normal personnel turnover, acquired skills "diffuse" into the domestic economy. In summary, EPZs have been demonstrably effective in transferring technology and skills in those countries where the absorption capability of domestic personnel and industries is high.

The major disappointment to date for governments undertaking free zones development projects is the low or negative financial returns on investment. Governments have frequently incurred heavy losses as a result of failing to "phase" construction in step with market demand. To avoid such problems, governments in developing countries (including Mexico, Haiti, the Dominican Republic and Malaysia) have encouraged private industrial park developers to invest their resources in zone development. Private developers have consistently proven more prudent than government bodies in phasing zone investment on a market-sensitive basis. As an added dividend to the government, few, if any, public resources are consumed in the zone development process.

2. Benefits To Foreign Investors

Incentives that benefit foreign investors generally consist of tax, tariff and/or regulatory relief offered on an entitlement rather than discretionary basis. A brief description of each benefit follows. Zones may offer any number or amount of these benefits to investors.

(a) Tax Relief

The common type of free zone tax relief is a corporate income tax holiday that lasts 5 to 10 years. In addition, some zones offer accelerated depreciation of capital investment, and "carry forward" provisions for losses incurred in early years to reduce taxes following the end of the tax holiday. Many zones also remove or reduce repatriated dividend taxes as well as sales taxes, local property taxes, licensing fees, and other "petty taxes" in the interest of stimulating foreign investment.

(b) Regulatory Relief

Elimination of controls over capital movements is the most important regulatory relief of free zones. In contrast to the tight regulation of foreign exchange transactions that prevails in the surrounding economy, free zone based companies can exchange and move funds without restriction, freely investing or repatriating capital, profits and dividends.

Reductions in regulatory burdens are another attractive free zone benefit for small- and medium-scale foreign investors. Whereas large corporations have the legal and political resources to minimize bureaucratic problems, small firms often lack the know-how and connections to resolve such difficulties.

Another common, useful regulatory relief practice is establishment of a "one-stop service shop" within the zone by zone management. The "shop" streamlines negotiations associated with establishing and operating a zone business. For example, whereas investors might normally deal separately with a dozen governmental departments, they can interact with the "one-stop" officials who, in turn, deal with inter-departmental responsibilities.

Some zones, notably those in China, also offer liberalized labor codes to foreign investors. In the Chinese zones, this means that foreign investors can hire and fire workers without official approval, in contrast to the labor code regime that prevails elsewhere in the country.

An additional type of regulatory relief is important in free banking zones. Specifically, major free banking zones such as the Bahamas impose no reserve requirements or interest ceilings upon financial institutions.

(c) Tariff Relief

Tariff relief and elimination of non-tariff trade barriers like quotas is a third major benefit for foreign investors. Within a free zone, companies may import goods, process them, and then re-export the finished product to international markets without paying custom duties to the host nation at any point in the process. In cases where zone-produced goods enter the domestic market, however, firms normally are required to pay duty as with other imports. The immediate tariff relief offered to zone-based firms has clear advantages over other duty-relief mechanisms in that it provides immediate savings rather than a lengthy wait to recover duty payments from the government.

3. Benefits To Indigenous Entrepreneurs

In most free zones established by developing countries, benefits to indigenous enterprises are achieved through indirect rather than direct channels. Beyond the initial impetus given to local construction firms, zone tenants usually establish "backward linkages" to suppliers of raw materials and intermediate goods. However, because many countries have strong import-substitution policies to protect domestic industries, the price and quality of locally produced goods may not be competitive in the world market. Under

such conditions, zone-based firms find it difficult to develop useful linkages to domestic suppliers, and instead favor foreign suppliers. Strong domestic linkages exist in a few countries such as Taiwan, Korea and Malaysia, where domestic entrepreneurs have little or no insulation from international competition as a matter of government policy and are able to compete successfully with foreign suppliers.

Enterprise zones that cater to the indigenous rather than foreign entrepreneurs are the exception to the secondary stimuli situation. The enterprise zone provides automatic, immediate tax and regulatory relief to small and new enterprises in an economically distressed area. By reducing problems with taxes and red tape, the enterprise zone can remove barriers to start-up and expansion of locally owned businesses.

C. What Are the Patterns of Free Zone Activity?

1. Geographic distribution

Among developing nations, the number of free zones has grown substantially in the postwar period. The increase has been most pronounced in the Far East and in the Caribbean, although all continents have experienced zone startups.

Asia

The pre-eminent free ports of the world are Hong Kong and Singapore. These virtually duty-free enclaves began in the 1800s as entrepot (warehousing and transshipment) areas, but also have become centers for light manufacturing and assembly activity.

Over the past two decades, another kind of free zone has taken hold in Asia. Since the development of Taiwan's pioneering EPZ at Kaohsiung in the mid-1960s, Asian zones dedicated primarily to export-oriented manufacture have proliferated. The most notable export-oriented zones have been established in Bangladesh (one), Malaysia (12), Korea (two), the People's Republic of China (four), Sri Lanka (one), the Philippines (four), India (two), Indonesia (one), and Thailand (one). Today a total of 34 EPZs operate in Asia.

Free banking zones also have multiplied in number and influence: Hong Kong and Singapore rank among the world's top eight international financial centers. Other zones like Vanuatu (formerly the New Hebrides) have become significant bases of offshore capital as tax havens that offer few regulations and strong banking secrecy.

Enterprise zones per se do not exist in Asia, although Hong Kong and Singapore provided the inspiration for the U.S. and British models. The low tax, low-regulation environment of both free ports stimulated considerable indigenous entrepreneurial activity; in Hong Kong, for example, all but 200 of 47,000 registered manufacturing operations are locally owned.

Caribbean/Latin America

Caribbean and, to a lesser extent, Latin American countries also have been active in free zone development. In the late 1940s, Panama established a warehousing-oriented zone near the entrance of the canal at Colon. By the late 1950s, Colombia had followed suit, and in 1960 The Bahamas established the hemisphere's first major free port on Grand Bahamas Island.

The most notable growth of free zones in the region has occurred in EPZs. The process began in 1965, when Brazil, Haiti and Mexico established duty-free areas to support export manufacturers. The Brazilian zone, based in the remote jungle city of Manaus, provided an important stimulus to an economically lagging area. Haiti created an industrial park near its capital, Port-Au-Prince, that offered tariff abatements to export industries. Mexico, by contract, established its EPZs along the entire U.S.-Mexican border; firms in the zones developed close relationships with firms in the United States by using the "twin-plant" concept. In this production format, U.S. firms share production with either an independent subcontractor in the border area or a zone-based branch of their own operation.

The Brazilian, Haitian and Mexican EPZ programs accelerated EPZ projects in the region. In 1969, the Dominican Republic established the first of four EPZs and a Barbados zone was established shortly thereafter. Costa Rica established its EPZ program in 1972; it was followed by projects in Honduras, Jamaica, Chile, El Salvador, Nicaragua, Guatemala, and a number of Eastern Caribbean nations. At present, more than 50 industrial estates offering EPZ incentives are located in Caribbean and Latin American countries.

Free banking zones have been established successfully in many Caribbean nations. Since the mid-1960s, the Bahamas and Grand Cayman Island have provided a virtually tax-free, high-secrecy environment; as a result, the Bahamas is now the world's third most active financial center. The success of the free banking zones prompted Panama to adopt similar policies in the 1970s.

Africa and the Middle East

Africa and the Middle East have been less active in pursuing free zone development strategies. Port Said, in Egypt, has enjoyed free port status since the 1890s, as has the former French colony of Djibouti. Small warehousing-oriented free zones exist in other African countries.

EPZs began appearing in the Middle East and Africa in 1970, when Mauritius initiated the first of five industrial estates operated as free zones. It was followed soon after by Tunisia (now with six zones), Jordan (one), Egypt (four), Senegal (one), Liberia (one) and Syria (13). At present, there are 31 designated EPZs in Africa and the Middle East.

Flourishing free banking zones have been established in Bahrain and Sharjah. For many years, Beirut was the most prominent outpost for international banking in the region. Wars and civil strife, however, have eroded its importance.

2. Market Orientation/Investment Patterns

Free zones are oriented primarily toward international markets. Tariff and tax incentives usually are limited to firms that distribute or produce goods entirely or principally for export. Caribbean, Latin American and Far Eastern EPZs produce goods primarily for U.S. markets. By contrast, African and Middle Eastern zones export goods primarily to countries of the European Economic Community. Some free zones, notably those in Syria and India, have access to Eastern bloc countries.

The export orientation of free zones is not universal. Free zones in Brazil, Colombia, and Panama, for example, have substantial "leakages" of zone products into the domestic market. While some countries permit such access legally, movement of goods to domestic markets is illegal in most countries.

Investment patterns in free zones vary greatly. The majority of investment in Hong Kong and Singapore is local in origin. Among export processing zones in the Far East, Japanese investors are dominant; they account for more than 70 percent of the foreign investment in the EPZs of Taiwan and Korea. Caribbean and Latin American EPZs are dominated by U.S. firms. A notable feature of investment patterns in free zones world-wide is the growing role of investment by Newly Industrializing Countries (NIC) such as South Korea, Taiwan, Hong Kong, and Singapore. The uncertain future of Hong Kong has prompted many investors to diversify into other Asian free zones as well as zones in the Caribbean and Latin America.

D. What Is the Future Outlook for Free Zones?

Free zones appear headed for continuing worldwide growth through the 1980s, as nations seek to move toward export-directed and private sector-oriented economic growth strategies. Free zones represent an excellent "proving ground" for liberalizing reforms before extending them on a nation-wide basis. Assuming that no major protectionist conflicts break out, free zones appear likely to flourish in coming years.

The nature of economic activity within free zones, however, likely will undergo a gradual transformation. Traditionally, export processing zone activity has been dominated by routine assembly operations in electronics and garments. In both sectors, computerized automation and robotics have begun to make rapid strides. By the early 1990s, it is likely that these "staple" free zone industries will be reestablished, to a large extent, within their final consumer markets because of the declining importance of labor costs as a location factor.

Changing production technologies will create both opportunities and problems for free zones. In particular, the decline in microcomputer and telecommunications costs seems likely to stimulate offshore "data entry" operations on a much wider scale. A number of companies have begun to locate key-punching, work processing, and other data entry functions offshore, to capitalize on labor cost that often are less than 25 percent of such costs in the United States. Free zones can play an important role in this trend.

II. INFORMATION FOR THE PLANNING PROCESS

A. What Government and Private Sector Goals are Established For Free Zone Projects?

The sponsor must define the project purpose and must establish goals that flow from that purpose. Profit maximization usually is the primary goal of private zone operators while national economic objectives usually are the primary goals of public sector projects. Specifically, when host governments establish free zones to attract export-oriented foreign investment, they establish as primary goals:

- to generate employment directly within the export processing zone and indirectly throughout the region as indigenous businesses develop to serve and support zone activities;
- to expand foreign exchange earnings; and
- to introduce new technologies, skills and managerial expertise that will be transferred to the domestic economy.

In addition to primary goals, secondary objectives are pursued by most countries. For example, in some less developed countries, one reason for establishing an EPZ is its contribution to regional development. EPZs can disperse industry from the main urban centers to less favored outlying areas. For example, the Kandla (India) and Bataan (Philippines) zones were established as alternatives to the country's congested major ports of entry.

Another secondary objective is to increase the use of domestic raw materials and intermediate goods. For example, the objective of domestic raw material use and the objective of industrial decentralization are functional in the free zone of Manaus (Brazil). Located in a jungle area, more than 1500 miles west of the coast, Manaus is a zone where foreign manufacturers are required to purchase a portion of raw materials and intermediary goods from domestic producers.

EPZs serve the following national policy objectives:

- to maximize efficient land usage through guided decentralization;
- to achieve more balanced regional growth and distribution of employment;
- to expand fiscal capacity of local and state government by adding new investment to the property tax base;
- to generate a marketable product (i.e. industrial estate and incentives) for small, medium and even large industrial firms;

- to improve community appearance while respecting the natural environment;
- to reduce the cost of individual capital investment to the industrialist; and
- to foster economies in public resources invested in infrastructure.

EPZs also serve the private sector goal of ensuring a high return on investment. Whereas profit may be the primary goal, other objectives also are realized from pursuit of this goal. For example, technology transfer and expanded demand for resources or commodities often "spin-off" as benefits that both private sector and host governments realize as a result of investment. Such valuable byproducts of profit-oriented initiatives encourage host government support for the project and integrate zone activities into the national economy.

B. What Factors Constrain Private and Public Sector Development?

A number of factors may constrain a zone project. Availability of resources; national and political stability; commodity price fluctuations; and climate affect zone feasibility. Even goals can serve as constraints that may be perceived differently by private developers and their government counterparts. For example, whereas a government may favor national development over profits as a primary goal, private developers likely will oppose restrictions placed on their ability to maximize profits since profit is their primary goal.

Goals as constraints are most problematic in terms of site location and infrastructure decisions. Private developers usually prefer sites that offer the best return on their investment. These are sites located near a port area in a major city with well-developed infrastructure. Governments, however, deliberately may select a less attractive site in order to stimulate economic activity in the region or to encourage population dispersal from a congested area.

This means that the purpose of the zone project has a direct bearing on the importance of infrastructure facilities to the developer. For government developers, building or expanding transport facilities, electrical and water supplies, or bolstering industrial services are justifiable expenditures and an integral part of long-term development policy. In contrast, private developers may see financial outlays for infrastructural development as a necessary burden. For these reasons, zone developers must decide upon the importance of zone goals and objectives before reaching a decision to implement the project.

C. How Are the Basic Factors of Production Related to Zone Planning?

Modern industry depends on five factors of production: land, labor, capital, transportation and infrastructure. Zone performance is linked inextricably to the cost and availability of each factor because the profitability of the zone entrepreneurs and zone success as measured by

employment generation, output and foreign exchange earnings are interdependent. Simply stated, factors that benefit the industrialist simultaneously contribute to the overall success of the zone as a generator of economic benefits.

EPZs attract manufacturers because they provide at least one of the economic factors of production more reliably or at significantly lower cost than does the investor's present location. But it is not enough for zones only to offer cheaper or more reliable factors of production; normally zone operators also must aggressively promote both potential cost savings and attractive financial incentives to overcome investor resistance to plant relocation. In general, companies move only when either domestic conditions prohibit a continuation of profitable operations at their existing sites, or when the savings promised by alternative locations are too attractive to ignore. The latter condition motivates the majority of industrialists who transfer operations into EPZs.

The results of studies about why firms select specific sites suggest that cost and reliability of basic factors of production are the main considerations in plant location decisions. In early 1984, FZAS interviewed officials from 18 companies that had relocated into the Honduras and Dominican Republic free zones. Though based on a small sample, the findings correspond with findings from similar surveys in other regions. The most important factors for relocation decisions, listed in order of importance are:

<u>Site Selection Factor</u>	<u>Percent for Whom Factor was an Essential Consideration</u>
Cost of Labor	98%
Access to Shipping and Air Transport	33%
Availability of Labor	28%
Tax Incentives	28%
Avoidance of Import Quotas	22%
Labor Productivity	17%
General Living Conditions	17%
Political Stability	11%
Government Subsidies	11%
Availability of Local Partner(s)	11%

By contrast, data from importers/exporters who rent warehousing facilities in the Panama (Colon) EPZ suggest that traders use a different set of site selection factors. Their most important considerations, in order of importance were as follows:

<u>Site Selection Factor</u>	<u>Ranking</u>
Commercial freedom and stability	1
Transportation services	2
Financial services	3
Quality of labor	4
Security against crime	5
Living conditions	6
Communications	7

While manufacturers considered labor issues as critical, traders rated quality of labor and wage levels as much less important. Instead, commercial freedom was the most important factor for traders, even though it was not mentioned by manufacturers. When analyzed together, these two surveys illustrate an important lesson for zone success. Specifically, successful zones market selectively to sectors and firms whose production requirements will benefit from the zone's distinctive, cost-saving features.

There follows a discussion of the five major factors of production as they relate to the (1) needs and concerns of investors (2) policies that promote or hinder zones, and (3) trends and technological innovations that portend decisive future shifts in zone activity.

1. Land and Buildings

The land and building concerns of the land owners (usually zone operators) and building and land occupants differ. For the zone developers, the ideal site is one that is located in an area that will attract industrialists. However, location is not the only consideration. Zone developers also must consider the cost of purchase and development in relation to the land's potential for appreciating. For zone inhabitants the ideal site is one that will minimize the cost of production. In fact, land and building considerations normally are of secondary importance to manufacturers; other factors of production such as labor, capital, and infrastructure weigh more heavily in relocation decisions.

(a) Land

Choosing the ideal site for an EPZ is the first and most critical decision of zone developers. Given that successful zones are those that provide their inhabitants with a profitable business environment, location analysis must be conducted in the earliest planning stages. Among land considerations deserving attention are the following factors:

Size and Shape--Suitable sites have distinctive property lines and the potential for land value to appreciate. Moreover, the area must accommodate not only individual factory buildings, but also employee parking, loading space, landscaping design, and accessory storage. Typically, 75 percent of the land is used for the industrial plots and 25 percent is common facilities such as roads, easements and green areas. Forty to fifty percent of the land designated for industrial use is under roof.

Potential for Future Expansion--When selecting a site for an EPZ, the developers should consider the land use of surrounding areas. While about 25 acres are ample to begin zone operations, as the amount of zone economic activity grows, so does the need for additional land. If possible, open land should be available on two or more sides of the zone.

Topography and Soils--The slope of the land should not exceed 5 degrees. Further, choose cleared land if land preparation costs are left to the occupying enterprise because willingness of companies to

invest in the zone will depend not only on the cost of raw land, but also on these costs.

Utilities--Accessibility to water, electricity, sewer service, and communications make a site more desirable. (These issues are discussed in the section entitled "Infrastructure.")

Accessibility to Transportation--Proximity to railroads, major trucking routes, cargo airports, and port areas are important. (These issues are discussed in the section entitled "Transportation.")

An experienced civil engineer should plan the physical aspects of the EPZ once a site is selected. This expense should be incorporated into the total development cost. Additionally, a competent surveyor must survey the property to derive the unit cost of construction.

Most zones offer long-term leases rather than sell land to industrialists. While a policy that allows firms to buy land on which they intend to build can be attractive, such an option is not essential. For example, successful zones in Mexico and Sri Lanka offer 99-year leases to foreign investors instead of allowing purchase of land. Moreover, where national laws make it illegal or extremely difficult for zone inhabitants to buy the land on which they intend to set up a factory, long-term leases almost always have been an acceptable alternative. In general, the experience of successful zones suggests that the way to maximize firms' interest in an EPZ is to provide multiple options concerning both the sale and leasing of the land; flexibility is the key.

A wide range of payment schemes are used. Thailand, for example, allows investors three options: (1) lease land at an annual rate of \$10,000 per acre; (2) purchase land outright; (3) purchase land on a four or six year installment plan. The Colon Free Zone offers an even wider array of choices including the option to rent part of a building or to arrange for warehousing through a local management service.

Reduced rental rates as investment incentives to manufacturers have proven to be dismal failures even though reducing costs is a common practice. The failure results from the insignificance of rent as a factor in the overall cost of production. Findings from a recent FZAS study indicate that rent for a typical garment manufacturer with 300 workers is only about 2 percent of total production cost. For most industries rent is less than 5 percent of the production cost.

Surprisingly, zone success is not correlated with lease rates. The Korea and Singapore zones experiences illustrate the point. The Korean zone offers land at exceptionally low prices yet is struggling to attract new investors; conversely, land in the Singapore trade zone is among the most expensive of any EPZ, yet business investment is flourishing.

The ideal pricing policy allows market forces to set land prices and rental rates. Not only does this policy yield higher revenue for the seller, but also it allows the ultimate selling price to reflect potential alternative land uses. For example, the Hong Kong zone policy allows businesses either to bid for land at public auction or to sublease it from the property owner. Many economists contend that this policy has helped

promote the zone's favorable investment climate that the zone presently enjoys.

Often manufacturers require detailed site information as a basis for determining site desirability. Information needs include:

- Maps of the location of the site.
- Air photos charting the size and shape of the property.
- Contour maps.
- Grading requirements.

Sometimes zone promoters provide material; alternatively, prospective firms send technical personnel to collect the data.

(b) Buildings

The critical building-related issue confronting zone planners is whether to build and rent standard factory buildings (SFBs) or to sell or lease improved land for owner-built factories. Cost is the overriding consideration. On average, building costs comprise about 80 percent of zone development costs; therefore, so developers with limited capital may be better off not constructing SFBs in initial development stages. Building preference depends on the type of clientele. Small, financially weak firms prefer to rent space in SFBs built by the zone operator; many larger firms prefer to build their own factories on land either purchased or leased long-term.

Despite their high cost, SFBs have promoted zone development for three reasons. First, SFBs allow firms to relocate with limited financial commitment to the new site. This is a major advantage to many foreign investors for whom the strongest argument against relocating overseas is the sizeable risk involved in pouring resources into an unfamiliar business environment. SFBs are particularly valuable to such firms during their initial relocation phase when funds are likely to be tied-up in equipment and working capital.

A second SFB advantage flatly contradicts the conventional wisdom that prebuilt factories have limited marketability because they do not conform to the specific plant requirements of individual firms. In reality, SFBs can be sold to a wide range of tenants because the factory needs of light manufacturing firms are fairly standard. Moreover, even when firms move their operations elsewhere, few problems arise in reselling the factory to another occupant, even though the new occupant may use a different manufacturing process.

The final SFB advantage is that they dramatically reduce the start-up time for the manufacturer because SFBs usually are built in advance. Sound policy dictates that at least one or two standard factory buildings be constructed in anticipation of demand, thereby accelerating establishment of operations by firms working on tight time schedules. Then, as the buildings are rented or sold, new units are built in anticipation of future demand.

The optimal design of buildings is as follows:

Adaptability -- A major SFB design advantage is their general purpose use. Additionally, they leave room for expansion so that as firms grow, their plant can expand operations at that site.

Shape -- Generally, single-story SFBs are more cost efficient than multi-story buildings. Two or three story plants require freight elevators, larger foundations and heavier structural members. Therefore unit costs tend to be as high or higher than for single-story buildings. Additionally, multi-story buildings introduce some inconveniences for personnel. Multi-story buildings of 4-7 or more levels, as used in sites where land costs are inordinately high such as in Israel and Singapore, can be built at lower unit cost than single-level factories. But such "flatted factory" structures are not suitable for operations requiring clear floor to ceiling heights of more than 12 feet.

Physical Environment -- Usually heating and ventilation is provided by the owner. Ventilation either may be passive or active, depending on whether passive ventilation is sufficient to prevent the accumulation of hot air. Because of its large expense, air conditioning should be installed only upon request and with suitable rent adjustments. Alternatively, the occupant can pay the entire installation cost.

Movement of Materials and Equipment -- Factory design must accommodate free movement of goods and equipment such as fork lifts. Foundations need at least 5-6 inches of concrete.

Lighting -- Use natural lighting where feasible. Use fluorescent lighting as the next most economical method. Make lighting adequate for light manufacturing work. Firms with greater needs should be required to supply their own special lighting requirements.

Fire Protection -- At a minimum, fire exits must conform with local statutes. Due to their cost, sprinkler systems should be installed only when the occupant pays the cost, or when insurance premiums are reduced commensurately.

Roof -- The building roof must be strong enough to support its own weight as well as the extra weight caused by snow and rain storms. In hurricane areas, the building must be able to withstand winds of up to 150 mph.

Rental rates at various zones differ substantially even though the design of SFBs is similar. For example, rates range from \$4.00-4.25 per square foot per year in the Bahamas to \$1.08-1.92 per square foot in the Dominican Republic. Rental rates are illustrated in Table 1, Building Rental Rates for 1983, on the following page.

Table 1
BUILDING RENTAL RATES FOR 1983

<u>Country of Free Zone</u>	<u>Annual Rates</u> (US\$ per sq.ft.)
Bahamas	4.00 - 4.25
Barbados	3.25 - 3.30
Brazil	2.40
Colombia	2.40 - 3.50
Costa Rica	2.70
Dominican Republic	1.08 - 1.92
E. Caribbean	1.75
Guatemala	1.82
Haiti	1.08
Honduras	3.35
Jamaica	3.50
Mexico	1.50 - 4.25
Miami	4.96
Panama	2.20
Port Everglades	5.65

Source: Free Zone Authority Services, Ltd. Reference Library

2. Labor

Labor in EPZs is available in abundant supply and at costs far lower than in developed countries. Labor has been the most important element for many manufacturers and explains much of the remarkable growth of EPZs over the last decade. Today, however, low labor cost is receding as the determining factor in location decisions. Automation and other labor-saving techniques are forcing a reappraisal of the real advantages of off-shore, low labor cost locations. Labor alone is no longer a sufficient inducement.

(a) Availability

Firms require assurance that EPZs insure a sufficient, continuing supply of labor. Unfortunately, despite the importance of this factor in site selection, area unemployment data often are the only available indicator of labor supply for a zone. As a result, manufacturers may reject sites with large labor supplies due to inaccurate aggregate statistics. Therefore, EPZs need to provide detailed work force estimates of potential numbers of male, female, skilled, semi-skilled, unskilled, clerical, technical, and managerial employees.

Attractiveness of Unskilled Labor -- Traditionally, EPZs have generated employment predominantly for unskilled or semi-skilled 16-25 year old females. Many manufacturing firms require no prior industrial experience for workers. These firms, whose products are highly labor-intensive and require imported materials for assembly and manufacture, are the target industries for zones with

an excess of supply of unskilled workers as their primary selling point. Such workers have demonstrated unexpectedly high productivity rates in EPZs in the Dominican Republic, Taiwan, and Malaysia.

Attractiveness of Skilled Labor -- Zones that can tap large pools of skilled workers appeal to certain manufacturers. Foreign capital infusion into these zones is much greater than into zones where only unskilled labor is available; the increased investment is attributable to the greater added value created by skilled over unskilled workers. In order to attract this more desirable type of investment, zones located in areas with high literacy rates and educational levels should include this data with other information about labor force characteristics.

Attractiveness of Managerial and Technical Workers -- The importance of available supervisory and technical personnel to manufacturers who are considering relocation overseas can not be overemphasized in predicting zone success. Though these positions represent only about 10 percent of all EPZ workers, scarcity of such personnel has dissuaded a number of firms from relocating in Caribbean and Central American zones. Even firms that located in Caribbean and Central American EPZs complain of an acute shortage of mid-level managers. Much of the capital investment growth in EPZ plants hinges on whether manufacturers can employ competent local technicians and supervisors.

An additional labor concern of EPZ firms is whether the area can assure a reliable labor supply to staff auxiliary off-site activities such as transportation, housing, warehousing, and construction. The uninterrupted supply of these services makes a zone considerably more attractive than areas where services outside the zone are undependable.

(b) Cost of Labor

Wage rates including overtime and bonus pay in EPZ industries after the initial apprenticeship period, tend to be at least as high as those of firms operating outside the zone. Consequently, EPZ firms probably do not drive down wages in labor surplus areas; rather, firms respond to existing, established low wages in those areas.

Interviews with representatives of manufacturing firms that produce highly labor intensive products revealed that low wage rates were the critical factor in relocation decisions for their firms. However, wage rates vary considerably among successful zones even though fierce competition rages among zones whose principle promotional strategy centers around wages. For instance, the hourly wages and benefits for unskilled workers in Caribbean and Central American zones range from \$0.44 per hour in Haiti to a high of \$2.25 in the Bahamas. Wage and benefit rates for countries included in the FZAS study are illustrated in Table 2, Selected Hourly Wages for 1984, by Country.

Table 2

SELECTED HOURLY WAGE RATES FOR 1984, BY COUNTRY

<u>Country</u>	<u>Hourly Wage*</u> (US\$/hour)
Bahamas	1.80-2.25
Barbados	1.35-1.50
Costa Rica	0.79
Dominican Republic	1.04
Eastern Caribbean	0.75-1.10
Haiti	0.44
Honduras	1.10
Jamaica	0.97
Malaysia	0.18-0.94
Mexico	0.99
Panama	1.52
Philippines	0.28
Taiwan	1.86

*.Wages include fringe benefits

Source: Country studies performed by FZAS.

Productivity levels also vary from country to country. Unskilled and semi-skilled labor in the Mexican border zone, for example, has reached productivity levels equal to or greater than U.S. workers in similar industries. Conversely, productivity levels for semi-skilled laborers in the Dominican Republic are only 75 percent as productive as their U.S. counterparts and levels for the Caribbean island of Nevis/St. Vincent are only 40 percent of U.S. levels.

There are indications that data entry, software development, and labor intensive service enterprises might replace assembly manufacturers as the primary beneficiaries of low cost labor. Additionally, zones offering particularly low wages may want to redirect promotional activities toward labor-intensive firms in the Far East, most notably those in Taiwan and Hong Kong. Such firms recently have shown increased interest in relocating part, or all, of their manufacturing process overseas.

Trade zones located in areas where wages are not nearly as low as Caribbean wages, normally focus their marketing efforts on higher-technology, capital-intensive firms, whose interest in wage rates is secondary to finding a labor pool with skills commensurate with production techniques. Such firms contribute immensely to a zone's financial viability and growth potential. They tend to create increased added value, at an average rate of up to 50 percent of export sales, while introducing new technologies and skills and contributing to the zone's attractiveness for prospective customers.

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(c) Stability of the Labor Force

Militant labor unions and unduly restrictive labor codes can offset otherwise ideal labor conditions and reduce EPZ desirability. Indeed, the quest to avoid strong labor unions and intrusive labor laws often motivates a plant to relocate.

Firms that have grown wary of union activity are interested not only in examining statistics on the proportion of the labor force that belongs to trade unions, but also in studying the area's history of labor contract negotiations. While the existence of unions does not necessarily discourage desire to relocate, union activity disruptive to business operations makes manufacturers become wary. Militant labor demands are a formidable obstacle to establishing successful EPZs. Conversely, zones with a history of cooperative labor-management relations enjoy a comparative advantage.

Many firms relocate overseas to avoid restrictive labor laws. Management objects to legislation like job security laws that are perceived to impinge on management prerogatives, to be meddlesome or to conflict with normal business procedures. Zones located in countries with restrictive legislation often find firms reluctant to invest there; successful zones eliminate such barriers where possible.

(d) Work Ethics

Culturally-based work ethics can retard investment into an EPZ. Manufacturers hesitate to relocate in areas where workers are unreliable or where there is a perceived hostility toward foreigners. Trade zones can dispel investor work ethic fears by publicizing favorable worker productivity statistics such as man-days lost due to industrial disputes; requirements for hiring and firing workers, and regulations or customs regarding local working practices. Highlight worker attitude and high productivity since these factors offset costs such as higher wage rates.

(e) Job Training

Industrial firms attend to the zone labor force aptitude for training. Firms use three types of labor force data to consider this factor: degree of literacy, worker attitudes, and measures of manual dexterity.

While some firms send local workers abroad for training, some firms locate in zones that provide local training opportunities. In Barbados, for example, an association of manufacturers instituted local management training courses that have benefited native personnel while aiding zone businesses by teaching specific skills used on the job. Because training programs attract investors, zone promoters should provide information on the range and type of training available in or near the EPZ. Even so, the importance of public sector training programs has diminished as required skills are tailored to company specific production processes. Increasingly, EPZ firms are willing to provide technical training on the job even though it often goes unsubsidized.

Manufacturing firms that supply and finance production and marketing training to native workers foster long-term EPZ growth. Productivity levels increase through employee training programs. Further, development of an indigenous managerial labor force not only promotes the host country but also contributes to the social and economic integration of zone industries.

3. Capital

(a) Availability for Foreign and Local Investors

The availability of capital (other than at subsidized interest rates) for purchases of machinery, equipment, building construction or working capital does not strongly affect the location decisions of most foreign investors. With the exception of the Hong Kong and Shannon (Ireland) zones, foreign investors finance off shore free zone operations with capital secured in their home country rather than borrowed from local capital markets.

However, the availability of short- and long-term capital is crucial. In many LDCs, the commercial banking sector cannot provide long-term financing; further, short- to medium-term finance costs are prohibitively high. For example, in Colombia current interest rates exceed 25 percent while in the Eastern Caribbean region, interest rates approach 20 percent with virtually no funds for long-term financing. Therefore, the high cost of borrowing in many LDCs retards industrial development.

Having recognized these problems, many international development institutions such as the World Bank, United States Agency for International Development and the Inter-American Development Bank fund lines of credit at reasonable to local entrepreneurs. The credit is channelled through industrial development banks, commercial banking institutions, financiers, and other mechanisms.

(b) Subsidies

To spur development, some zones offer subsidized finance capital for start-up investment to foreign and local entrepreneurs. For example, in Shannon, Ireland, US\$ 6 million in grants and subsidies were offered to pioneer occupants during the 1960s. However, since host country subsidization costs may exceed short-term benefits, most free zones do not directly offer subsidized capital to potential occupants, particularly foreign investors. However, some Far East free zones such as Taiwan and South Korea, offer preferential interest rates to pioneer firms in high-technology industries.

(c) Restrictions

Restrictions on capital transfer such as limited access to the foreign exchange parallel markets or restrictions on repatriation of profits discourage foreign investment. Most free zones guarantee the free movement of capital, although some countries such as the Dominican Republic have attempted to increase foreign exchange earnings by requiring foreign investors to exchange all foreign currency at the rate (US\$1=DR\$1), rather

than at present market rate (approximately US\$1=DR\$2). This restriction, partially relaxed in May 1984, increased production costs and forced some producers to seek alternative offshore locations. Generally, the free movement of capital has become a standard item in free zone incentive packages. Variation among incentives often are too small to provide comparative advantage to any particular free zone; however, restrictions on the movement of capital are a major disincentive to investment.

4. Transportation

(a) Reliability

Expensive, slow or unreliable transportation for raw materials or finished products contribute to the rapid demise of an EPZ. It has happened frequently; in fact, findings from location factor studies reveal that transportation issues are almost as important as labor costs. Transportation concerns mentioned by potential zone manufacturers include: existence of port facilities, frequency of shipment, access to highways, access to raw materials, access to local markets, and company-specific transportation requirements.

Reliability of transportation services is as important as cost when evaluating potential EPZ locations. Firms that specialize in producing high-value, low-bulk goods, the principle output manufactured or transshipped from some EPZs, attend to time of delivery. Further, firms that ship seasonally-sensitive goods like apparel must adhere to timely delivery schedules.

The quality of transportation services also is important. Firms desire low damage risks and highly predictable arrival times. This means that as products shift toward higher value per unit of weight, minimum inventory, zones that provide dependable inexpensive transportation services will have an advantage.

(b) Airport Facilities

Some firms transport intermediate products and finished goods by air, therefore, access to a modern airport contributes to zone desirability. However, for most firms other than manufacturers of low-bulk, high value products such as electronics assemblies, air freight is expensive and impractical. Therefore, for most firms, access to airports is not a major consideration in choosing a plant site.

The greatest concern to manufacturers who ship by air is whether the airport can handle international jet cargo carriers. There are few promotional tools more persuasive for firms that ship by air freight than comprehensive international flight schedules that note the number of daily flights to primary markets.

(c) Maritime Port Facilities

Access to modern port facilities is necessary for manufacturers who produce low-value, high-bulk goods such as clothing, sporting goods, and toys. The port need not be extravagant, only functional. Three factors make a port functional: (1) accessibility to zone occupants; (2) security from pilferage or mishandling; (3) adequate container handling facilities. Most manufacturers investigate the availability and frequency of direct shipping lines from Europe, the Far East, and North America because shipment frequency determines freight rates.

(d) Roads

Inadequate road networks retard an EPZ's development. Roads are important because they provide access to airport and maritime port facilities and they handle heavy commercial traffic within the zone. Roads in developing countries often do neither. Shortcomings are particularly troublesome when zones are situated far from the principal exporting sea port. In some instances, it may take a manufacturer longer to transport goods twenty miles across an island—from the zone to the airport—than to fly the goods to a distant overseas market.

Transporting workers to and from the zone also is a problem in some zones. Normally small bus companies transport employees to and from work. However, when overtime or irregularly scheduled work is required, manufacturers may provide transportation. Adequate roads are essential for transporting workers and goods.

(e) Railroads

Most overseas industrialists do not require access to railroads. But, for those manufacturers that import raw materials—especially agricultural commodities used in food processing—developed rail systems may be a necessity for timely delivery. As with shipping and air transport, the rail system must include appropriate cargo handling facilities to be of benefit.

(f) Cost

EPZs that can provide low-cost transport to major markets and distribution centers hold a decided advantage over competitors where high transportation costs cancel other cost-saving attractions. Since the late 1970s, manufacturers have attended to the costs of importing raw materials and exporting processed goods. Higher energy prices increase the cost of transporting materials and products; further, they cause special problems for firms that move perishable, bulky, or fragile materials. These are the types of firms that are attracted to zones that offer the least expensive transportation costs.

Promoters of zones that cannot offer low transportation costs should market to an altogether different type of clientele, for example, firms involved in electronics assembly operations. Electronic assembly factories have flexible locations since transportation costs for component parts are

low and production need not be tied to a material site as in traditional industries. Such firms have exhibited increased interest in zones where transportation costs previously had precluded establishing operations.

Frequency of shipment and not distance determines shipping rates. Other factors that contribute to shipping cost such as the cost of loading and unloading the freight and insurance against pilferage also reduce the component cost of distance on shipping manufactured products. An example, based on comparative data between the electronics industry in West Africa and South East Asia, illustrates this point. The evidence indicates that despite the shorter distance traveled from West Africa to the developed country market, the cost of transportation for similar items was actually higher than shipping identical items from the Far East. Thus, distance is merely one factor that influences transportation costs. Efficiency and frequency of transportation services easily can offset the additional cost incurred by a zone's further distance from the product destination.

Even so, Caribbean zones possess an advantage in attracting certain types of U.S. and Canadian manufacturers. For example, automation will reduce the cost of wages for routine, labor intensive assembly operations; therefore, it is projected to change patterns and location of investment. As wages become a less significant contributor to cost, some mainstay industries are expected to relocate operations closer to final markets as transportation costs become, by default, a more vital concern.

Zone promoters should provide prospective client firms with detailed estimates of the cost of transporting various types of products. Manufacturers are interested in data on inbound freight rates and outbound freight rates per unit of weight or volume. Especially informative are charts that list rates to and from heavily industrialized countries such as Japan, U.K., U.S., and Hong Kong. These statistics also should include costs of services like insurance that vary with location.

5. Physical Infrastructure

A well developed infrastructure is essential to EPZ success, even for those zones offering the lowest wage rates and the most generous tax relief package. If land, buildings and services (power, water, etc.) are inadequate, there is little incentive for investors to lease EPZ space since comparable benefits usually are available at sites where infrastructure expenditures may be lower.

Infrastructure may refer to internal (on-site) facilities or external (off-site) facilities. Normally, internal roads, power, water and sewage networks are installed as part of the EPZ project investment. Conversely, access roads, power connections to the national grid, water supply, sewage treatment and other off-site installations generally are the responsibility of public utility corporations.

For most zones in the early stages of development, building the site's internal infrastructure at one time risks overextension and financial ruin. Zones that have been most successful are those that have expanded the area's infrastructure in phases that parallel the growth of effective demand. Where funds are limited, a zone may grant financial concessions to firms that enter

the EPZ while it is still underdeveloped. Such agreements benefit both parties: the firm reaps long-run cost savings even though it provides much of its own infrastructure; the zone clears the first crucial hurdle toward maturation. Pioneering firms not only erect the initial infrastructure, but also stimulate further development in and around the zone.

Given suitable roads, investors consider four services as the most important elements of infrastructure: water, energy, communications, and sewage.

(i) Water

The water supply problem in many LDCs is particularly acute. Zone access to municipal water supplies is restricted by the overall supply/demand ratio. Where municipal water supply is inadequate and unreliable, oversized storage facilities should be installed so that reserve water can build up for high-demand periods. Often, EPZs supplement municipal water with on-site wells.

Water supplies are restricted by local variations in demand and by municipal regulations. The issue of how to provide manufacturers with adequate water supplies must be tackled from the planning stages of the zone. Distribution lines must be installed to ensure that each industrial resident has access to water. Moreover, where supply disruptions are of great concern, zones should invest in a cistern system and a recycling facility. When estimating water use of future tenants, planners should figure that the average factory of 150 workers uses as much as 30,000 GPD. The exception is warehouses where little water is used; 50-75 GPD per worker should supply all sanitary needs in such facilities.

(ii) Energy

Dependable power greatly enhances the attractiveness of an EPZ since production shutdowns caused by power interruptions are extremely costly. Conversely, undependable power limits zone growth and attractiveness. For example, firms located in the Jamaica EPZ state that unreliable energy supply is the primary deterrent to further industrial expansion in that zone. The Dominican Republic is hindered by similar shortages; power outages occur up to five times a day with average manufacturing losses approaching 15 to 20 percent. Interviewed manufacturers at these sites estimate that if it were not for the constant disruption of electrical service, they could expand operations by 30 to 40 percent.

Average power demand of zone occupants is 100,000 kw per acre. The installed capacity should be capable of carrying short periods of higher demand. Often it is necessary to provide supplemental EPZ-generated electric power supply where the public utility cannot accommodate heavy energy usage.

Energy-intensive manufacturers hesitate to invest in countries where energy availability is vulnerable to disruptions from foreign supply of oil, industrial gas or other fuel. Most potential zone manufacturers that are heavy energy consumers investigate the percentage of fuels imported by the host country. Such calculations have unfavorable implications for locations

such as the Nantze free zone (Taiwan) which imports virtually all of its energy-generating fuel and where production costs can be severely affected by unfavorable shifts in price and supply of OPEC oil. Zones located in oil-rich countries may have an advantage in attracting firms whose production process is highly energy-intensive.

Electricity rates for a sample of Caribbean countries as illustrated in Table 3, Electricity Rates in the Caribbean Basin reveals the variation of prices charged by successful zones.

Table 3

ELECTRICITY RATES IN THE CARIBBEAN BASIN

<u>Country</u>	<u>Average Rate per KWH</u> (US\$/kwh)
Costa Rica*	.0144
Haiti	.0679
Dominican Republic	.170
Mexico*	.0290
Barbados	.0750
Honduras	.0750
Jamaica	.1200
Panama	.0950

Source: FZAS in-country studies and zone investment promotion literature.

* The very low rate is due to the devaluation of the local currency without a corresponding adjustment in internal prices.

(iii) Communications

The rapid growth of international communications technology has aided EPZs as much as any other single factor. Technological improvements have been of special benefit to electronics assembly and other production-sharing industries where worldwide inventory control and production scheduling are done on a daily basis. Free banking zones capabilities also have risen dramatically with the revolutionary changes in communications. Extensive and reliable communication systems, especially for the electronic transfer of funds, have become an integral part of the modern international banking community.

As part of their marketing effort, zone operators should supply prospective occupants with data on rates for long distance telephone calls as well as information concerning connection times with other countries. In some countries, poor communications seriously affect industrial progress. In Brazil it can take over ten hours to connect with an overseas operator, and, in Egypt, zone residents complain vehemently that inadequate telecommunications have resulted in frequent interruptions in production. Evidently, zones located in countries with highly refined communications networks have a distinct advantage. Such zones should publicize available communication services such as overseas cable systems, telex services, long distance and local phone service, and, satellite transmitters and receivers.

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Recent advances in satellite applications will open up vast new markets for free zones. Rapid, low-cost communications have just begun to make it cost-efficient for large corporations to move clerical tasks--specifically word processing and data entry operations--to EPZs where local labor can perform these services at a fraction of the rates charged in developed countries. Zones that contain satellite capabilities offer a formidable inducement to magazine publishers, insurance companies, mail order houses, banks, and other firms for which data entry represents a sizeable portion of the operating budget. Furthermore, including of office-sharing operations in a zone promotes economic stability: it provides immediate employment due to minimal investment leadtime requirements; it diversifies a zone's industrial mix; and it brings computer technology into the zone and builds skills of the indigenous labor force in a rapidly growing sector.

(iv) Sewage

Adequate sewage disposal is an important component of zone infrastructure, especially where high levels of industrial waste are generated. Where central municipal sewage treatment facilities are available, direct tie-in of the estate's sewage network is desirable, provided effluent can be maintained at suitable standards. Usually this requires pretreatment in liquid waste generating plants to remove or neutralize aggressive waste matter like acids, alkalis, high organic content, and metal ions. Where no municipal facility is available, the zone must consider installing its own treatment plant. Sanitary waste under either set of circumstances can be mixed with the industrial waste. If industries are predominantly nonliquid-waste operations--typically light mechanical activities--simple septic tanks can be installed either on an estate-wide basis or for each individual factory, if soil type is appropriate.

D. How Does Stability of the Investment Climate Affect Planning and Development?

Foreign investors are acutely sensitive to real or perceived risks to shifts in the "groundrules" for economic development. Therefore, one must analyze the stability of the investment climate before embarking on a free zone development project. Problems that are likely to threaten a zone development project include the following concerns:

1. Potential for invasion/war. No deterrent to industrial investment by foreign firms is as powerful as the actual or perceived threat of invasion or war. Such concerns have retarded the development of free zones in the Middle East and in several African countries.

2. Internal uprisings/terrorism/civil strife. Depending upon scale, intensity, and frequency, incidents range from nuisance to prohibitive obstacles to zone development. Successful zone projects continue in countries such as the Philippines and Sri Lanka, where outbreaks of civil violence have occurred sporadically in some areas of the country. Nations with sustained, severe internal strife, however, do not have flourishing zones.

3. Disruptive union actions. Militant labor union activities adversely affect zone development prospects. For example, in Mauritius, strikes resulted in closure of firms based at the Coromandel Export Processing Zone in the late 1970s, and contributed to the reluctance of subsequent investors to establish operations at the site. Many countries sponsoring free zones have implemented special labor legislation protecting zone-based firms from strike actions.

4. Amount of criminal activity. Criminal activity has retarded foreign investment in free zones in developing countries. For example, perceptions of high crime rates have limited investment in several African free zones like Senegal and Liberia. Crime concerns often can be offset, by strengthening zone security systems.

5. Frequency and manner of government changes. Investors may be reluctant to locate in countries where coup d'etats are common, and where such changes of government are marked by violence. However, in countries like South Korea, the impact of such changes has been minor because of economic policy continuity.

6. Frequency and severity of changes in basic economic policy. Sudden shifts in basic national policy toward foreign investment and the private sector can have a chilling effect upon zone development prospects. The legacy of past socialist policies in Jamaica and similar current policies in Nicaragua have weighed heavily in calculations of foreign investors exploring prospects for establishing operations.

7. Clarity of tax and regulatory provisions. Vague or complex free zone enabling acts and regulations invite investor skepticism. Investors fear that regulations will be interpreted arbitrarily.

8. Integrity and efficiency of juridical process. In some developing countries, problems with resolving disputes through the courts have reduced the interest of foreign investments. Such problems generally do not kill an otherwise viable project; rather, they combine with vague and contradictory statutes and regulations to create unacceptable obstacles.

9. Participation in international copyright and patent conventions. This consideration, while beneficial, does not appear to be essential to zone success. Although some firms have expressed reluctance to invest in Taiwan's export processing zones because of the lack of safeguards against copyright and patent infringement, Taiwan's free zones are highly successful.

E. How do Assistance Programs Effect Planning and Development?

1. Cash Subsidies

Few host countries provide specific cash subsidies to free zone foreign investors. Because of the commercial banking liquidity problem, many LDCs, particularly small-island economies, not only forbid subsidization, but also prohibit foreign investors from borrowing on the local capital market.

Subsidized interest rates for indigenous free zone industries are more widespread than cash subsidies. International organizations such as the

Canadian International Development Agency (CIDA) and the soft loan window of the World Bank (IDA) participate in projects such as extended credit at preferential interest rates to small and medium industries. The purpose of these projects is to stimulate indigenous entrepreneurship, particularly in export-oriented industries.

2. Land subsidies

The most common form of land assistance program is de facto subsidization through reduced rental rates. Especially during the early years of a zone's existence, rental rates may be set artificially low in an effort to attract tenants. The long-range policy in such matters may depend on whether private or public entities have borne the cost of developing the zone. If a central government or an international agency is involved, rents may remain low for an extended period of time. The justification for this practice is that the economic benefits of the project far outweigh the financial return. When the developer is a private entity, rents are the major source of revenue and are seldom subsidized indefinitely.

3. Job training

Job training programs offered by public sector institutions for unskilled, assembly-line workers appear to be of little interest to many EPZ firms. Most companies prefer to train their work force "on-the-job," even if institutional training programs are subsidized. However, for technicians and middle-level management, training can facilitate expansion of activities and assist in the transfer of skills to the indigenous population.

Research for this report indicates that the most successful training programs are cooperative ventures between zone industries and public sector institutions. For example, in Ciudad Juarez (Mexico), "maquilla" industries provides partial funding for a training center that trains their employees. Some Eastern Caribbean companies permit students to use their facilities, including equipment and machinery, as a training center after the close of business. The benefit is twofold; (1) industrialists assure a steady flow of trained workers and (2) public sector institutions provide appropriate training at a substantially reduced cost.

Other forms of training assistance programs involve either a direct cash subsidy from the government of an LDC or reduced compensation to workers. For example, in India the state government may pay up to one half of the wage payments during the initial training period. At other sites, such as the Philippines, industries to pay only one half of the minimum wage for a six-month period. These programs reduce the cost of production, but have resulted in significant labor unrest due to misuse of the system.

F. How Does Market Access Affect Planning and Development?

Recently, industrialized countries such as the United States and the European Economic Community erected protectionist barriers to limit imports. The policies profoundly affect Newly Industrialized Countries (NICs) and the products they export -- apparel and electrical/electronic devices such as

radios, televisions and watches. For example, apparel imports to the United States are regulated by the Multi-Fiber Agreement, a series of bilateral negotiations that establish the maximum amount of any product produced in a specific country that can enter the United States. Also known as "quotas", this system has forced producers in traditional production centers such as Hong Kong and Taiwan to shift production facilities to free zones in non-quota bound countries such as Sri Lanka, Dominican Republic, and Jamaica.

Impending changes in the Generalized System of Preferences (GSP) also are accelerating investment from the Newly Industrialized Countries to the LDCs. In 1985, the terms of duty-free access to the United States market will be renegotiated for 3,000 products. It is expected that the number of eligible products will decline, and that manufacturers in the NICs will graduate out of their favored nation status. Many manufacturers have been preparing for these constraints by actively seeking new investment locations to preserve duty-free export operations.

Other tariff provisions, such as the Lome Convention which permits duty-free entry to markets in the European Economic Community for 40 developing countries in Africa, the Caribbean and the Pacific are also in the process of modification.

The effect of the changes in special tariff provisions has distorted the terms of trade in certain product categories. Decisions to expand existing facilities or undertake new investment may not always reflect an evaluation of the lowest cost production center, but may be the result of access to markets. Diversity in the industry mix in the free zone may be the best mechanism to prevent stagnation.

G. Where are Zones Located and What Are Their Characteristics?

Since the late 1960s, 36 countries have implemented about 100 export processing zones. Table 4, Free Zones Worldwide on the following pages, provides basic information on these zones. Additionally, 13 countries have approved free zone legislation and expect to activate new zone projects in the next two to three years.

Since the market area for a zone is both regional and world-wide, an understanding of how typical established zones have performed is desirable. However, only a few zones will be direct competitors. Examine these specific sites for their similarity to the proposed zone. Factors included in this analysis are location, type of facility and range of services.

1. Location

The map on the page 22 identifies the countries who have established almost 100 EPZs. As indicated on the map, zone projects are clustered in the Far East and the Central American/Caribbean regions, regions that contain 80 percent of the world EPZ population. Specifically, 46 percent of all export processing zones are located in Central America (including Mexico) and the Caribbean, 7 percent in South America, 13 percent in Africa and the Middle East and 34 percent in the Far East.

Table 4

WORLD EPZ POPULATION
(1982/83 DATA)

REGION 1 - Central America and Caribbean

Country	Number of Projects	Date of Commencement	Ownership	Direct Employment	Number of Firms	Exports (US\$ millions)	Major Industrial Sectors	
							Industry	Share of Exports (Percent)
Bahamas	1	1960	Private	1,500	8	N/A	Pharmaceuticals Petroleum Refining	100
Barbados	10	1965	Public	15,000	N/A	140	Manufactured exports: Electrical parts Clothing	47 22
Costa Rica	2	1972	Public	12,000*	60*	57*	Apparel Shoes	82 6
Dominican Republic	4	1970-1983	1 Public 1 Private 2 Mixed	18,921	93	150	Garments Tobacco/cigars	46 34
El Salvador	2	1976	Public	3,000	N/A	77	Electronics Garments	75 20
Guatemala	1	1981	Public	15	1	<1	N/A	N/A
Honduras	1	1976	Public	1,300	12	16	Garments	100
Jamaica	1	1976	Public	3,000	14	22	Garments	65
Mexico	17	1965	Private & Public	130,049*	605*	1,622*	Electronics & electric Garments	93* 7*
Nicaragua	1	1977	Public	N/A	3	2	Garments	86
Panama	1	1979	Public	250	3	< 1	Apparel	100
Eastern Caribbean/1	5	1978	Public	8,500	20	30	Garments Electronics	65 25
Haiti	1	1965	Public	48,000*	200*	100*	Garments & footwear Sporting goods Electronics	39 31 8
Total	48			241,535	1,019	2,297.7		

Notes

*Designates countrywide data for entire EPZ sector (including single factories with EPZ status).
 1 The Eastern Caribbean region includes: Antigua, St. Kitts, Dominica, St. Lucia, St. Vincent. On all of these islands, 100 percent export-oriented firms are offered fiscal incentives and regulatory relief similar to other EPZs throughout the world. Manufacturers are permitted to locate facilities anywhere on the island.

Table 4 continued

WORLD EPZ POPULATION
(1982/1983 Data)

REGION 2 - South America

<u>Country</u>	<u>Number of Projects</u>	<u>Date of Commencement</u>	<u>Ownership</u>	<u>Direct Employment</u>	<u>Number of Firms</u>	<u>Exports</u> (US\$ millions)	<u>Major Industrial Sectors</u>	
							<u>Industry</u>	<u>Share of Exports</u> (Percent)
Chile*	1	1976	Public	3,200	N/A	11.1	Warehousing	N/A
Colombia	3	1982	Public	>200	>25	N/A	Furniture, garments	100
Brazil	1	1967	Public	49,213	194	75.0	Agricultural goods	45
Total	<u>5</u>			<u>52,433</u>	<u>195</u>	<u>87.1</u>		

*1979 Data - Out of a total of \$280.2 million in merchandise handled by the zone only \$11 million was destined for re-exportation, primarily to Bolivia. Very little value added.

Table 4 continued

WORLD EPZ POPULATION
(1982/1983 Data)

REGION 3 - AFRICA AND THE MIDDLE EAST

<u>Country</u>	<u>Number of Projects</u>	<u>Date of Commencement</u>	<u>Ownership</u>	<u>Direct Employment</u>	<u>Number of Firms</u>	<u>Exports</u> (US\$ millions)	<u>Major Industrial Sector</u>	
							<u>Industry</u>	<u>Share of Exports</u> (Percent)
Egypt	4	1974	Public	8,000	N/A	N/A	Food and beverages, chemicals, metal parts	N/A
Jordan	1	1973	Public	600	N/A	N/A	N/A	N/A
Liberia	1	1975	Public	15	1	<1	Hand tools	N/A
Mauritius	5	1970-79	2 Public 3 Private	23,470*	118*	112*	Apparel	71
Senegal	1	1974	Public	250	1	0	N/A	N/A
Syria	6	1978	Public	1,500	60	N/A	Perfumes, cosmetics	N/A
Tunisia	6	1972	Public	N/A	N/A	N/A	N/A	N/A
Total	<u>24</u>			<u>33,835</u>	<u>189</u>	<u>113</u>		

*Designates countrywide data for entire EPZ sector (including single factories with EPZ status).

Table 4 continued

WORLD EPZ POPULATION
(1982/1983 Data)

REGION 4 - FAR EAST

<u>Country</u>	<u>Number of Projects</u>	<u>Date of Commencement</u>	<u>Ownership</u>	<u>Employment</u>	<u>Number of Firms</u>	<u>Exports</u> (US\$ millions)	<u>Major Industrial Sector</u>	
							<u>Industry</u>	<u>Share of Exports</u> (Percent)
China (PRC)	4	1978	Public	100,000	N/A	N/A	N/A	N/A
Hong Kong*	2	1977-80	Mixed	4,000	26	N/A	Garments, Textiles and Electronics	N/A N/A N/A
India	2	mid-1960s, 1974	Public	3,500	40	57	Electronics	100
Indonesia	1	1973	Public	11,191	18	18	Garments	65
Malaysia	12	1971	Parastatal	71,000	89	1,482	Electronics	56
Philippines	4	1972-1979- 1980-1982	Parastatal	20,991	58	156	Food manufacturing Apparel Electronics	23 20 17
Singapore*	1	early 1970s	Public	88,000	2,000	1,320	Petroleum Electronics	37 18
South Korea	2	1971	Public	N/A	89	679	Electrical and Electronics Machinery	60 10
Sri Lanka	1	1979	Public	27,000	14	79	Garments	80
Taiwan	3	1965-1970-1970	Public	70,047	267	1,598	Electronics	60
Thailand	1	1981	Public	15,500	25	N/A	Garments Crafts Metal Products	N/A N/A N/A
Total	33			411,229	2,626	5,287		

NOTES:

*Data for Hong Kong and Singapore represents employment and exports from the industrial estates/EPZs only.

World EPZ Population



2. Type of Facilities

For the most part, zone facilities are so standardized that one could not be sure in which country a zone was located if one viewed only the standard factory buildings. Building size generally ranges from 6,000 to 20,000 square feet although occasionally buildings contain up to 80,000 square feet. Special warehouses with controlled environments for products such as tobacco, chemicals, sugar and grain are provided as needed. A gate house and customs office are necessary facilities for the zone.

3. Range of Services

This section deals with services other than the basic physical infrastructure of the zone. Infrastructure is called zone "hardware" while services is called zone "software". Sponsors who hope to develop successful EPZs must understand the availability and composition of the software offered by competitive zones and keep up-to-date on new developments and trends. Services include post offices and banks, transport services, auxiliary worker training and recreational facilities. A detailed listing of services that could be provided in the course of zone development is given Annexes.

In summary, competing EPZs should be studied to determine their strengths and limitations and to identify those industries whose needs are not being given adequate attention. Becoming thoroughly familiar with the competition's pricing strategy, services, promotional tools, incentives and management capabilities will help zone developers define their own requirements in enhancing their competitive edge.

H. What Has Been the Nature of Previous Market Demand?

A thorough demand analysis is essential to formulating a master plan, construction schedule and cost/benefit projection. It also provides a rational basis for EPZ benefits such as estimating the job creation potential.

Potential markets help determine the zone's location, and the facilities and services it should offer. Almost all major firms involved in international trade could make use of a zone; therefore, it is important to define the market to achieve the best possible usage of limited resources. This then becomes a question of market segmentation and the selection of target markets.

A market segment is a group of prospective firms with similar characteristics that have common needs and wants, and which will respond to similar stimuli. Effective product and service differentiation is left to chance unless such segmentation is used. One effective strategy is to concentrate attention on those market segments whose needs are not being met or are imperfectly met by other zones.

Free trade zones have four distinct market segments: manufacturing, warehousing, exhibition and office. EPZs are devoted primarily to manufacturing, offering warehousing facilities as a supplemental service.

By contrast, commercial free zones focus on warehousing and transshipment and often include exhibition and office space. The appropriateness of a specific segment for a region or site depends upon the community's objectives, economic base and complementary commercial services. Major industrial sectors presently engaged in manufacturing in EPZs include apparel, shoes, garments, electronics, furniture and chemicals.

During the early 1980s, there was a sharp drop in the rate of growth, attributed to the world recession; even so, the number of zones still increased to a total of 97. According to 1984 research, at least 13 countries including Peru, Bolivia and Ecuador, are planning export processing zone development. These new projects should bring the total EPZ number to between 110-120.

Although the decision to establish offshore industrial operations contains an element of risk, since 1965, companies have chosen to establish over 2000 new manufacturing plants that have generated 800,000 jobs in 38 countries. Barring new, stringent protectionist policies by advanced industrial countries, the next five years should produce sustained growth in demand for EPZ sites as multinational corporations (MNCs) respond to the challenge of maintaining internationally competitive operations. This involves the transfer of segments of their production processes to offshore locations that offer a lower-cost operational environment, a process that may be termed "production sharing" or "international subcontracting." However, in the longer (5-15 year) term, automation and robotics may return a portion of this activity to locations closer to the ultimate consumers in the United States and European markets.

The primary factors influencing investment decisions are the basic factors of production, as discussed in detail earlier in this guide. The attractiveness of a country's tax, regulatory and tariff policies alone usually cannot offset inherent shortcomings in these factors. However, the presence of a favorable policy environment can greatly accelerate the pace of development in areas where the basic factors also are adequate. Countries such as Taiwan, Malaysia, Singapore, the Dominican Republic, Hong Kong and South Korea, that have a reputation for understanding and responding to the needs of industrialists, are at the top of the list of alternative locations.

Research performed during the course of this study suggests that that MNCs will generate an average of 50,000 to 75,000 factory jobs per year over the next five years in existing or yet-to-be-built zones mainly in the form of production sharing or international subcontracting.

Much of this growth is predicted to occur in the established Far Eastern and Caribbean EPZs. A few new projects with lesser growth are expected in North Africa, South America, the Middle East and southern Asia. Additionally, the People's Republic of China has entered the market by establishing "Special Economic Zones" in six areas. This program appears to be expanding, in response to China's prime location and low wage rates.

By applying known working space/job and capital/labor ratios for typical EPZ projects, the above forecast of jobs can be translated into industrial space and capital requirements, assuming:

- (1) Average 175 square feet of factory space per job;
- (2) Average capital investment per square foot of factory space is approximately \$40-45. This estimate includes the cost of land, buildings and services, but does not include the investment by occupant firms in equipment and working capital.

These assumptions were used to project future capital investment and job creation as seen in Table 5, Capital Investment and Jobs.

Table 5

Capital Investment and Jobs
Forecast for Export Processing Zones, 1984-89

	<u>Annual Average</u>	<u>Five-Year Total</u>
Jobs	50,000 to 75,000	250,000 to 375,000
Industrial Space Required	8,750,000 to 13,125,000 sq.ft.	43,750,000 to 65,625,000 sq.ft.
Capital Investment	\$350,000,000 to \$525,000,000	\$1,750,000,000 to \$2,625,000,000

Source: FZAS research and World Bank reports.

Note: The assumptions on which these projections are based are discussed in detail in the Annexes.

Based on the projection in the previous table, project sponsors for any given project need attract only a minute share of a very large market. Provided physical infrastructure, incentives, software services and prices are competitive, there should be little difficulty in reaching full occupancy. However, good management and intensive promotion will be necessary since even the best product must be first brought to the attention of potential customers and then "sold" on its merits.

I. How Do Planning Zone Incentives And Reciprocal Investor Commitments Affect Planning And Development?

Investment incentives are part of almost all industrial development efforts, even though most associate them with export processing zones. In fact, the idea of a "freeport" with an anything-goes environment that produces extraordinary growth is misleading because business development incentives are so commonplace that they are of secondary importance to many investors. Today, a good incentive package is necessary but not sufficient to attract foreign investment.

The real task for a host government is to present a broadly hospitable climate for investment, not just token tax breaks. Although the

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government's ability to manipulate the economy is constrained by natural factors, the government can stimulate an attractive business climate through strategies such as developing an economic plan or the entire country, ensuring stable economic policies, and establishing a tradition of working to expand and assist foreign investment.

There follows, a discussion of possibly policy-based incentives. While these are important, investors consider the natural factors of production more important. Therefore, zone developers must first build on the natural comparative advantages of the EPZ's locale.

1. Inventory of Possible Incentives

(a) Tax Incentives

A number of tax incentives are available and in use. Their effectiveness varies across locations and types of manufacturer. Incentives include the following:

Tax Holidays. Income tax exemptions on profits and dividends are offered in most free zones throughout the world. Called tax holidays, these exemptions can extend for a period of five to 15 years. However, they stimulate only limited foreign investment because of transfer pricing and double taxation agreements. To reduce both taxable profits in the EPZ and duty payments in the final market, transfer pricing techniques such as overvaluing the value of imported materials and undervaluing the final product are often used. A holiday from double taxation could be an incentive if investors normally would be taxed both in their home countries and in the host country. Then a tax holiday in the zone would only cause the user to be taxed in their home nations.

Operating Loss Carry-Forward. The right to carry forward operating losses to future tax years can provide savings comparable to those provided by lowering or eliminating early-year taxes.

Deferred Depreciation. The right to defer depreciation of assets until the tax abatement ends can extend or simulate a tax holiday. If a 100 percent tax abatement is given, depreciating assets in those years would be pointless to the firm.

Accelerated Depreciation. The accelerated depreciation of capital assets can also be an incentive to increase the cash flow of an enterprise in the initial years of operation.

Investment Tax Credits. These may be given to investors who make unusually desirable efforts in fields that the host government wishes especially to encourage. For example, training of local workers, providing services, or developing of infrastructure might be rewarded with credits. Double deductions worker training is common.

Exemption from Local Taxation. Local property or sales tax, building permit requirements and work permit requirements are the prerogative of local governments. The EPZ enabling legislation should state that the EPZ management has sole authority over the zone; further the zone should be

exempt from local taxes and regulatory bodies. Confrontation between local and state officials has occurred when such jurisdictional matters were left unclear.

(b) Importation/Exportation Incentives

The distinguishing characteristics of an export processing zone is that it allows imported materials to be exempt from customs duties and other taxes, provided that material is later re-exported. Export taxes are not applied to these re-exported items. In most EPZs throughout the world, both imported raw materials and all capital equipment used in the production process are permitted entry into the country free of all duties and taxes. Note that this system differs from CATs, the export certificates commonly used in South America that permit reimbursement of import duties and taxes.

(c) Regulatory Relief

Regulatory relief can be a very important incentive, especially if the LDC has a reputation for "red tape" and a slow-moving bureaucracy. Regulatory incentives, such as streamlined customs and licensing procedures indicate that the economic environment encourages private sector investment. Streamlined permitting procedures should be part of any export processing zone. Likewise, host governments should review the rules for importing and exporting, customs inspection and assessment, inventory control and construction permits. Additionally, the EPZ Authority should mediate local government regulations. Facilitating cooperation between labor unions and free zone industries is a possibility, particularly in resolving disputes in a timely manner. Labor relations are very important in an EPZ, since foreign firms are more sensitive to criticism, both in the host country and in their homes.

The government can encourage cooperation between labor unions and free zone industries by resolving disputes in a timely manner. Labor relations are very important in an EPZ, since foreign firms are sensitive to criticism, both in the host country and in their homeland.

The right of investors to manage their businesses according to their own wishes and skills benefits government and businesses. Although the host country may feel that such autonomy will limit governmental influence and undermine the management possibilities for native workers, in actuality, managerial autonomy usually leads to the transfer of useful management skills to indigenous managers. Once the enterprise is operating successfully, the investor probably will be willing or eager to replace their foreign personnel with well-trained domestic managers.

(d) Assistance Programs

Building and Infrastructure. Physical infrastructure must be under construction before it is possible to interest potential occupants. Prepared building sites are the minimum; ideally, standard factory buildings should be available for immediate lease or sale.

Assistance in Hiring. The zone operator or authority can help firms locate workers. Files might be kept of particular individuals with special skills or attributes. Further, the zone operator's staff can help bridge the language and cultural gaps with potential employees.

Programs for Workers. Health services, day care, transportation and skills training are services that can be provided by the zone operator to help attract and maintain a productive labor force. If the investor imports a number of foreign workers and their families, these programs become critical. In terms of training, if the zone can provide the physical facilities, zone users often prefer to train their own employees in company specific methods and avoid the difficulty of 'unlearning' other techniques.

Two additional incentives can be important. The presence of service firms in or near the zone benefits investing firms, especially if the zone is far from existing industrial areas.

Second, even though the sale of seconds in domestic markets, at discounted prices, after appropriate tariffs have been paid on those goods is usually not allowed if domestic producers would be hurt, the competition produced by domestic sales of these products can result in long-term benefits of improved productivity and quality in domestic production.

2. Incentives Most Attractive to Foreign Investors

The most important thing a government can do is offer secure investment conditions to investors. In addition, different incentives can be used to attract specific types of manufacturers.

(a) Incentives for Assembly Operations

Incentives that emphasize tax relief on the exported profits and provides available buildings and land attract assembly operations. The natural incentives of low-cost labor is of great importance to potential investors in this type of operation so its availability must be ensured. These firms also respond favorably to removing local taxes and allowing free import of equipment. Tax holidays are effective because assembly-type operations can be profitable in their first year.

(b) Incentives for High Technology Firms

If the zone seeks to attract firms using higher skills or technologies, other incentives are important. Such firms may not make a profit for several years. Labor cost will be less important, but training and machinery costs are higher. Tax holidays are less useful than is the more expensive incentive of financial assistance. The ability to carry forward losses to future tax years along with full management autonomy to zone businesses are alternative low-cost incentives.

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(c) Incentives for Small-Scale Enterprise

Since small businesses also are important employment sources, small-scale enterprises can be the recipients of additional incentives, especially those that aid capitalization. Rent subsidization through a sliding-scale price structure is one method. However, even small-scale tenants should be phased into the regular market-dictated process over time to encourage their economic development.

(d) Other Strategies Regarding Incentives

In-bound manufacturing outside the zone might be part of a national strategy for regional development, and thus receive EPZ-type incentives. Mexico currently offers investors this type of opportunity.

To the extent that a more open, 'world-class' economy can be achieved, the need for EPZ incentives will decline over time and the zone will function as traditional industrial estate. Or, similar to the foreign-trade zones of the United States, the original export orientation of the zone can be expanded so that the zone becomes a tool for promoting international economic cooperation. The U.S. zones are often used not for escaping duties on re-exported goods, but to delay or modify duty payments on goods that eventually are imported. Thus industries that would otherwise be developed overseas are drawn to the U.S.

The table on the following page shows the various categories of incentives available at selected free zones around the world.

3. Reciprocal Commitments Asked of Industries Desiring the EPZ's Opportunities

The host government must define zone goals and determine the zone's role in the nation's economy. These decisions establish the conditions of approval of foreign investment in EPZs. Although, in the short- and medium-term such constraints can help determine the impact on the local economy, in the long run these constraints can help determine the impact on the local economy, in the long run these constraints can have a negative effect on national economic growth. Nations considering an EPZ program must realize that the program's success rests with the re-focusing of the development strategy, channeling the momentum of the national economy outward and taking the risks of competition. It is in this light, that the reciprocal commitments asked of the potential users and investors in the zone must be determined. Here are the basic types of constraints often asked of foreign investors:

(a) Foreign exchange regulations

A nation may require use of an official market exchange rate, or may require that hard currency be exchanged through the central bank in an effort to increase and control foreign exchange reserves. However, evidence indicates that EPZs are placed at a distinct disadvantage if foreign investors are required to exchange hard currency at an official rate, assuming

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Table 6

Incentives and Constraints at Selected Free Zones

		TAX HOLIDAY	FOREIGN INVESTORS EXEMPT FROM LOCAL TAXES	REPARATION OF CAPITAL	DUTY-FREE ENTRY OF GOODS	U.S. DOUBLE TAXATION AGREEMENT	BANKING SECRECY	WAGE SUBSIDY FOR TRAINEES	HOURLY WAGE	RENT: US\$ SQ.-FT./YEAR	LOME SIGNATORY	CBI DESIGNEE	GSP DESIGNEE	LATIN AM. FREE TRADE ASSN. SIGNATORY	EXPORTS SALES TAX FOR FOREIGN INVESTORS	U.S. QUOTAS ON SOME GARMENTS	DELAYS IN CUSTOMS
CENTRAL AMERICAN AND CARIBBEAN										CONSTRAINTS							
Bahamas	to 1990	Y	Y	Y	Y	Y		1.50-1.80	4.00	Y	Y						Y
Barbados	10 yr	Y	Y	Y	Y	Y		1.35-1.50	3.25-3.50	Y	Y	Y					
Costa Rica	10 yr	Y	Y	Y	Y			0.79	2.70		Y	Y			Y	Y	
Dominican Rep.	15 yr	Y	Y	Y	Y			1.04	1.08-1.92		Y	Y					Y
E. Caribbean	10 yr	Y	Y	Y				0.75-1.10	1.50-2.50	Y	Y	Y					
Haiti	5-15 yr	Y	Y	Y		Y		0.44	1.80		Y	Y			Y	Y	
Honduras	Unlimited	Y	Y	Y				1.10	3.35		Y	Y					Y
Jamaica	Unlimited	Y	Y	Y	Y			0.65-0.80	3.50	Y	Y	Y					
Mexico	none		Y	Y	Y	Y		0.99	1.50-5.25			Y			Y	Y	
Panama	15 yr	Y	Y	Y		Y	Y	1.52	2.20		Y	Y					
SOUTH AMERICAN																	
Colombia			Y	Y	Y		Y	1.45	2.40-3.50			Y	Y		Y	Y	
MIDDLE EAST AND AFRICAN																	
Liberia	5 yr		Y	Y			Y	1.25	1.67			Y			Y	Y	
Mauritius	15 yr		Y	Y	Y			0.65			Y	Y			Y		
Senegal	10 yr	Y	Y	Y	Y		Y	1.45			Y	Y					Y
FAR EAST																	
Hong Kong	18% max. tax	Y	Y	Y		Y		1.00-1.50	4.50			Y		Y	Y		
India	5 yr	Y	Y	Y		Y		0.38	2.24			Y			Y	Y	
Indonesia	none		Y	Y				0.28				Y			Y		
Malaysia	8 yr	Y	Y	Y				1.45	variable			Y			Y		
Philippines	none	Y	Y	Y		Y		0.48	2.00			Y			Y	Y	
Singapore	5-15 yr	Y	Y	Y	Y	Y			variable			Y			Y		
Korean	5 yr	Y	Y	Y	Y				1.35			Y			Y		
Sri Lanka	10 yr	Y	Y	Y	Y		Y	0.20-0.40				Y			Y	Y	
Taiwan	5 yr	Y	Y	Y				1.45				Y		Y	Y		

Source: Research of Free Zone Authority, Ltd.

the official rate is artificially high. Some zone industries have chosen to cancel or delay expansion plans because of such regulations.

(b) Joint Venture Requirements,

Joint venture requirements are intended to strengthen linkages with the domestic economy and to facilitate the transfer of technology. The reasoning behind such an approach is that a foreign investor can provide knowledge and access to foreign markets and advanced production skills, whereas a local investor has a command of local production considerations.

Foreign investors have different reactions to these joint venture. Some fear the loss of autonomy in management and a lowering of their return on equity. Others appreciate the image of goodwill projected by a joint venture and the local partner's knowledge in dealings with labor and the government.

(c) Profit Repatriation Limits

Profit repatriation limits are an alternative method of gaining funds for local borrowers by forcing the foreign party to commit more fully to local operations. This is likely to be a greater disincentive to small-scale investors, since larger multinational corporations are better equipped for a prolonged presence abroad.

(d) Technology Transfer Requirements

While host governments desire to obtain technology from foreign firms, they also prefer the employment benefits of labor-intensive production methods. Yet, more and more frequently, governments enact regulations that mandate technology transfer as they seek the long-term benefits of the modernization of their industrial sector.

(e) Local Content Requirements

Zone users often expect the host government to encourage or demand use of local raw materials or intermediate goods in the production process. This generates more foreign exchange than does use of imports, has greater repercussions on employment and is often an integral part of the EPZ design. Governments considering imposing this constraint should remember that EPZs are enclaves for the controlled use of imported raw or intermediate materials and that use of local raw materials might best be encouraged by developing incentives to that end. For example, the zone administration can help expedite procurement of local raw materials for the unfamiliar new investor or tax credits can be given for their use.

Forbidding use of foreign unskilled labor stems from the common goal of EPZ projects to stimulate domestic employment. Since the local labor is usually cheaper than foreign unskilled labor, this constraint is not of major importance. Minimum wage requirements usually are low enough not to have any real impact on zone users.

(f) Inventory Reporting Rules

Export processing zones revolve around the production of potentially taxable items on which duties are not collected. The corresponding constraint is that users are usually required to keep precise inventories of these goods. All merchandise brought into the zone must be shown to have been re-exported, destroyed, or taxed and imported to non-zone areas. Otherwise, the merchandise may be presumed imported and tariffs collected or some penalty imposed. Every effort should be made to keep these inventory procedures straightforward and clear.

(g) Access to the Local Market

Zone users often are restrained from offering their goods to the local market, even if duties are willingly paid. This results from the import substitution approach to development together with a desire to protect non-zone firms from competition from the "subsidized" or privileged zone firms. Even when such measures are taken, the nation's ultimate economic development efforts still should be directed toward making all businesses competitive in the international economic community.

(h) Pollution/Environmental Controls

These controls are found in international developments. Ideally, it might be possible to piggyback such controls with goals for technology transfer in sanitation or sewage, thus encouraging technological advancement while contributing to infrastructural development.

III. STEPS AND ACTIVITIES IN THE PLANNING PROCESS

Developing an enterprise zone is a time consuming and complex activity. It is best performed through a series of discrete steps or planning activities, many of which can be undertaken at the same time. Necessary tasks include the following steps, each of which is discussed in this chapter:

- Select the Site and the Desired Zone Facility
- Perform Physical Planning
- Perform Financial Planning
- Established the Zone Development Group
- Raise Capital
- Design and Implement Marketing Efforts
- Implement Zone Construction

A. Select the Site and the Desired Zone Facility

Experienced planners, financiers and entrepreneurs know that even the most efficient zone enterprise cannot overcome location deficiencies. Therefore, site selection is a critical process. The scope and depth of information zone planners must collect is determined both by the scale of the proposed zone and by the resources at hand. Therefore the outline of information and process described in this section and the Annexes is a guideline rather than a fixed program of action. It was designed specifically for large scale projects. For smaller projects the site selection process will be less elaborate and costly; however, the sequence of steps remains the same.

When possible, use the economic and physical planning required for site selection as part of the overall preliminary planning. It saves time and money and reduces the net cost of site search to consultant time spent assessing the sites not chosen. Even so, collected data can prove useful for future development at those sites.

1. Complete Preliminary Search Activities

(a) Identify the Principals

Identify the principals in the zone project. "Principals", in this context, means those persons, agencies or organizations with major control authority and major duties and responsibilities in the project. Typically, they will include a private or governmental zone developer; key agencies of the host nation; multinational technical and financial assistance institutions; and sources of finance.

(b) Create a Site Selection Team

Create a site selection team of three to seven persons. Normally, this team will include the zone developer's representative as team leader, plus representatives of the other principals, major economic/financial consultants, and the physical planning consultant or contractor. The team can add other technical consultants as needed. Often the zone developers representative will serve as the leader.

(c) Select the Key Consultants and Contractors

Select the best available consultants from the beginning of the project. In the site selection stage, their time will be minimal but their services are critical. The planning contractor will participate extensively in site evaluation/choice and will be largely responsible for the success and development of the preliminary master plan. Other consultants may be used to fill specific legal, marketing or real estate needs.

(d) Define the Export Processing Zone Mission and Goals

Develop and write a clear statement of the goals, the mission, and the operating format of the proposed zone. This statement is background material for all site selection team members and consultants. Usually it is prepared by the zone developer.

(e) Identify the Site Rating Criteria

Identify elements that must be present to establish a successful zone. These factors include the economic potential of the region or community from the standpoint of target industry sectors; political stability of the area; living conditions; zoning status; and environmental considerations such as topography, soil characteristics, access to water and climate. Next weigh the factors according to importance. Use the weighted factors to rate each potential site on a scale from "poor" to "excellent."

2. Compare Export Processing Zone Type Site Profiles

A prerequisite to site selection and planning steps is choosing the zone format or profile that is most appropriate for the proposed type of operation. Most existing zones are one of six types of zones:

(a) Manufacturing and/or Assembly Zone (Export Processing Zone)

Function These are zone for manufacturing or assembling electronics, clothing, furniture, footwear, automotive.

Physical area Site size typically ranges from from .5 to 1.0 km square.

Location These are located close to international class air, water or rail transport. Low pollution output allows possibility of site location in urban vicinity. Should be close to residence area of work force.

Facility Use multi-purpose, standard, modular buildings, with office space and employee amenities. Building height ranges from one-story (U.S., Europe) to four-story (Asian). Buildings include Administrative and utility building(s); optional trade centers; and optional transit depots. Percent of land covered by buildings

range from 50 percent (U.S.) to 85 percent (Asia). Buildings have truck access, paving, loading docks, employee parking, guest parking, landscaping, lighting, and security systems.

Infrastructure There is excellent drainage and flood control throughout the site and peripheral vicinity. All major utilities water supply, sewage disposal, electricity, gas and telephone are in place or can be built or extended. There is a good street and highway network, adequate for dense truck traffic. There is good public transport system for work force. There is good air, water and rail networks plus cargo-handling systems, capable of expansion to meet zone needs at reasonable cost.

Examples Dominican Republic, Haiti, Mauritius, Jamaica, Malaysia.

(b) Variation of Manufacturing and Assemble Zone (Industrial Process Zone)

Function There are zones for heavy industrial processes such as petroleum, chemical plants, steel fabrication, and raw materials processing. Products are used for export and for use by the host nation.

Physical area Sites are large, typically from 5 km square-20 km square.

Location Large amounts of noise, air and water pollution require establishing the zone away from residential areas. Sites must have direct access to major water and rail networks.

Examples Mexico, Philippines, Malaysia.

(c) Storage/Distribution Zone (entrepot or bonded warehouse)

Function This type of zone is for storage, shipping and distributing internationally manufactured products, components and other goods in locked, bonded warehouses free from normal tariffs.

Physical area Site size varies from a single warehouse building to one or more km square.

Location Typically they are located within or adjacent to a waterport, airport, rail terminal or truck terminal boundary. Location contributes to speed and economy of shipment.

Facility Buildings vary from a single, rudimentary storage building to a complex of large structures with automated goods handling and storage systems, air conditioning, refrigeration, office space and elaborate security systems. Truck access always is required. Rail access is optional. Often the land coverage is maximal with the entire lot used for the building and its minimal vehicle access space.

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Infrastructure Excellent site drainage and flood control is required. Utilities requirements are moderate and extend to water supply, sewage disposal, electricity, gas, and telephone. Air, water or rail cargo handling systems must be available nearby and may be required within the zone facility.

Examples Colombia, Chile, Panama.

(d) Services Zone (Office Park)

Function These zones are centralized facilities for international banking, insurance, brokerage, corporate registration, tax shelter services, data centers, and support service activity. They also include branch offices for international corporations.

Physical area Site size ranges from single building, or portion of a building, to an office park of .2 to .5 km square. An entire metropolitan area can be a services zone.

Location These zones are located near centers for international trade, such as urban business districts, airports or harbors.

Facility Requirements include quality office space with sound-proofing; air conditioning, and facilities for computer and communication utilities; adequate parking; and extensive landscaping (not less than 33 percent open space). Larger versions should include conference rooms and a product display facility. Optional items include a hotel and restaurant. Building heights vary from low (2-3 stories) to high-rise (10 stories or higher).

Infrastructure Sites require excellent drainage and flood control. Utilities requirements include water supply, sewage disposal, electricity, gas, telephone, and special communications requirements such as global satellite links and local microwave networks. In these zones there is a trend toward private carriers or corporate ownership of communications services.

Examples Hong Kong, Singapore, Bahamas.

(e) Enterprise Zone

Function Enterprise zones support the incubation of small, local business enterprises in distressed urban areas.

Physical area Size varies from several city blocks to several km square; they can be an entire town.

Location Usually enterprise zones are located in a densely populated urban area; however, they also can be in a village or rural area.

Facility Facilities include rehabilitated existing buildings and new construction. Facilities are used for indigenous handicraft/

artisan industries, and light manufacturing. Occasionally buildings are used for shops, restaurants, technical services, and light commercial purposes.

Infrastructure May require rehabilitation or expansion of existing infrastructure, focusing on public transport, eliminating health and safety hazards in street paving, lighting, water supply and waste disposal. Alternate energy tech options.

Examples Hong Kong, Singapore.

(f) Technology Development Zone (Evolutionary Model)

Function These zones support the technical growth of a host nation in a center for high-technology industries, research and development activities, and technical/vocational training. Zones are an international technology "showcase".

Physical area Size can encompass up to 2 km square.

Location Optimal location is adjacent to and interrelated with a major technical and industrial urban area and close to major transport hubs.

Facility Buildings may be single or multi-purpose plants. Buildings uses include high technology production and processing; research and development; education; and public demonstration and conferences. Usually the zone's main campus has 33 percent to 50 percent open land. Additional peripheral open land is used for demonstration and teaching in advanced technologies; wind and solar energy; forestry; and other similar uses.

Infrastructure Sites need excellent drainage and flood control. Utility requirements are similar to an industrial park. Emphasis is on global and local communication links, e.g. microwave and optic LAN.

Example Taiwan.

The site selection team must choose the preferred zone profile and commit that choice to the planning process.

3. Conduct the Site Search

Steps in this process include the following activities:

(a) Select Initial Candidate Sites

First, identify potential sites that generally fit the proposed zone format. The search viewpoint may range from a choice among regions to a choice among locations in one city. The number of considered sites should range from 5 to 10. This number of sites ensures an adequate comparison basis, while keeping time and cost within limits.

(b) Build a Preliminary Data Base

The site selection team builds an economic and physical planning preliminary data base. Economic and physical aspects are discussed in the annexes.

--Economic Data Base. The site selection team consultants on economic factors prepare a computer and manual economic data base, using a manual review of documents, computer searches, consultant input, and field research.

--Physical Data Base. The physical planning contractor and consultants prepare a physical data base that includes a study of ecological, energy and environmental factors; geographic information studies; all architecture and engineering studies.

(c) Prepare a Preliminary (Conceptual) Zone Master Plan

Direct consultants to prepare a preliminary zone master plan before evaluating possible sites. The plan outlines zone development in phased steps on a timeline of up to 25 years. The plan is based upon the findings of the market study regarding absorption rates and tenant physical needs. Then judge potential sites on their goodness-of-fit to this development pattern.

(d) Select and Analyze the Final Candidate Sites

At the end of the preliminary search phase, the major consultants evaluate all sites and develop recommendations about each. The site selection team then narrows the search to two or three final candidate sites. Subsequent steps include:

--Schematic Master Plans The economic and physical planners prepare brief, preliminary plans that apply the framework of the conceptual plan to the specific conditions of each competing site.

--Preliminary Architecture and Engineering Program: The physical planning contractor prepares this program for each site. Based on the master plan, this program lists required building facilities, site development work, and infrastructure development work.

--Preliminary Cost Estimates: The cost analysis consultant prepares a cost estimate for physical development and construction for each of the final potential sites. The estimate is based on the preliminary architecture and engineering program.

--Local Liaison and Involvement: During the final selection period, the zone developer and the site selection team conduct a program of local liaison and involvement at each site. The purpose of the local program is the following: elicit the cooperation of local officials; assist in making any needed zoning changes; encourage commitments and

proposals by the host country for the project; and inform and involve the local population and potential zone employees.

--Site Criteria Refinement: Prior to the final evaluation, the site decision criteria are updated and refined to reflect information developed during the search period. The site selection team also revise the priority weighting at this time.

(e) Select the Export Processing Zone Site

If the preparatory steps have been thorough, the best site will emerge from the analysis. Once the site is selected, the site selection team is disbanded. The zone developer and the other principals begin the physical and financial planning.

B. Perform Physical Planning

The creative efforts of the architect have a direct bearing on a zone's vitality. The long-range success and growth of the zone only can be assured by creating a thorough and useful physical design.

1. Complete Pre-Planning Activities

Several organizational steps must be completed before planning contract work begins. The care taken in administrative pre-planning pays dividends in success and efficiency for the entire planning process.

(a) Choose the Zone Physical Planning Contractor

Choose the planning contractor for the proposed zone early in the project because the planner's input affects the character and economic viability of the project. The zone developer must choose among planning formats that range from many separate consultants to complete service by one firm. The best alternative depends on the particular circumstance of each zone project.

--Architect/Engineer. In this option, all physical planning work is done by an Architecture and Engineering firm (A/E). Auxiliary consultants are used as sub-contractors, either by the A/E firm or by the developer. By using a leading A/E firm, the developer ensures excellent design quality and the protection of an independent, pro-client viewpoint about construction costs, quality and correctness.

--Planning Group In this option a multi-service planning group coordinates key functions such as: architectural design; civil, mechanical and electrical engineering; urban and regional planning; geologic analysis; and so forth. Such firms offer thorough supervision services and other types of client representation but usually do not engage in construction.

--Planning/Construction Group In this option a major firm performs both planning and construction. These very large firms take over the entire contractual responsibility for a zone project, from preliminary design to final operating inspection. They can carry out almost all required tasks for zone planning and construction.

(b) Create a Planning Team

As soon as the planning contractor is chosen, the firm creates a zone planning team, and function as its leader. Each major planning field is represented--architecture, engineering, cost control and project management. Decisions are made at periodic meetings of the team.

(c) Complete the Planning Procedure Document

An early task of the planning team is to create a planning procedure document. It is a short list of all planning steps; it guides the activities of the planning team and the zone principals.

2. Carry Out Preliminary Planning

Preliminary planning covers all planning work done up to the selection of a single zone architectural design, the approval of a preliminary master plan, and the completion of a preliminary cost estimate. This modestly budgeted study is critically important because it can help zone developers to avoid costly mistakes later in the project. The steps in the process include the following activities:

(a) Conduct research steps

Physical planning research is less expensive per data item, quicker, and more comprehensive due to advances in computers and telecommunications.

Zone planners need information that is accurate, current and in-depth. The data is obtained in three ways: derived from zone project information supplied by the developer; compiled as an accumulation of project data by the planning contractor; or gathered through site data collection visits by the planning team.

Site research visits are an important part of the planning process. Planners and experts in the various technical fields, should work together as a field team to collect the information. Local technical consultants can also be employed if needed. The collected data is documented by various methods such as, field notes, computer data entry, photographs, physical samples, the completion of inventory forms and formal written reports. Given the rise in technological possibilities brought on by the increased use of computers and other advanced engineering tools, one should be aware of new surveying techniques being developed and tested.

(b) Complete the Preliminary A/E Program

While evaluating potential sites, the planning contractor and planning team prepare a non-site-specific preliminary architecture/engineering program based on site data. This document outlines the Phase One physical development plan, although further phases might also be summarized. Site-specific applications of this program should be prepared for each of the final potential sites. An outline of the items covered in the A/E program is included in the Annexes.

(c) Obtain a Preliminary Cost Estimate

The preliminary cost estimate covers the expected cost of zone physical construction and related consulting costs, such as planning and scientific/technical services. Include a detailed analysis of the first construction phase and a general analysis of future phases. The preliminary estimate is extremely important for analyzing the cost feasibility of the entire project; it must be both accurate and thorough.

(d) Review Preliminary Plans

Next, review work to date, perhaps during the final site selection process. Then evaluate the entire design proposal in terms of design quality, cost feasibility, market attractiveness and compatibility with the nation's development plans. The evaluation will result in one of the following decisions: a) drop the project as not feasible; b) continue the project as planned; or c) continue the project with revisions. If the decision is to continue, begin the final planning stage.

3. Complete Final Planning

(a) Use Databases

Modern design firms use databases. Computer-based data collections provide access to and cross referencing of economic and physical information. Often planning firms also use technical databases of building codes and standards; structural systems; building products and materials; urban and regional planning; and operating systems.

(b) Maintain Cost Control

During the physical planning phase, the responsibility for holding future construction costs within the budget rests largely on the planning firm. There are several planning practices that will help to maintain the required cost control:

Speed. Rapid completion of plans is essential in an inflationary period. Cost rises can nullify planning economies.

Adequate study. There must be adequate site information and thorough consideration of economical design alternatives.

Information flow. During the planning process, there should be a continuous flow of information on costs and technical facts among the project designers and the firms under consideration as the future builders and vendors.

Competitive bidding. Statistical studies show that competitive bidding almost always results in lower construction costs.

(c) Complete Final Plan Documents

Next, the planning contractor produces the final planning documents. These documents are used to establish the construction costs. They contain the instructions for all construction work. Final plan documents for a major project contain the following elements:

Site data. Legal information; technical and geographic maps; photographs, technical reports; etc.

Construction drawings. Civil engineering details; infrastructure plans; landscape plan; structural engineering details; building details; electrical, mechanical and plumbing systems; schedules of finish work; etc.

Construction specifications. Written instructions for all construction work, by standard trade categories.

(d) Complete the Zone Master Plan

Working jointly with the developer and the planners in the other major fields -- economics, finance, marketing, technology, and law -- the physical planner completes the zone master plan. This is a comprehensive document that describes in text and pictures all zone development phases for the foreseeable future. It covers all major aspects of the zone: physical facilities, operation and administration; growth phases; and incorporation in economic programs of the government and world organizations.

(e) Provide Presentation Aids

The contract should specify that the planning contractor provides all presentation aids as required for agency review, meetings with lenders, zone marketing and public information. These aids can include: models, illustrations, photographs and slides; charts, leaflets and brochures; and newspaper and magazine advertisements.

(f) Obtain the Final Cost Estimate

The developer must obtain a final cost estimate based on the final physical plans. The estimate can be provided by the planner, the general contractor or an outside consultant. An accurate final estimate is crucial as a basis for funding and as a confidential comparison check on the

validity of bid prices.

(g) Coordinate Bidding by General Contractors

Customarily, the planning firm coordinates bidding by general contractors on zone construction. It specifies the bidding time and the bid presentation form. It assist the developer in evaluating and selecting among bidders.

4. Provide Construction Supervision

The developer specifies who will carry out construction supervision. Generally, the A/E firm that developed the detailed design, working as the owner's representative, also supervises both the contract negotiations with civil works contractors and construction in the field. An alternative approach to supervision is to form a zone supervision team. The team is headed by an impartial supervisor and includes representatives of the planning team -- the government, the zone administration, the funding agency, the international sponsoring agency, and so forth.

5. Update Planning for Zone Growth

(a) Plan Services For the Zone Administration

Free zones are permanent entities; therefore they require long-term planning. At a given point, planning responsibility shifts from the developer to the zone administration. The change-over usually occurs during the Phase One construction. If the planning firm's work is satisfactory, often it is retained for future planning because of its familiarity with the project.

(b) Plan Services For Zone Tenants and Owners

As zone occupancy increases, design services for zone users mount. Needs include plans for standard factory structures for lease or sale as well as plans for custom-designed structures.

(c) Modify the Master Plan

As the zone proceeds through its development phases, the master plan periodically requires revisions, additions and completion. Advice from the original developer, planning team and contractor is helpful to maintain the intent and continuity of the plan as the new increments unfold.

6. Maintain Zone Design and Appearance

One of the zone's greatest assets is its physical appearance. The planners are responsible for providing an appealing visual setting in the original design. Once construction of Phase One begins, the zone

administration must ensure control of the zone's appearance by:

Land use controls. Strict adherence to protective land use controls is helpful in zone maintenance. This includes vigilance against undesirable adjacent development.

Deed covenants. The use of deed covenants and restrictions is an enforceable means of obtaining conformity to architectural and landscape quality control standards by tenants and owners. Such controls cover building style, colors, materials, signs, parking, landscape maintenance, setbacks, etc.

Maintenance. Careful maintenance by the zone staff of the overall facility -- landscaping, streets and sidewalks, exterior lighting, painting, and prompt repair work -- is a wise investment of zone resources. It attracts and keeps occupants.

C. Perform Financial Planning

1. Define Financial Objective and Constraints

Financial performance is determined by the price charged for land, buildings and services for both privately and publicly developed free zones. Pricing policies of financially successful projects reflect all costs incurred in planning, execution and operation. Costs include preinvestment studies, debt service obligations, maintenance and promotion expenditures and a reasonable return on invested capital. When all costs are reflected in the pricing policies, the free zone project can achieve bankable status.

In general, public sector projects regard profitability as a secondary objective to generating employment, increasing foreign exchange earnings, stimulating regional development, encouraging industrial decentralization, or requiring skills and technology. The rationale behind this approach is that reduced rental prices are necessary to attract investors to the free zone and that long-term economic benefits will offset financial losses. For example, some Eastern Caribbean countries would be pleased to "give away" factory space if it generated significant short-term employment.

For the profit-motivated private sector, industrial estate development income is realized in two ways: (1) capital gains from "speculation" in land sales and (2) as revenue from lease or sale of factory space. Land speculation, defined in this context as the acquisition of undeveloped land for the purpose of resale with or without improvements, may be constrained in some LDCs if public land is deliberately priced below "market" levels in order to restrain increases in land values in surrounding areas. In instances where the public sector has neither restrained land value appreciation nor legally prohibited speculation, resale of developed or undeveloped industrial land can generate substantial capital gains.

The second source of profits for industrial developers is income from the lease or rental of factory space. Profitability is tied directly to the ability to increase rental rates, at intervals and in parallel with escalating land values and building prices.

Free zone economies of scale also can be critical to profitability. If infrastructure costs are high, due to increasing the water or electrical supply, for example, then the ability to earn a reasonable return on the investment will be determined in part by the overall size of the project.

2. Acquire Necessary Information

(a) Capital Cost Information

Estimate capital costs only after a specific site has been selected and preliminary data has been obtained from the feasibility study. As a general rule, infrastructure and infrastructure-related land acquisition costs represent 15 -20 percent of the total infrastructure cost of the free zone project. However, if large infrastructure improvements like additional power or water are necessary, then infrastructure costs may well exceed 15 - 20 percent.

The superstructure, standard factory buildings, may be built of structural steel, cement and masonry, or a combination of both. They are the major cost item of most free zone projects. For planning purposes, the 1984 construction costs including all surveying and engineering designs varied from US\$20 - 30 per square foot.

(b) Operating Expenses

Operating expenses include salaries for free zone management and staff plus costs for maintenance, insurance, promotion, and plus general overhead. In most public sector free zone projects, operating expenses -- particularly staffing -- tend to be excessive. Even in small and medium-sized zones where a management team of two or three professionals and support staff is adequate, promotional activities such as professional fees, travel and presentation materials may be expensive. Promotional budgets for public free zone projects have cost as much as US\$1 million per year the Philippines and Sri Lanka. Promotional expenses for private projects rarely approach the cost levels of public sector projects even though they may be costly in the early development years.

Insurance and maintenance can be considered fixed operating costs. Depending on the lease agreement, maintenance costs generally amount to one percent of the total cost of the project per year during the first five years of the project and two percent thereafter. Insurance costs make up one to two percent of the total cost of the project. However, if the project involves foreign participation, additional insurance to protect the investor against expropriation may be required; this insurance costs an additional one percent of the total cost of the project per year.

(c) Absorption Rates

Market demand forecasting is an imprecise "science"; free zone planners have learned not to undertake costly studies while attempting to predict the unpredictable. The best mechanism to assure that investment

parallels demand is to plan the construction program in phases, each phase corresponds to a fraction, perhaps 20 to 25 percent, of the potential market; thus, capital costs do not greatly exceed the market. However, if phased construction is to maintain effectively a balance between supply and demand, the executing agency must react rapidly to unexpected surges in demand. This entails access to stand-by financial and technical resources.

In general, planning a phased program for development of a free zone should reflect findings of the market study on target industries and absorption rates. Interviews conducted in the market study of candidate firms coupled with an analysis of existing or pending applications for space in competitive zones provide needed input for planning initial phases.

An alternative to including costs of pre-built standard factory buildings in project costs is to provide developed land and infrastructure to investors who build factories for their own use. Whereas this alternative alleviates the need to use the zone's scarce resources to construct factory space, only a limited number of firms will make a long-term commitment by constructing factory buildings for their own use. Therefore, the availability of some standard factory buildings is advisable.

3. Prepare Financial Statements

(a) The Package

The purpose of preparing pro forma financial statements is to predict the short and long term cost of establishing and operating a free zone. Financial statements should include income cash flow and balance sheet tabulations for a 20 year project life in both current and constant prices. Income statements are based on projected revenue and costs. Cash flow statements provide the basic data for calculating the internal rate of return. The internal rate of return (IRR) calculations, or the discount rate which reduces the cost and benefit streams to equal net present values, assist financial institutions to evaluate credit applications. Private sector projects place less emphasis on IRR indicators, but sophisticated private investors are learning to rely on the methodology in their decision-making. Most private industrial developers prepare statements indicating the return on equity and the payback period.

Real estate developers usually seek a minimum annual return on equity of 20 percent with a 5-year maximum payback period. If a project entails above-normal risk, a 25 -33 percent return on investment and a 3- to 4-year payback period may be set as the investment objective.

(b) The Element of Risk: Sensitivity Analysis

The purpose of conducting a sensitivity analysis is to indicate the potential risk of the project, for example, the financial drain on the host country or private developer if absorption rates prove lower than expected or if investment costs exceed the original predictions. Conversely, a sensitivity analysis also indicates the financial consequences of a "best case" scenario, such as increased revenue.

4. Determine Rental Rates

(a) Fixed Cost Method

To achieve financial viability, base rental on the principle of cost recovery. This principle is defined as the rental charge necessary to assure capital recovery. It includes an adequate return on investment after realizing administrative, debt service, maintenance, promotion and other operating costs in constant terms. More specifically, cost recovery is realized when net revenue (net income plus depreciation) during the amortization period or assumed life of the project (20 years) is equal to the net present value of the capital invested. The discount rate that yields this equivalency should be no less than the opportunity cost of capital in the host country. When calculations are made in constant prices (real terms), the results can be converted to current terms by adding the assumed rate of inflation to the constant term IRR or discount rate.

An exception to the fixed-price lease system frequently is made during the operating phase of a free zone development. In the interest of attracting "pioneer" tenants, zone developers may offer individually negotiated, discounted rental rates to the first applicants. Once the first few tenants have operated successfully in the zone, however, pricing policy should move in the direction of cost recovery principles.

(b) Auction

Another approach to setting lease prices is auctioning leases to high bidders. This policy has been implemented most fully in the free port of Hong Kong, where the government offers limited-term leases of "Crown Lands" (public lands) at auction. This policy has two advantages for maximizing financial return from a free zone project. First it insures that the price set for leases in the initial sale will be at market-clearing level, thereby overcoming the problem of a slow initial absorption rate. Second, it enables the zone developer to reap the largest possible windfall from increases in land values as zone development proceeds. From the standpoint of a financial planner, however, the policy of auction-set prices has the disadvantage of making it difficult to estimate accurately the zone's revenue stream.

D. Establish the Zone Development Group

Most EPZs are public-private partnerships. Even when industries initiate or finance a zone, national and regional economic development policies always are involved. For example, even when an industry commits the zone development capital, the host country ultimately commits land and resources for infrastructure. Moreover, government officials always have a stake in the fortunes of the EPZ because of its impact on their overall economic development policy even when the venture is totally private.

1. Decide on Organization

(a) General Information

Often EPZ development is stimulated by national policymakers who address national, regional, and local economic interests as they move to create jobs, increase trade and earn foreign exchange. In such cases formal responsibility for the project is conveyed to a zone authority that receives funding from the central government. Depending on the orientation of the governments involved, the control either may be assumed by a public corporation with an appointed board of directors or may be placed in a division of an existing government agency.

Whatever form the authority takes, responsibility for zone construction and operation usually is delegated to a management team. Team members are either agents of the government or private operators with special expertise in EPZs or industrial estates. Under the best circumstances, private zone managers work together with government officials to devise a strategy that will earn the most revenue in land sales and leases and will realize national employment goals or regional development interests.

Within the parameters of zone management outlined by the central government, the actual management structure may take a number of forms. If the government opts for tight control it may delegate authority to a general manager and a set of administrators who have equal power and responsibility and who oversee financing, planning, customs or personnel. Authority also may emanate from zone authority members who head individual agencies like labor or trade and who direct the activities of zone personnel falling under their department.

The lines of authority often reflect the central government's priorities. In the organizational structure of the Shannon Free Zone, for example, planning and promotion are combined in a single zone office and given equal priority with physical operation, finance and administration. In the Bataan EPZ Authority (Philippines), administrators dealing with operation and administration take orders from a head administrator and delegate planning, finance, engineering and personnel matters as subordinate functions.

(b) Advantages and Disadvantages of Private Administration

Regardless of the mix of private and public involvement in the zone management, the central government may choose to operate the zone as an economic development strategy rather than a for-profit venture. This may occur when policymakers incorporate the zone policy into a national and/or regional economic development strategy. Governments may view the EPZ as a "loss leader" in a larger scheme to attract foreign investment and reach a threshold of technology transfer as occurred in South Korea and Taiwan. Another strategy emphasizes regional development resources such as agricultural produce or minerals, through value-adding processing and export. In other instances, government EPZ development goals may be to draw the population away from a congested urban area to other areas as in the successful Bataan Free Zone in the Philippines. Under such circumstances

capital cost recovery may not be achievable but the national interest still might be served.

Once the zone proves effective as a national initiative, the central government may expect the zone to support itself financially. This objective can be difficult to achieve if zone managements establish or reinforce operating inefficiently and at a loss. Not only might it be difficult to change operating procedures, but also it may be difficult to readjust land development costs and lease rates to reflect realistic costs.

2. Staff the Effort

(a) Public Sector Involvement

Many successful zones use flexible staffing strategies. Specifically, the management team is formed to allow for phasing out early functions like planning, development and construction. As the zone begins to take physical shape, additional personnel are directed toward promotional and administrative duties. Planning, construction and engineering may even be contracted to outside specialists who are neither part of the government nor permanent parts of the management team.

(b) Coordination With Private Developers

Alterations in management and administrative procedures also may become necessary as the government's expectations for the zone change. In fact, after the initial purposes for the zone have been served, the central government may favor turning over administrative responsibilities to parties with a stake in earning a profit--private entrepreneurs. Private operators tend to be more efficient than public managers; cost/benefit ratios improve; facilities are better maintained; promotion is more aggressive; dealings with customs officials is more businesslike; and paperwork is completed in a more timely manner.

Often a host government can strike an understanding with a private zone management team. They might agree, for example, to recruit most vigorously labor-intensive businesses than capital-intensive firms because the economic benefits from high technology companies are less readily transferred to the local community. With government input, a private operator can run the zone project in a financially sound manner, holding waste and inefficiency to a minimum.

Even when the zone authority and the management team agree that the EPZ eventually should make a profit, the authority may preclude that possibility by establishing unrealistic lease or sale policies. In their eagerness to recruit businesses of any kind to occupy the zone, the zone authority may agree (formally or informally) to occupancy terms that are unreasonably low. Once discounted leases become the norm, zone operators find it difficult to adjust rates to reflect actual operating costs.

In summary, the focus of zone management will change in the course of zone development and should reflect both the short- and long-term priorities of the zone in the following manner:

- Phase I management structure is oriented toward planning, engineering, construction and recruiting. Many of these early functions will be performed by short-term zone personnel or outside specialists. In this phase, most zone operatives may be public servants, such as employment and training officials charged with meeting priority government objectives.

- Phase II management should be more profit-motivated, businesslike and efficient to offer clients a smoothly run industrial estate. Zone management, whether public or private, should stress dependable services and a profitable environment as selling points to prospective clients rather than attempting to attract businesses through extremely low lease rates.

The initial zone incentives package should highlight tax and regulatory relief, a trained workforce at favorable wage rates and first-rate, well-designed industrial sites available at competitive prices. Although at this stage management may choose to proceed carefully in recruiting initial zone users, as the zone approaches a take-off level of growth, management focus should shift toward a cost-effective operation.

E. Raise Capital

1. Prepare Business Prospectus

Prepare a comprehensive project analysis to approach either a private commercial bank or an international development organization for financing. The key elements of this "business prospectus" as summarized from the feasibility study includes project description; capital cost, construction schedule; financing plan; financial projections and organization and management.

Comprehensive project description. The description includes a brief overview of the proposed project, followed by a detailed description of land preparation, road development, utility requirements, building description and pattern of land usage. Site plans and preliminary engineering designs also are included.

Capital Cost and Construction Schedule. Capital cost information, calculated both in constant and current terms, should be derived from a unit cost analysis for infrastructure and superstructure. The construction schedule provides information concerning the projected time frame for investment expenditure.

Financing Plan. The financing plan indicates debt/equity ratio and expected sources of both.

Financial Projections. The key elements of this forecast include revenue projections, income and cash flow forecasts, internal rate of return calculations, return on equity and pay-back period and risk analysis. Also, if the prospectus is prepared for international lending organizations, a detailed economic cost/benefit analysis should be included.

Organization and Management. Institutional framework and management responsibilities, procurement and other administrative guidelines must be described.

2. Investigate Sources of Capital

The sources of capital for free zone projects are private sector equity, multilateral and bilateral institutions and public sector equity.

(a) Private Sector Equity

Private sector involvement in free zone development has occurred in at least seven LDCs--Dominican Republic, Mauritius, Mexico, Bahamas, Philippines, Haiti, and Malaysia. In these countries the private sector has developed successful projects and realized a financial return on investment through the policy of economic pricing. Most often, the economic benefits that accrue to the host government, generating employment and increasing foreign exchange and investment, have been achieved without the financial drain on the resources of the country.

At times, private sector involvement may take the form of a joint venture with the government to reduce the initial capital outlays required. This structure places no burden on the government's cash flow and generally assures a more equitable distribution of future benefits. Other forms of private sector involvement include management and promotion of free zones.

In general, private sector industrial real estate projects are highly leveraged. The debt/equity ratio could be as high as 80:20, but 60 percent debt financing is more common. Sources for financing the debt portion of the project include banks that usually are based in industrialized countries rather than LDCs due to the market interest rate and availability of long-term financing. However, recently, regional development banks with financing from international organizations have made funds available to the private sector.

(b) Multilateral Assistance and Bilateral Sources

Several international development agencies encourage the use of free zones to promote export-oriented industrialization and to stimulate indigenous entrepreneurship. Involvement ranges from financing feasibility studies and providing technical assistance to financing the project itself. The World Bank, the primary source of long-term development funds for free zone projects, has financed 7 EPZ projects and 12 industrial estate projects with EPZ features. The European Development Fund, Canada International Development Assistance, Inter American Development Bank and United States Agency for International Development also have supported free zone development in the Caribbean, Central America and South America. The scope of funding from these agencies ranges from providing long-term development funds at or below market rate to grant assistance for construction of factory shells and infrastructure requirements.

(c) Public Sector Investment

Public Sector funds are another alternative for financing free zone investments. Almost all free zones enjoy public sector capital in the form of land and infrastructure. Although some LDCs have not chosen this option due to the resource scarcity, notable exceptions have been the Katanayake Free Zone in Sri Lanka and the Bataan Free Zone in the Philippines. Both projects involve large infrastructure expenditures that enhanced regional development as well as the free zone project.

F. Design And Implement Marketing Efforts

1. Define the Marketing Concept

According to Philip Kotler in Marketing Management, the marketing concept is "a management orientation that holds that the key task of the organization is to determine the needs, wants and values of a target market and to adapt the organization to delivering the desired satisfactions more effectively and efficiently than its competitors". The underlying premises of the marketing concept are as follows:

- The organization conceives of its mission in terms of satisfying a defined set of wants of a defined group of customers.
- The organization recognizes that satisfying wants requires an active program of marketing research to discover what they are.
- The organization recognizes that all organizational activities that affect the customer must conform to the overall marketing strategy.
- The organization believes that doing a good job of satisfying the customer wins their loyalty, repeat business and favorable recommendations, all of which are crucial in satisfying the organization's goals.

A feasibility study is the first opportunity for a community or developer to put the marketing concept to work. However, exercise caution when assessing market demand for zone facilities. General statements of support from local industry or indications of interest from multinational corporations alone do not constitute justification for a zone. The proposed zone project must be evaluated in a straight-forward manner based on qualified responses to zone demand and empirical data.

2. The Target Industry Approach

The marketing process first defines the specific product to be marketed. Answers must be developed to questions like, what are the strengths and weaknesses of the proposed zone? What are the unique characteristics that you have to offer prospective tenants? What are the markets like for users of the zones? For what services are users looking?

The goal of a target industry survey is to identify specific companies that, if located within the proposed zone satisfy corporate objectives

(i.e. lower production and distribution costs, secure favorable competitive position) and will most benefit the country, its residents and its local economy.

Based on the review of industrial locator models, the most adaptable methodology for identifying target industries was developed by Midwest Research Institute (MRI) in the early 1970s. The methodology is briefly outlined below and discussed in detail in the Annexes.

The first step in the process is to develop a data base of prospective industries. This information resource pool identifies industries of interest to the zone. Next, match characteristics of the potential industries to local needs. For example, if a zone is located in an area with a large educated work force in need of employment, a high technology enterprise would be better suited to the local environment than a low-skill garment manufacturing business.

After targeting desired industries identify those businesses that might relocate to the zone based on its locational characteristics, e.g. access to transportation, cost of raw materials, size and skill level of labor force. After performing the locational analysis targeted industries suited to both local goals and locational factors.

Also consider the composition of the tariff schedules and trade agreements that apply to zone industries. Refine the industry list by matching agreements that offer tariff reductions on certain products with the previously-cited industries that produce those products.

Finally, identify all major domestic and international companies that operate in these industries along with types of products they manufacture, their addresses, telephone and telex numbers, etc. This list can be generated by a computer or manually constructed through cross-referencing.

3. Marketing Activities

The impact of all marketing and promotional activities is relatively small when compared to the other factors involved in the investment decision process. If the basic factors of production and business climate are not present and inviting, the most well-developed promotional program will not entice new industrial activity. Avoid exaggerated expectations of the power of investment promotion. However, realize that government promotional programs can reinforce attractive investment incentives.

This section outlines marketing activities and presents several low-cost strategies for implementing an export processing zone marketing program. The strategies are based upon techniques that have been successful for industrial development agencies particularly in less developed countries and are discussed in detail in the Annexes.

(a) Developing Local Leads

The marketing of export processing zones in less developed or newly developing countries begins in the country's governmental and business

community. It is necessary for the local business community to identify domestic companies that, but for lack of capital or marketing ability, could produce for the export market. Once these business, as well as prospective entrepreneurs, are identified, they can be encouraged to participate in the more favorable business climate in the export processing zone.

It is of utmost importance that the host country build confidence throughout the business community. New industry's interest in the zone will be increased by improving local business-governmental relations. The business community's economic development committee can activate marketing efforts at relatively low cost.

(b) Marketing Through Advertising

Advertising can be very expensive. Because many free zone marketing budgets are included within a larger, country-wide promotional effort, it is difficult to estimate the amount of money spent in zone advertising. However, research indicates that adequate promotion of a new zone may cost well over \$100,000 annually. When possible, general-audience advertising is more cost effective when conducted jointly by several countries in a region rather than by individual countries. Industry trade publications are an effective advertising medium. Every segment of international industry has trade publications that cater to the management and technical levels of light manufacturing and assembly industries. These publications can be used to promote a specific "fit" of how a zone's special incentives and attributes serve a specific industry.

Promotional materials have been sponsored individually or collectively by the zone developer, the government's department for industrial development, the country's chamber of commerce and other related organizations. The literature should describe the zone attributes truthfully in a simple and sensible order. The purpose of the information is to inform, not just impress. Specifically, it should

- Be aimed at the selected industrial sector, such as textiles, clothing, footwear and electronics;
- List by name existing firms operating in the country;
- Use testimony of respected authorities to emphasize community attributes;
- Outline the specific advantages or incentives that the zones and the country have to offer;
- Be as current and as accurate as possible, and based on and/or cite unbiased sources and
- Most importantly, must include clear references for obtaining further information.

(c) Marketing Through Publicity

Publicity, in contrast to advertising, is inexpensive. In addition, because people tend to consider editorial content in the media more trustworthy than in ads, publicity often gives a message greater credibility than paid advertising. Because of this credibility, every dollar devoted to public relations and promotional activities can be worth up to three dollars spent on paid advertising.

A major concern for most less developed countries' industrial development efforts is that all publicity be favorable. Good publicity should result from using press releases, articles and interviews related to developing zone success stories. In addition, editors of trade publications often are receptive to publishing articles submitted by local development organizations.

(d) Industrial Development Professionals

Trained industrial development professionals are critical to successful marketing. The industrial representative must be able to work independently, and be a highly motivated, private enterprise-oriented individual who has business experience and excellent communication skills. Industrial development marketing relies upon the individual's ability to develop an open and sincere relationship with potential industrial clients. The day-to-day work of negotiations and data collection is what will lead to a firm's location in a specific country. In addition to these skill requirements, zone representative must be able to assist each prospective company in estimating the cost and benefits of a location in a free trade zone.

(e) Direct Mail and Telephone Contact

Research indicates that direct mail is not the most effective form of marketing a zone; free zone administrators report disappointing results from such efforts. However, carefully thought out telephone calls can be an effective first contact with a prospect because it provides immediate feedback and a needed personal quality to the promotion effort. The best means to use these techniques are outlined in the Annexes.

(f) On-Site Marketing

An effective tool for marketing a free zone is the establishment of an on-site sales office. This is particularly effective when the zone is located on or near a major highway or commercial/industrial area. Potential users, developers, brokers and owners can drop by to obtain information about the zone. Consider the following suggestions for on-site sales offices:

- Choose a highly visible and accessible site for the trailer/office.
- Hire a full-time receptionist who is capable of obtaining the necessary information from the prospect when the industrial representative is out of the office. The receptionist also can prepare the data sheet

(portfolio) on each prospect so sales representatives can follow up.

- Have on hand a supply of business cards, brochures and flyers on the zone and pictures.

- Choose a sales office trailer large enough to provide private meeting rooms that comfortably accommodate four to six people.

G. Implement Zone Construction

The physical construction of an export processing zone is extremely important in the overall development process. In most cases, construction absorbs the largest part of the total zone budget. The host country and the zone development group must understand the construction process, exercise firm control, and participate actively. The basic steps of the process are described below.

1. Prepare for Construction

(a) Creating a construction management program

A carefully-drawn, realistic project management program is the most important factor in building project success. The management program sets down in graphic form all construction tasks on a time line. It is a brief version that keeps the same main categories but eliminates details. Further, it should use a broader time line, weeks or months instead of days. It permits the previewing and monitoring of all aspects of the construction process from basic logistical orientation to the coordination of phased development. It is important because although the general contractor will complete project management procedures the zone developer also must be involved in the supervision of the various construction program elements.

(b) Complete Cost Estimates

Before competitive bidding or other contractor selection processes begin, the developer must have a firm cost estimate, based on the final plan documents. The planning contractor provides all documents and specifications needed to get accurate estimates. If estimates are calculated accurately, they should fall within plus or minus 5 percent of the actual contract cost.

(c) Obtaining Construction Funding

Construction funds normally are not released until completion of a contract that contains an explicit cost/expenditure schedule. Funds should be released incrementally by the lender to the builder upon receiving proof of satisfactory completion of each work phase. Funding may come from a local or international bank, investment firm, government agency, or a mix of sources.

(d) Comply With Construction Laws, Codes and Standards

The developer must have the guarantee of the Planning Contractor and the General Contractor that all applicable construction codes and standards will be met. This assures that there will be no costly work stoppages or delays because of code violations and ensuring the personal and financial safety of the persons involved.

(e) Selecting the General Contractor

The three key selection issues for choosing the general contractor for zone construction are capability; national versus international operation; and competitive bidding versus direct selection with contract negotiation. The first two issues often are resolved by hiring a major international firm as the responsible party and by specifying that the international firm work in close collaboration with local firms. Competitive bidding usually produces a lower stated price but creates concerns about quality and flexibility. Direct selection of the general contractor usually gives the client better project control and service but may carry a cost penalty.

(f) Define the Construction Contract

The contract must be written specially for the project even when General Contractor's standard contract form is included. The contract must ensure the interests of the developer, the funding agency, the zone administrator and the zone tenants. Moreover, it must clarify critical points like performance bonuses or errors; responsibility for sub-contracts; and procedure for resolving disputes. In cases where foreign contractors are retained, determine the language of performance in advance because if legal disputes arise over the contract, a Spanish translation of an English contract may not be accurate.

(g) Organize the Labor Force

Before construction startup, the developer must secure an adequate local work force. Address basic elements such as housing, transport and wage rates in the zone general plan. Also include a job training program as part of a host government program, as a new program specifically connected to the zone, or as a combination of both.

(h) Establish the Logistic System

Complete a logistic system should be complete at the start of construction. Logistics include everything needed to keep a construction project operating --transportation, equipment, raw materials and building components; temporary housing and offices; vehicle and equipment maintenance and fuel supplies; and temporary electrical power. Logistic system efficiency affects costs, schedules and overall project success.

(i) Set up the Supervision System

Since free zones usually involve several principal parties, the most practical supervision option is a joint supervision team. The team should be led by a Chief Supervisor who must be a licensed architect or engineer with no connection to any of the agencies or business firms involved in the zone. Team members also should be engineers or architects who represent one or more of the principal parties.

Maintain under the guidance of the Chief Supervisor a project supervision office on or close to the construction site during the entire construction period. Conduct comprehensive inspections by the Supervision Team at least once a month and submit a joint report to the principals.

2. Carry Out Construction Program

(a) Energize the Work Base

After the general contract is signed, a construction work base can be installed at or near the zone site. Use this work base to operate all of the logistical elements. International builders tend to set up highly autonomous bases; local firms use similar work bases

(b) Complete Site Preparation

Site preparations proceed in three stages. First, cargo and transport facilities are improved. Initial site work also involves heavy engineering tasks like swamp drainage, area clearance, large scale cut and fill, and harbor dredging. Second, engineering addresses infrastructure such as: flood drain systems; power transmission lines; water supply and sewage disposal systems; and roadways. Third, finish grading is completed. In this stage, lots and zone facilities are prepared along with curbs, sidewalks, and street lighting. Foundation grading is completed for buildings and other structures that will be provided by the zone developer. Differences in natural conditions can cause great variation in site preparation time, cost and difficulty, so careful planning is extremely important.

(c) Construct Physical Infrastructure

Physical infrastructure includes the major public works needed to support human habitation and commerce such as waterways and harbors, dams, street and highway systems, airports, energy systems, flood control, water supply and sewage disposal, and communications. Because of the huge cost of public works in both time and money, a host nation prudently may choose to build an infrastructure system as part of a regional development plan and as a necessary condition for the export processing zone. Timing is critical since public works construction often is slow and zone construction may be very rapid.

(d) Construct Zone Facilities

Typical facilities include an administration building, a zone trade center, a maintenance building and a cargo transit terminal. Prepare zone lots for lease or sale in phased groups; include basic landscaping, lighting, streets and walks, and utility access. In each phase, complete several standard multi-purpose industrial buildings along with one or two industry-specific structures. Facilities construction should be relatively problem-free. Precise cost estimation allows use of advanced structural technology; and shipping and erection are quick and simple with prefabricated systems.

(e) Install Operating Systems

Operating systems are the electronic, electrical or mechanical systems, the equipment; and the devices required for zone operations. They include plumbing; HVAC (heating-ventilating-air cooling) and lighting, security alarms, cargo transport systems; cargo handling and storage systems; and utilities and communications systems.

The subcontractor for each system installs it. The General Contractor coordinates installation of each system with all the related construction trades and guarantees to the developer or zone administrator that all systems are operating correctly until a specific date after the completion of construction (typically 12 months).

(f) Provide Transport Systems

Free zones differ in their transport requirements and systems. Many zones are served only by truck; in this case, the structural needs are covered concrete loading platforms with weight scales and adequate roads. Other zones located at airports require special air-freight terminals where aircraft are directly loaded in large, covered, automated cargo transit structures. In many zones, rail sidings are brought alongside tenants' buildings. Coastal or river-based zones provide docks and piers for the use by a specific tenant or by all tenants.

Transport systems involve heavy construction and often are very costly and slow to build. At times, the renovation and extension of existing older railway, canal or harbor systems may be a practical compromise between cost and service.

(g) Conduct Post-Construction Inspections

In addition to ongoing supervision, the client must conduct a formal inspection of all completed work. When the work is acceptable insist that the client give the general contractor a written statement affirming that the contract has been completed satisfactorily. The chief supervisor schedules all post-construction inspections and provides the client with technical assistance. The supervision team provides a final report to all concerned agencies upon the completion of each major construction phase.

3. Access Construction Data Sources

Although zone construction contractors are expected to have all the necessary expertise, zone developers must be knowledgeable about the process. They require quick, easy access to crucial sources and to a distilled, correlated, easily assimilated database on free zone construction methodology.

(a) Locate Candidate Construction Firms

Developers and host nations may know the names of several major global construction firms but may not know firm specialties or limitations. References and suggestions will assist the client nation and the developer to locate and choose contractors. This safeguards the validity and success of their commitments.

(b) Obtain Technical Assistance and Information

The following technical information needs must be satisfied.

Cost Analysis. Developing nations and sponsoring agencies increasingly will demand independent construction monitoring and cost control. U.S. construction firms rely heavily on published construction cost reports from 15 or more national sources as a basis for estimating costs. Conversion factors permit adjusting the costs around the world. One of the major commercial services is now available as a computer data base. Cost analysis data also is available from government sources such as the U.S. Department of Commerce and Defense branches or the U.S. Army Corps of Engineers.

Construction management. Construction project management is emerging as an important branch of civil engineering. The last two years have brought a great increase in computer-based project management systems offered commercially by private corporations as computer software and as short training courses. Computerized work schedules, cost control systems and greatly improved communications technology, promise great improvement for construction management in the future.

Building Technology. In all major nations, government agencies conduct research and provide information on building technology. Important government sources in the U.S. include: National Bureau of Standards; National Technical Information Service; and HUD USER. The last two are computer/manual data base. The following U.S. and international independent organizations provide professional level technical information: National Institute of Building Sciences; Advisory Board on the Built Environment; and International Council for Building Research, Studies and Documentation. Other helpful sources, are technical and professional publications; universities; professional associations of architects, engineers, and planners; and several United Nations agencies.

Job Training. As building technology advances, the training of construction workers for zone projects becomes increasingly important. Four sources for technical and vocational education are host nation programs; global programs of the United Nations as well as major nations acting unilaterally; global programs of private corporations; and on-site programs of zone construction firms. The UN has many worldwide vocational programs. One of the most successful is the ILO Center for training vocational teachers and technical leaders at Torino, Italy. The U.S. offers international job training support through the National Center for Research in Vocational Education, and through corporate programs such as those of Singer Education Division and Control Data Corporation.

4. Evaluate Construction Technology Trends

Adoption of the system analysis method allows international builders to produce building program models with great predictive accuracy. A second trend is the increased use of computers in construction planning, cost control and project management. Global satellite links are shortening construction time by improving project communications. Laser survey instruments and computer controlled production of building tools and components are creating higher measurement standards. Prefabrication methods prevalent in industrialized nations are being widely used in construction in developing nations, with an impact on labor needs that must be considered.

Other aids to building efficiency are emerging in the areas of cargo transport methods, energy conservation and alternate systems, and long-range weather prediction. The transfer of building technology--training workers in host countries in advanced construction technology and skills--remain an important area of concern.

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**GUIDEBOOK
ON
FREE ZONES**

Annexes

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Annex 1

Dominican Republic Free Zones Case Study

Agency for International Development

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I. INTRODUCTION

Free zone development in the Dominican Republic typifies economic policy choices of emerging democracies in the Caribbean over the past 30 years. The combination of the country's desire to establish business and trade ties with the West, and pressure on U.S. firms operating in the region to adopt a social conscious resulted in innovative, job creating zone projects.

Information gained from the Dominican experience with free zones may point to the most effective mix of public and private involvement in zone development. Specifically, the notable success recorded by the Santiago industrial free zone indicates public sector investment in infrastructure and private management of day-to-day operation produce optimal results.

This case study presents a historical review and analysis of the development of industrial free zones in the Dominican Republic. Of the four industrial free zones in the Dominican Republic, the Santiago Free Zone is featured because it stands out as an excellent model of free zone development that can be used by developing countries.

The study begins with an overview of the country's manufacturing and economic base. The process experienced by the country in the development of the zones is then explored followed by an analysis of the factors identified as leading to the successful development of the zones. The study concludes with recommendations for improvements in the zone-related economic development policies of the country.

II. COUNTRY BACKGROUND

A. Location

The Dominican Republic occupies the eastern two-thirds of the island Hispaniola in the Caribbean and is 18,712 square miles in size. The remaining third of the island is occupied by Haiti, one of the Dominican Republic's major competitors for industrial clients.

B. Manufacturing and the Dominican Republic Economy

Since the election of a Constitutional Government in 1966, the Dominican Republic has made impressive progress in terms of institutional stability and establishing a favorable climate for direct foreign investment. This has been reflected in the high rate of economic growth. Gross Domestic Product (GDP) expanded at an average annual rate of growth of 4 percent from 1978-81. Per capita income, expressed in US dollars, has more than doubled in the period from 1970-80.

The Dominican Republic economy depends heavily on primary commodities. The country's main exports are sugar, gold, ferronickel, coffee, cacao and tobacco. In 1981, traditional exports accounted for 86 percent of the total US\$1262 million in exports. Non-traditional, or light manufacturing exports accounted for 12 percent in the same year.

Primary commodities are expected to continue as the mainstay of the economy for the foreseeable future, but are severely constrained by world market demand. Non-traditional manufactured goods are the dominant growth sector in the economy, yet they are not expected to provide the basis for growth that was enjoyed in the 1970s. Additionally, industrialization based on import substitution of consumer durables has also reached its peak and has been declining since 1978.

C. Zones Profiles

Recognizing its export dependence on primary commodities and thus its sensitivity to world demand, the Government of the Dominican Republic authorized free zones when it approved the Industrial Incentive Law in 1968. Industrial free zones were established as a means of creating new job opportunities, improving the balance of trade and transferring technology.

Approximately \$23.7 million to date has been invested by both the private and public sector for site preparation, infrastructure development and construction of standard factory buildings in zones located at La Romana, San Pedro de Macoris, Santiago and Puerto Plata. The successful implementation of the existing zones stimulated the request by representatives of several communities for additional zones in Barahona, Bani, Azua and El Seybo, San Francisco de Macoris, Higuey and La Vega. (For the status of each of these, see Section VII, Future Zone Development.)

The government offers zone users 100 percent exemption from corporate income tax; import duties on machinery, plant and equipment; and import duties on raw materials and semi-finished products for periods ranging from 12 to 20 years. American industries operating in the zones benefit from the special tariff provision 807 which bases tariffs solely on the value added

to the finished product re-imported to the U.S. by that company. Additionally, the Caribbean Basin Initiative (CBI) is expected to attract new investments to help diversify the economic base.

With the exception of the sugar industry, no other sector of the Dominican economy contributes as much as the zones to increases in jobs, value of salaries earned and foreign exchange earned. In 1983 approximately 89 companies operated in the zones, employing close to 19,000 people; value of salaries earned exceeded US\$35 million; and foreign exchange earned topped \$51 million. Significant technology transfer has been more difficult to achieve because activities in the zones are the simplified portions of the production process delegated to offshore sites.

Of the three forms of zone management used by the Dominican zones, i.e. public, private, and private-nonprofit, the private-nonprofit management of Santiago and Puerto Plata is viewed as the most effective and successful management. The public ownership of the San Pedro de Macoris zone has registered management limitations, specifically regarding land preparation and building development skills. Additionally, there is undue bureaucratic procedures imposed by the public-nature of the management.

Research performed for this study indicates that, to the Government of the Dominican Republic, the industrial free zone provides a more socially acceptable and expedient policy for job creation, technology transfer and industrialization than alternative strategies like import-substitution.

1. La Romana

The La Romana zone, established in 1969, is located 80 miles east of Santo Domingo, the capital of the Dominican Republic. (See Map on Page 31 for locations of zones and major cities). Its total area is 1,000,000 square meters, of which one third is already developed. There are 86,989 square meters of covered factory space. The Romana zone is run by a U.S. company, Gulf and Western of Americas, under a 30 year contract. Rental fees for the standard factory building range from US\$0.16 per square foot per month up to US\$0.35 per square foot for specially designed facilities. Presently, there are 19 companies operating in the zone, employing approximately 7,000 people.

2. San Pedro de Macoris

San Pedro de Macoris is only 44 miles east of Santo Domingo and has grown quickly from 300,000 square meters to 600,000 square meters in less than eight years. The city has its own port, but it is used only for exportation of sugar, cement, and fertilizers. The free zone must use the port of Boca Chica, located about 20 miles west of the city. Of the four active Dominican zones, the Free Zone of San Pedro de Macoris is the only zone that has prepared land immediately available for building industrial facilities. Rental fees for industrial space ranges from US\$0.10 per square foot for the first four years, up to US\$0.11 per square foot for the second four years. The zone has approximately 35 firms employing about 4,000.

3. Santiago

The zone in Santiago, established in 1974, has a more remote location in the principal agro-economic region of the Dominican Republic. Santiago has traditionally been the production center for industrial activities such as production of cigars and cigarettes, alcoholic beverages, leather, and footwear. The zone's remote location not hampered its progress and does not seem to be an obstacle to attracting new firms. Its 200,000 square meters of standard factory buildings is 100 percent occupied even though it is not located near a airport or a water port. The zone is occupied by 40 industries, employing about 7,000 people. Rental charges range from US\$0.09 per square foot to US\$0.14 per square foot. The zone's success has been attributed to the following factors: private-nonprofit management, productive labor force, low-cost labor, and market access.

4. Puerto Plata

The zone in Puerto Plata is located in the far northern portion of the country in a small rural community. The zone site is located on the highway, one mile from an international airport, and 12 miles from the water port. The zone has four occupied buildings, 256,739 square meters of prepared industrial land, Customs and administration offices. There are presently 5 industries in operation, employing approximately 600 people.

III. ZONES' CONTRIBUTIONS TO THE ECONOMY

The major contributions of the export-processing zones in the Dominican Republic to date has been job creation, although they have also served to increase foreign exchange earnings, upgrade local managerial skills and diversify industrial activity away from the capital city of Santo Domingo. This chapter presents data to illustrate, first, the zone's contribution to employment, followed by the impact on the country's export performance, foreign exchange performance, linkages to the domestic economy and advancements in technology transfer.

A. Employment

Employment generation in export-processing zones is particularly important in the Dominican Republic because of the country's traditional dependence on agriculture. Seasonal unemployment is particularly severe in a one-crop economy i.e. a so-called sugar island. In the Dominican Republic, the export-processing zones have substantially eased the unemployment problem created from a depressed market for their sugar products. The zones were created at a time when the agricultural sector (dominated by sugar production) underwent a substantial transition from labor-intensive to capital-intensive production. The zones provided opportunities for unemployed agricultural workers as well as new entrants to the job market.

Since the instigation of zone activity in 1970, the zones have created an average of 1500-2000 new jobs annually. The 18,721 jobs represent 14 percent of the total workforce in the manufacturing sector and one percent of the overall workforce. In addition, some consideration must be given to the creation of indirect jobs. Employment in the service industries includes transportation, housing, canteens and food preparation, warehousing and general construction, laundry and dry cleaning, training staff, etc. But the greatest potential for indirect employment generation is through the purchase of domestic raw materials and intermediate goods from local suppliers. According to several studies performed by both the private sector and the government, an estimated three indirect jobs are created for every one job in the free trade zone, translating into a total employment figure of approximately 75,000, or 40 percent of the total work force. These estimates are based on a simple calculation of indirect jobs and not on a sophisticated model based on generated consumption.

The majority of firms operating in the zones report that they pay the minimum wage of \$0.65 an hour or just slightly higher for skilled workers. The average wage per day in the Dominican Republic, is \$4.00 for males and \$3.20 for females. These lower daily averages reflect the fact that many companies take advantage of government approved training programs which allow the firms to pay only fifty percent of the minimum wage to unskilled workers for a period of three months. Additionally, although mandatory fringe benefits should total 27 percent of basic hourly salary, in practice the benefits represent a much lower percentage. Interviews with company representatives revealed a discrepancy in that most reported only providing two weeks vacation and a few health benefits.

Tours of company factories revealed clean and air conditioned working areas. Workers are given regular work breaks and 30 minutes for lunch. Most

of the companies sponsor training programs for mechanics and supervisors. They have also sent some of their workers to local schools and universities for special classes.

B. Export Performance

Export volume, or gross product values shipped out of the zone, is a basic indicator measuring the level of activity of an export-processing zone and its relative importance of the manufactured export totals for the Dominican Republic. As can be seen from Table 1, exports originating from the zones have increased annually. Zone exports of manufactured goods had increased from six percent of all exports in 1976 to 20 percent by 1982. This is most helpful to the economy as it decreases dependence on agricultural products, in particular, sugar.

Table 1
Country and Zone Exports

Year	Total Exports	EPZ Exports	EPZ% of Exports	---Rate of Growth (%)---	
				Total Exports	EPZ Exports
1976	716.4	42.2	6	---	---
1977	780.5	61.5	8	8.9	45.7
1978	675.5	72.9	11	(13.5)	18.5
1979	868.6	93.6	11	28.6	28.4
1980	961.9	117.1	12	10.7	25.1
1981	1180.0	135.8	12	23.5	16.0
1982	767.7	150.0	20	(35.3)	10.4

Source: Dominican Republic Investors Handbook, 1983.

Imports under Items 806.30 and 807.00 of the Tariff Schedule of the U.S., 1979-1982.

C. Foreign Exchange Earnings

The critical need to increase for foreign exchange earnings of the less developed countries has been intensified because of balance of payment deficits and the current international debt crisis. The resolution of this issue is a fundamental objective of the Dominican Republic zones.

Foreign investment in land and factories must be converted from foreign currency to local currency, as must any payments for domestic goods and services, representing an initial inflow of foreign exchange. Companies in the zones must pay all local costs of production in pesos. They must trade dollars at the official exchange rate through the Central Bank. Cost of production include wages, salaries, benefits, rent, electricity, water and local materials. Foreign exchange paid to the Central Bank by the zones in 1982 was a total of \$50,889,000, as compared to \$1,361,000 in 1972. Table 2 shows how payments have grown over the 1970-1982 period.

Foreign exchange earnings in the Dominican Republic have been increased by the zones in two ways: initially, as a result of direct foreign investment in zone infrastructure, and subsequently, as a result of export sales by zone based manufacturers.

Table 2 shows the foreign exchange earned derived by the Dominican Republic from the zones. La Romana remains the largest contributor, although its percentage has dropped substantially since 1982. La Romana's contribution dropped from 65 percent to 49 percent of the total while Santiago's rose from 17 to 32 percent. San Pedro's contribution remained constant at 18 percent.

(Note: Because nearly 95 percent of the firms in the Dominican zones are U.S. companies, it is inaccurate to add export sales to the foreign exchange resulting from conversion of U.S. dollars to Pesos to determine total foreign exchange earned.)

Table 2
Foreign Exchange Paid to Central Bank by
Free Trade Zones, 1970-1982 (000US\$)

Year	La Romana	%	San Pedro	%	Santiago	%	Total
1970	134.6	100					134.6
1971	432.9	100					432.9
1972	1355.5	99.5	1.7	.5			1361.7
1973	1511.0	94.0	97.1	6.0			1608.1
1974	2158.0	78.2	601.4	21.8			2759.4
1975	3927.9	73.7	1184.4	22.2	218.0	4.1	5329.9
1976	5100.5	64.6	1440.0	18.2	1351.0	17.1	7891.5
1977	6366.2	49.5	2651.8	20.6	3851.0	29.9	12869.0
1978	10460.8	49.8	4070.1	19.4	6477.0	30.8	21008.8
1979	14853.2	54.7	5506.7	20.3	6773.2	25.0	27133.1
1980	19624.2	60.8	6574.8	20.4	6060.0	18.8	32259.0
1981	26554.3	54.0	8743.0	17.8	13798.3	28.1	49095.3
1982	25074.6	49.3	9303.6	18.3	16511.0	32.4	50889.2

Source: Central Bank

D. Linkages to Domestic Industries

Progress in developing linkages with domestic industries has been minimal. The tobacco industry is the sole example of a free trade zone firm utilizing national raw materials. In the case of the apparel industry, there are virtually no linkages because they are producing a finished good. One hundred percent of the materials used in the manufacturing process are imported. Although goods may be produced under Import-Substitution policies, these goods are not competitive in the export market.

Expected linkages between the industrial parks in the Dominican Republic and the free zones have been slow to develop. In interviews, managers cited as reasons for this the lack of quality of the local product, and the unreliability of the supply and cost. Since all local materials must be purchased in local currency, converted at the official exchange rate, it is more expensive to buy goods locally than to import them from elsewhere.

There are, however, some indirect effects of backward linkages from the free zones to the local economy. The employment of thousands of workers widens the local market for simple consumption such as food and shelter. The majority of free zone labor is poor with a low marginal propensity to save and their consumption has a low import content. Most of their income goes directly back into the local economy, stimulating demand for production.

E. Technology Transfer

There are two levels of technology transfer: 1) the design and adaptation of production or manufacturing processes and 2) design of management and organizational processes. In regard to the first definition, benefits from the Dominican Republic free zone operations are limited for two reasons. First, the activities taking place in the zones are the elemental portions of the production process which have been delegated to offshore sites by the multinational parent company. Second, research and development in these industries generally takes place in the parent company. Some transfer can be attributed to the sale and transfer of new or second-hand machinery and equipment, however.

With regard to the second definition, that of management and organizational talent transfers, data gathered on the zones show a labor force predominately unskilled and trained for specific operations. The only real training has resulted from a few males trained in maintenance or tool-making which took place only when skilled labor was not on hand or could not be drawn from other occupations.

Although gains for the Dominican Republic could not be measured without extensive interviewing of national managers of the free zone firms, potential gains can be estimated by looking at the number of Dominican nationals in managerial and technical positions. Dominican law states that at least 70 percent of those employed by a firm must be Dominican but this excludes foreign executives and technicians. However, whenever available, nationals are employed because they can be paid lower salaries and because they are a member of the community, they generally have better relations with labor.

IV. ZONE DEVELOPMENT PROCESS

A. Planning

1. Legislative Planning

The Dominican Republic committed itself to export-led industrialization in 1955 with Law 4315, which established free zones in Santo Domingo, Haina and Boca Chica. The practical effect of this initial step was to establish just one duty-free shop. Not until 1968 with the passage of Law 432, did the real institution of industrial free zones begin. Law 432 added four articles to the original Law, using for the first time the term "industrial free zones" and regulating the foreign exchange of the companies that operate in them. This change was the result of lobbying by executives of Gulf and Western and the American Chamber of Commerce.

Prior to Law 432, the law on industrial incentives controlled classification of the industries seeking to locate in industrial free zones. A subsequent law, No. 78, in 1970 created special regulations for the "retailing free zones," emphasizing the true differences between the two institutions. Regulation 1864, in 1956, which is still in effect, applies to industrial free zones, although its provisions relate mainly to criteria that originated in the 1955 law.

This legal structure allows the establishment of industrial free zones. The first to be organized was the La Romana zone, established by a 1969 contract between the Government of the Dominican Republic and Gulf and Western. The National Congress authorized the agreement with Decree 4361 that same year. The second zone at San Pedro de Macoris was created in 1971 by Decree 1574, which grants the zone's administration to the Industrial Development Corporation of the Dominican Republic. Established by Decree 3615 in 1973, the Santiago Industrial Free Zone operates under the administration of an association for non-profit purposes; operations are governed by a contract between it and the Dominican State, approved by the National Congress by Resolution No. 684 in 1974.

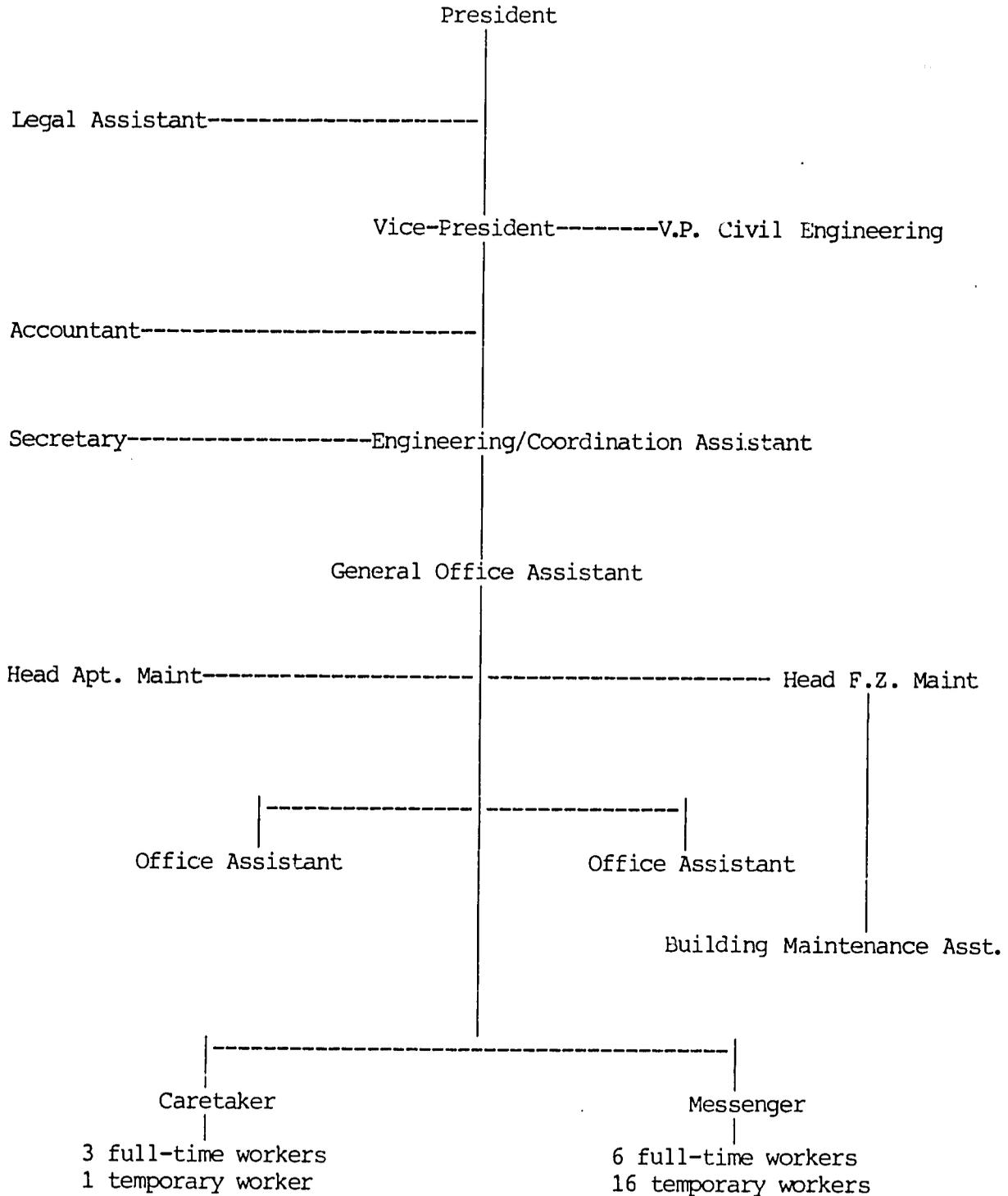
2. Zone Management Planning

La Romana:

Administration: The La Romana zone is administered by a private organization. Gulf and Western established a subsidiary corporation to officiate activities at the free trade zone. Operadora Zona Franca La Romana is the legal authority responsible for operating the zone. In 1969 Operadora Zona Franca La Romana signed a contract with the government, entitling it to operate the zone for 30 years. At the end of the 30 years, the buildings and infrastructure revert to the government's ownership.

Operations: The operational staff of the zone is represented in the graph on the following page:

La Romana Free Zone
Organizational Chart

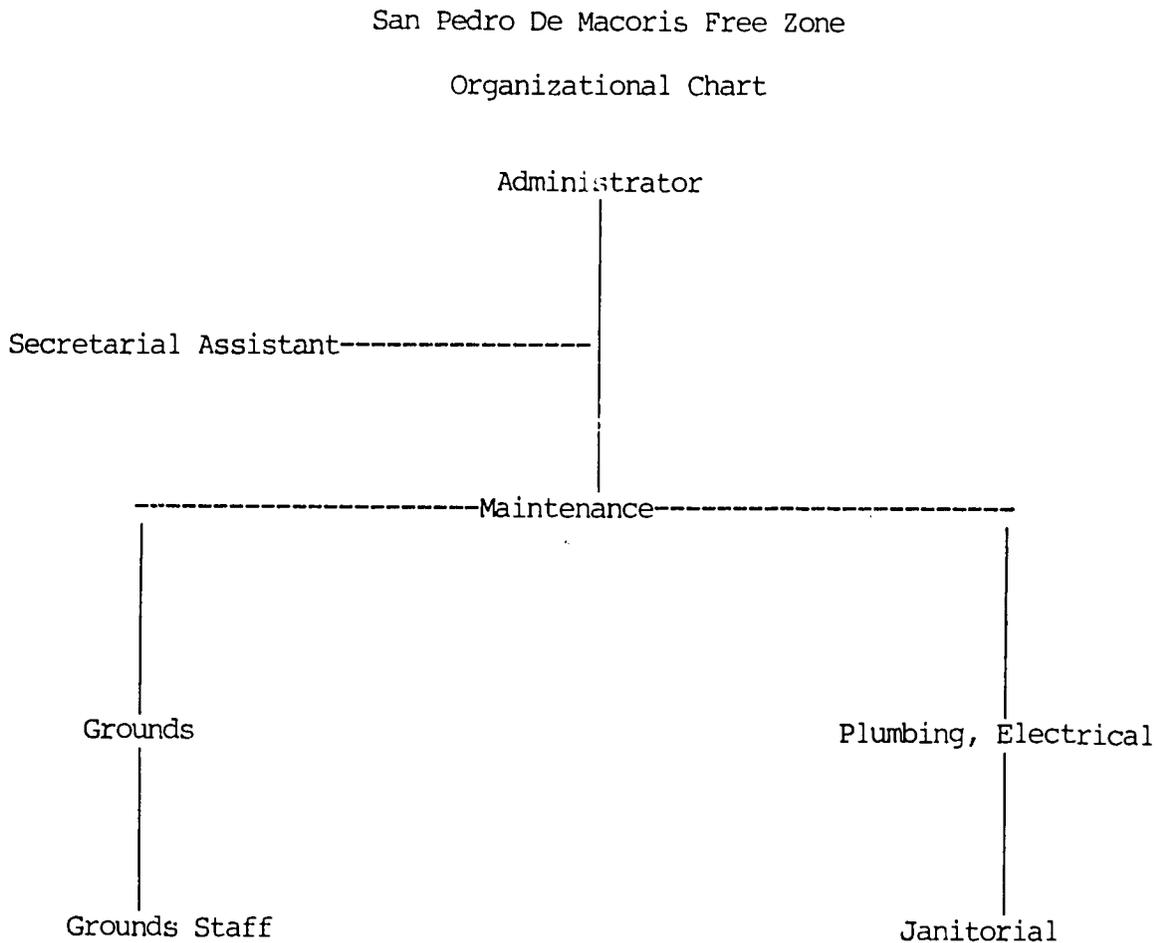


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San Pedro de Macoris:

Administration: The second Dominican zone established was set up under the exclusive authority of the Industrial Development Corporation of the Dominican Republic, an autonomous entity of the Dominican State. The zone operator is the Corporacion De Fomento Industrial. Private and public sector representatives agree that of the four Dominican zones, the publicly-operated zone in San Peóro has the weakest record in offering service to potential users. Unacceptable delays in application processing and confusion in administration responsibilities have also plagued the zone, which is run de-facto by Customs Officers. Needless to say, the officers' objectives differ radically from those of a private developer and operator.

Operations: The following diagram represents the organization of the San Pedro zone operator.



11

Santiago:

Administration: A private-nonprofit industrial development organization manages the Santiago Free Zone. Corporacion Zona Franca Industrial de Santiago, Inc. is managed by an autonomous business-oriented entity backed by the Dominican government and Santiago's municipal government. A brief history of the corporation's development follows.

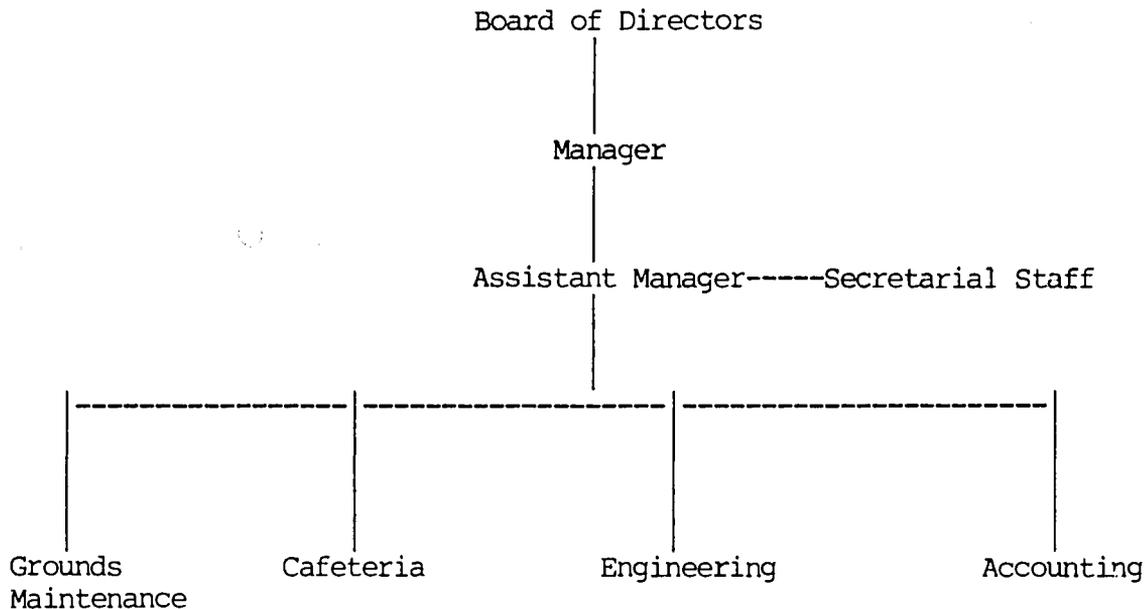
In 1961, following three decades of dictatorship, new freedom in the Dominican Republic permitted development of previously prohibited ideas. A group of dynamic young professionals and business people of Santiago created a non-profit organization designed to "contribute in all possible ways to a full and complete development of the community." The country's new democratic institutions and free market ideas soon favored the role of private initiatives. The Asociacion para el Desarrollo, Inc. won immediate praise. To ensure success, the Asociacion consulted economists, educators, sociologists and other international experts. The Asociacion para el Desarrollo, Inc. quickly established the following successful projects:

- An agricultural school, the Instituto Superior de Agricultura, created with contributions from the Agricultural Research Center, the Ford Foundation, the Pan American Union, as well as the Dominican Government.
- Savings and loan associations for housing, as well as the Banco Popular Dominicano and the Financiera Dominicana.
- Recruitment of American Can Company in Santiago, with the goals of lowering canning cost, creating jobs and increasing capital investment.

The Asociacion's most visible and successful project was the creation, implementation and administration of the Santiago Industrial free zone. The Asociacion created the Corporacion Zona Franca Industrial de Santiago, Inc., a non-profit legal entity directly responsible for building, installing, managing and developing the Santiago Industrial Free Zone. The founding members of this private entity are the Dominican Government, Santiago's Municipal Government, the Asociacion para el Desarrollo, Inc., the Camara Oficial de Comercio, Agricultura e Industrial de Santiago, Inc., the Asociacion de Comerciantes e Industriales de Santiago, Inc., and a group of private representatives of Santiago de los Caballeros. Thus, the Santiago Industrial Free Zone is managed by an autonomous business oriented entity backed by the Dominican Government and the Santiago's Municipal Government.

Operations: The zone operator has a staff of five professionals and six office support personnel. The following graph represents the organizational structure:

Santiago Free Zone
Organizational Chart



Puerto Plata:

Administration: The Puerto Plata organizing committee has adopted administrative and operational procedures similar to those of the Santiago Free Zone. At this early stage in their operations, a four-person administrative staff handles the day-to-day responsibilities of the zone.

Conclusions:

In summary, there is no question that the private-nonprofit industrial development agency which administers the Santiago Free Zone is an excellent example of an organizational structure. The three major factors responsible for the zone's success and attributed to this entity are: (1) the combination of public sector financial support and the dynamics of the private sector; (2) the Board of Directors' ability to relate to business people; and (3) the insulation of the organization from by-partisan politics.

3. Financial Planning

La Romana:

The financial planning for the zone in La Romana was performed primarily by the private company, Gulf and Western. It should be noted that Gulf and Western developed the zone out of a need to make a social contribution to the community of La Romana. The company did not intend to make a profit. According to a Gulf and Western executive, the company simply hoped to break even on the project.

Santiago:

The goal of the Corporacion Zona Franca Industrial De Santiago, Inc. was to be self-sufficient. The Corporacion intended to charge an economic rent to zone users in order that revenues exceed expenses. In order to achieve that goal, it was necessary to streamline the administration and operations budget.

Puerto Plata:

A resolution was drawn up in 1963 to establish a zone in Puerto Plata. However, this occurred shortly after Trujillo's assassination. In the mist of the political and social turmoil, no progress was made for 10 years. In 1974, a commission was created to develop the zone. The Commission set up the legal provisions, conducted the site selection, and began to look for financing.

San Pedro De Macoris:

The zone in San Pedro De Macoris has always been recognized as a public sector endeavor, i.e. publicly financed by the Government of the Dominican Republic. The original investment of \$6.5 million was to be administered by the government's Industrial Development Corporation with no private financing envisioned.

4. Site Selection Criteria

La Romana:

Site selection for the La Romana zone was performed informally by executives for Gulf and Western. Criteria for selection included: (1) relatively level terrain, (2) proximity to transportation networks and labor supply, (3) good soils, (3) availability of expansion areas, and (4) proximity to services.

Santiago:

The site for the Santiago zone rests upon the original site for a proposed industrial estate. The Santiago business community had originally planned to build a simple industrial estate. The town's mayor, however, made a mistake when making a public announcement, and used the term "free zone". So, in a sense, the mayor had to live up to his mistake, and approached the town's representatives in the capital and requested a designation for a free zone. Site selection criteria included considerations for soils, highway access, proximity to water port and airport, availability of services, and distance from labor force.

San Pedro de Macoris:

Interviews with community and zone representatives did not uncover information with respect to original site selection criteria.

Puerto Plata:

Site selection for the Puerto Plata zone was performed by the Port Authority, the Mayor's Office, and community representatives. The community resolved that the zone need not be located immediately adjacent to the airport or the water port. It was felt that a site mid-way between the two transportation ports would be appropriate.

Conclusions:

The Government of the Dominican Republic has succeeded in locating its zones throughout the country, affording a variety of choices for industrial companies. The individual sites within the four communities appear adequate and attractive to servicing the needs of their industrial clients.

B. Implementation

1. Record Keeping

Accountability was a major concern of all zone administrations except the Industrial Development Corporation which runs the zone in San Pedro de Macoris. The private and private-nonprofit administrations of La Romana, Santiago and Puerto Plata felt it was imperative to present accurate financial and administrative records on annual activity in the zones. The Santiago zone enlisted the services of a local accounting firm and set up the books so that at any time, an audit could be performed and the zone's administration had accurate and current financial information. This concern was not shared by the San Pedro de Macoris administration. The implication was that the public administration was not accountable for surpluses or losses of operating revenue.

2. Engineering and Construction

Due to the sparsity of information available on construction in La Romana, San Pedro de Macoris, and Puerto Plata, this section will focus upon the construction activity in Santiago.

Santiago:

The Santiago Zone administration contracted with local firms in its early years to construct their standard factory buildings and install roads, sewer and water lines and electric power connectors. The administration hired an engineer to supervise all construction activity. As the zone matured, the individuals in management positions felt they could handle the construction of new factory buildings in house. A smaller, 6,000 square foot building was chosen for their first project. The smaller size was selected because if mistakes were made, it would be less costly to correct. This experience proved very valuable. The zone administration found that:

- 1) Overall construction costs were less than previously experienced. It seemed as though a watchful eye was ever-present and no cost overruns were experienced.
- 2) The construction of the standard factory building was completed in less time than had previously been experienced when utilizing local

firms as building contractors. Coordination among sub-contractors seemed to be better which contributed to meeting deadlines.

3) The zone administration saw better quality buildings being erected. Improvements were noted in the appearance and durability of the standard factory buildings.

Throughout the years, the zone administration has made modifications to the specifications for the standard factory buildings in the zone. The illustration on page 32 presents the drawings for the most commonly requested building.

3. Marketing and Promotion

La Romana:

The operators of the La Romana zone initiated marketing and promotional efforts in the early years of the zone development. Because the zone operator is a well-known and respected U.S. firm, minimal efforts were required to give the zone exposure in the U.S. market. Advertising placed in a few trade magazines generated many inquiries about the zone. Additionally, Gulf and Western, the zone operator, located two of its own companies in the zone. This helped get the zone going and gave prospects a good impression since, upon visitation to the zone, they saw activity.

Santiago:

The Santiago zone administration has experienced acceptable results from its marketing and promotion efforts. In the first seven years of zone development, a New York lawyer was hired to represent the Santiago free zone in the United States. This representative would screen interested prospects and then arrange a site visitation. This type of marketing effort bought about a 20 percent return rate.

Publicity helped give the Santiago zone visibility and exposure. Since the majority of firms in the zones are involved in the apparel industry, an effort was made to get a trade magazine, Bobbins, to write a feature story on the Dominican Republic and the apparel industry. This one article created a tremendous number of inquiries. Because it was not "paid" advertising, the article was accepted as a credible representation of the Santiago zone's advantages.

Results from direct mail campaigns and paid advertising have been very disappointing. The general consensus of government and zone representatives was that word of mouth is the most effective method of promoting a zone.

San Pedro de Macoris and Puerto Plata:

At the time field work was performed for this case study, San Pedro de Macoris had not engaged in marketing efforts.

Conclusions:

The Dominican zones are doing exceptionally well given the limited expenditures experienced thus far for marketing and promotional efforts. The

presence, however, of a large and respected company like Gulf and Western in the Dominican Republic, carries a lot of weight in the international marketplace.

4. Financial Performance

La Romana:

The Government of the Dominican Republic has not incurred any direct cost or made any contributions to the operational expenses at the zone in La Romana. Gulf and Western Corporation owns the land and financed all site improvements, including roads, water and sewer systems and electrical hook-ups. Gulf and Western has invested \$9 million in infrastructure, and site improvements since 1969. Company and government officials both have registered satisfaction with the 7,000 jobs created by the zone.

Santiago:

To get the project moving, the site for the zone, valued at \$200,000 was donated by the city of Santiago. The Government of the Dominican Republic gave the zone a \$1 million grant. The following schedule presents the income and expense statement for the zone's first year of operation.

Santiago Free Zone 1973-1974

Income

First State Contribution	RD\$1,000,000.00	
Second State installment	175,000.00	
Interest Earned	24,509.43	
Private Contribution	907.00	
Total Income		\$1,205,627.99

Accounts Payable

Works of Infrastructure water, sewer, sidewalks, fences, streets	505,995.39	
Construction of Buildings 7 industrial buildings, 6,600 square meters, administration and customs building	390,282.11	
Supervision and technical assistance Salaries, office expenses, study trip to Colombia	15,900.27 23,711.48	
Total Expenses		\$935,899.25
Long Term Debt Works of Infrastructure	113,013.43	
Construction of Buildings	50,224.60	
Total value of expenses to be paid		163,238.03
Total Expenses		\$1,099,127.28
Balance to cover expenses		106,500.71
Total		\$1,205,627.99

As of March, 1984, the Government of the Dominican Republic has contributed a total of \$7 million to the development of the Santiago zone. The government will not, however, be contributing to the future support of the zone so it is incumbent upon the zone management to receive enough income to support itself. For example, income received in 1983 from rental of building and land was \$1,032,117. Charges for services (green areas, cafeteria) was \$27,255 and \$65,130 respectively. Total income was \$1,124,502. Major operating expenses included \$426,175 for General Administration, \$25,000 for promotion, and \$29,473 for principal and interest repayment. Therefore, total expenses were \$480,648. A surplus of \$643,854 was retained for additional land development.

This surplus is not unusual for the Santiago zone. The zone lost \$4,316 the first year of its operations in 1974-1975, but has earned a surplus every year thereafter. The Board of Directors of the zone insisted that a formal financial accounting procedure be adopted the first year of the zone's operations. This accountability has kept the zone respectable in the governments eye as well as that of the community.

Puerto Plata:

In 1979, the Government of the Dominican Republic gave the zone administration a grant of \$2.2 million through a variety of sources and agencies. This money was spent to purchase 256,000 square meters of land at DR\$1.75/square meter from a private family. To date they have 15 acres of prepared sites. The Administration and Customs buildings are finished along with four standard industrial buildings.

Financial difficulties were incurred shortly after establishing operations. An agreement with the State's Industrial Development Corporation required that the prepayment of three-month's rent was paid to the Corporation, and not to the zone's administration. Cash flow problems have plagued the zone. Fortunately, the Government of the Dominican Republic received a loan from the United States's Agency for International Development and awarded a \$2 million grant to the zone in Puerto Plata. This money will be used to build another ten buildings, a cistern and an electric sub-station. The \$2 million will not, however, be enough to expand the zone's infrastructure. The zone's administration has requested additional financing of \$8 million from the World Bank and the Inter-american Development Bank.

San Pedro De Macoris:

Financial accountability is not a major goal of the administration of San Pedro De Macoris. Indeed, after considerable field work and research, records of operational revenue and expenses were impossible to determine.

Conclusions:

For future zone development and present zone expansions, the Central Bank announced last April that the Monetary Board had approved two financing programs for the free zones. The first program will finance the installation of private industrial parks in new areas while the other will finance businesses installed in the zones. Additionally, the Central Bank is studying the possibility of establishing a financial aid program for private sector entities that establish new free zones or install new businesses in those

zones.

The program as approved will provide up to 70 percent financing of construction costs, (including infrastructure) to businesses, national or foreign, who plan to establish an industrial free zone in a province where one does not already exist. Financing of up to \$4 million per free zone will be made available under favorable terms. The term of the loan may extend up to 12 years with a five year grace period. The interest rate will be 12 percent. It is hoped that the financing program will stimulate the establishment of industrial free zones in other provinces. The Monetary Board also approved a financing program for businesses which are already installed or will be installed in free zones. Under the program, up to 75 percent of the investment in machinery, equipment and supplies, as well as initial working capital may be obtained in financing from the Central Bank by enterprises establishing themselves in a new or existing free zone. Businesses qualifying for this type of financing must be 90 percent Dominican-owned. The loans for free zone businesses may range in size from \$10,000 up to \$1 million. Both industrial and agro-industrial businesses qualify. The Central Bank explains that the purpose of the two new financing programs was to increase employment at a lower equity investment cost and to provide a better regional balance to economic development.

V. POSITIVE FACTORS OF DEVELOPMENT PROCESS

A. Experienced Project Participants

The Dominican Republic capitalized on the experience gleaned from their previous zone development process in La Romana and San Pedro de Macoris prior to development of the Santiago zone. Having been introduced to free zones by executives of the Gulf and Western Corporation, years passed before the Government fully understood the concept. Because of Gulf and Western intimate involvement in the zone program, a background on the company's investments in the Dominican Republic is appropriate.

In the Dominican Republic, Gulf and Western is engaged primarily in agriculture and tourism, industries of great importance to the country's economy. The company's Dominican operations began in 1967 when it acquired the holdings of the South Puerto Rico Sugar Company (SPR). Through the acquisition, Gulf and Western bought 275,000 acres in the Dominican Republic, including 120,000 acres devoted to sugar cane and the balance used for live-stock pasture and other agricultural operations. The company's holdings also include a raw sugar mill, a furfural plant, a related railroad system and sugar storage and loading facilities. Along with these properties, Gulf and Western inherited the country's social and economic problems. Widespread resentment of SPR's chronic neglect of employees--their wages, working conditions and health care--became a liability for Gulf and Western. Immediately upon acquiring SPR, Gulf and Western instituted policies to address the general as well as specific grievances against the previous management. Gulf and Western developed the following five policies regarding its Dominican activities:

- (1) To modernize its sugar and sugar by-products operations.
- (2) To "Dominicanize" its operations
- (3) To diversify its agricultural operations
- (4) To re-invest substantial earnings in efforts to diversify the Dominican economy through tourism and to create more jobs.
- (5) To channel a portion of company earnings to programs aimed at human and community development.

The free trade zone concept emerged from brainstorming sessions held by Gulf and Western executives. Presented with Gulf and Western's idea, the Dominican Government became interested, and within about 12 months it developed and enacted the needed legislation. The Industrial Incentive Law signed in April, 1968, called for the designation of industrial zones, where materials could be imported, processed by local labor and re-exported duty free. The law's intent is "to promote a more rapid and effective industrial development in the economy of the country for the purposes of obtaining permanent sources of jobs and income for our population and a diversification of the national economic base." This program would help Gulf and Western by helping to eliminate the underlying social unrest.

Gulf and Western offered to establish the first industrial free zone in its central place of business, the City of La Romana, donating a 28-acre tract of its own property for the zone. The zone operator, Operadora Zona Franca, entered into a 30-year contract with the Government of the Dominican Republic to develop the industrial free zone. At the end of the contract period, the property will belong to the Government. Gulf and Western pro-

vided professional support, as well as the \$9 million needed to construct buildings, roads, water, sewer and power facilities.

The objective of Gulf and Western in the development of the zone has always been to make a contribution to the nation's employment and economic base. To make a profit was never a goal. It could, however, be inferred that Gulf and Western wanted to make a positive impression on the Government because of its extensive holdings in the country.

Nineteen companies, manufacturing products ranging from handmade cigars and automotive electrical systems to medical supplies and women's apparel, now operate in the La Romana zone. Interestingly, three of the 19 companies are Gulf and Western subsidiaries --- Consolidated Cigar, Kayser-Roth and Glasgow Industries -- which created more than 1,500 jobs. Early activity in a zone makes for easier marketing of the project. Therefore, Gulf and Western's role in building the zone infrastructure, and in securing clients should not be under-valued.

The free zone has aided the La Romana region's economy by benefiting local storekeepers and artisans and creating new sources of employment in local service industries. As zone operations grew, La Romana's population increased over the decade from about 30,000 to nearly 70,000 through the attraction of new job opportunities. La Romana, now the Dominican Republic's third largest city, ranks second only to Santo Domingo in tax payments. More importantly, the region's unemployment is reported to be less than half the nation's average.

Encouraged by the La Romana free zone's success, the Government offered zone status as an economic development tool for other Dominican cities. Additionally, Gulf and Western offered direct assistance to the developers of the Santiago free zone and, to a lesser degree, the project developers in San Pedro de Macoris.

B. Utilization of Trade Agreements with the United States

The Dominican Republic participates in the three major U.S. programs which serve to allow large, multinational firms to reduce overall production cost through production sharing activities in less developed countries. These programs include the following:

--TSUS 807: This provision accounts for the majority, if not all, of the activity in the free trade zones in the Dominican Republic. Approximately 89 industries currently producing for export under 807, make up 85 percent of all free zone operations; another 12 were in the tooling up process at the time of this report. TSUS 807 allows U.S. firms to assemble American-made components abroad and then return the finished or semi-finished product to the U.S. Duty is paid only on the value added in the host country.

Industries producing under TSUS 807 play a significant role in the Dominican manufacturing sector accounting for an average of 9 percent of total manufactured exports from 1980-82. According to the U.S. Department of Commerce, U.S. imports under TSUS 807 from the Dominican Republic increased from US\$45 million in 1977 to \$131 million in 1982. Approximately 90 percent of these exports are wearing apparel and footwear, specifically

brassieres, trousers and men's and boys' shirts. Electrical and electronic components, such as electronic connectors, transducers, potentiometers, auto relays and capacitors account for the other 10 percent of 807 exports. Almost all of the raw materials are supplied by the United States, with labor payments accounting for the majority of the value added in the country. Electrical and electronic components, such as electronic connectors, transducers, potentiometers, auto relays and capacitors account for the other 10 percent of 807 exports.

--Imports under Generalized System of Preference (GSP). The GSP, unlike TSUS 807, provides duty-free access to the U.S. market without requiring that U.S. components be used in the manufacturing process. Imported goods are free of duty if the value of materials produced in the developing country plus direct costs of processing, equals at least 35 percent of the articles appraised value when imported. However, eligibility for duty-free treatment of many articles, particularly agricultural products, applies only for certain periods of the year under GSP. This tariff provision, enacted in 1976, currently applies to 143 countries, including the Dominican Republic, and includes 3,000 categories of articles.

GSP imports from the Dominican Republic have grown substantially during the last decade. The advantage for U.S. companies of using GSP for production sharing is that no duty at all is paid on the entire product. Under TSUS 807, duty is paid on everything except the value of the US components. On the other hand, GSP covers only a limited number of products, requires a high percentage of value added in the developing country, and removes any tariff benefit for using U.S. produced components. Additionally, the attractiveness of GSP may be further limited when the agreement comes up for renewal in 1985. In early 1984, the Reagan administration moved a number of items produced in Hong Kong, South Korea, Taiwan and Mexico from GSP eligibility.

--The Caribbean Basin Initiative (CBI). The recent advent of the Caribbean Basin Initiative (CBI) has created new opportunities for the development of the economy. CBI provisions, in effect, reduce the value-added provisions under GSP to only 25 percent for favored Caribbean nations. The policy, enacted in mid-1983, vastly improves prospects for creating new Dominican industries. Because textiles/apparel, hides, canned tuna and petroleum by-products are excluded from CBI, Dominican industries must become more diversified. The apparel sector represents more than two-thirds of the jobs in the free zones.

Since taking effect in January, 1984, the CBI has prompted an increasing number of investment missions from the Far East, and a growing interest in new industrial locations in the Caribbean by electronic firms. Representatives of the U.S. American Chamber of Commerce feel that the free zones will be a vital factor in the development of the industries oriented to the CBI. Dominican officials are advising domestic investors to explore the opportunities available through the CBI in order to increase the ratio of Dominican companies to U.S. companies in the zones.

In sum, TSUS 807 offers the most opportunities for production sharing ventures with U.S. manufacturers in the Dominican Republic. Dominican Government representatives say that many companies in the zones, as well as several private financial institutions, would not be operating in the

country at all were it not for the special provisions of the U.S. Customs regulations

C. Low Cost and Productivity of Labor

A large pool of inexpensive and unskilled labor is a vital ingredient in a national policy to develop successful industrial free zones. Fortunately, the cost of labor in the Dominican Republic is competitive with the Caribbean region and productivity of the workforce is excellent. Most zone company managers say they are satisfied with the quality of work and efficiency of the Dominican worker; productivity averages 70-80 percent of United States standards. Labor problems in the Dominican Republic's industrial free zones are non-existent, primarily because the government prohibits unions in the zones.

In the last few years, an increasing number of firms from Newly Developing Countries in the Far East have been locating in the Dominican Republic. These companies, mostly from Hong Kong and involved in the apparel industry, have relocated their operations to this Caribbean country to take advantage of low labor cost, as well as utilizing available garment quotas.

D. Use of Private/Nonprofit Sponsorship of Zone Projects.

Government and zone company representatives both cite private sector involvement in zone sponsorship and management as the overriding reason for the success of the Dominican zones. The country's first zone in La Romana attracted investors quickly because of the private investor interest of Gulf and Western. Although the second zone at San Pedro de Macoris is publicly owned and operated, Gulf and Western assisted the original planning committee in establishing it. Gulf and Western also helped establish the zones at Santiago and Puerto Plata. The company recently donated land to the community of La Vega to help that community start a zone program. Again, company managers as well as government officials have recommended this structure for future zones because it combines positive features of both the private and public sectors.

The following table illustrates that private or private-nonprofit management has been more efficient than public management. Cost of site preparation, infrastructure development and building construction indicate a more favorable investment-to-employment relationship for the privately managed zone in La Romana and the private-nonprofit zone at Santiago than for the public zone. Aside from the Puerto Plata zone, which has only recently opened for business, the San Pedro de Macoris zone has the highest investment to employment ratio of \$1,635, followed by La Romana with \$1,242. The private-nonprofit management of Santiago developed the zone for a cost of only \$1,119 per employee. Public financial assistance in infrastructure preparation, combined with the motivation of profit appear to result in efficient operations.

Table 3
Zone Development Cost and Employment Ratios
1982 (Current US Dollars)

Zone	Investment	Employment	Relationship
La Romana	\$9,001,910	7,250	\$1,242
Santiago	\$8,238,740	7,360	\$1,119
San Pedro	\$6,538,939	4,000	\$1,635
Puerto Plata	\$4,700,000	250	\$18,800*

Source: American Chamber of Commerce

* This project has only recently opened and should not be compared with the other three zones which are built to capacity.

VI. LIMITATIONS TO ZONE DEVELOPMENT

A. Lack of Access to Parallel Market

The major obstacle faced by potential zone investors in the Dominican Republic is the higher costs of production due to the fact that all local costs must be paid in US dollars exchanged at par with the Central Bank. The par rate is US\$1 = RD\$1. This official rate is over-valued by approximately 160 percent as indicated by the parallel rate (DR\$1 = US\$2.60). Interviews with foreign investors in the country indicate that access to the parallel market would greatly enhance their competitive position and enable them to expand existing operations. The exchange rate issue is also aggravated by the legislation currently being debated by Congress in the Dominican Republic which would raise the minimum salary by 60 percent. Several company representatives stated that if the minimum wage were to increase and no exchange relief was given, operations would be forced to close.

B. Lack of Promotional Efforts

Promotional activities to attract new investment in the zones are inadequate and performed on an ad-hoc basis. Even though some steps have been taken on an international scale and the Industrial Free Zone of Santiago, Inc. had the services of a promoter in the city of New York, the presence of the Dominican Republic country is not felt in the publicity media that are within the reach of interested companies. Several company representatives indicated, although the clothing industries employ almost two thirds of the jobs created by the whole sector, the Dominican Republic has never promoted the free zones in newspapers and magazines specializing in this industry.

C. Rising Cost of Labor

Salary is the most important factor in determining the cost of production in the Dominican Republic because all the industries established in the zones require intensive labor. The present system of converting dollars to pesos at the official exchange rate has made the salary of the Dominican Republic worker near the highest for manufacturing in the Caribbean free zones. This situation is aggravated by the legislation which substantially increased the minimum salary.

D. Inadequate Infrastructure

The free zones must be prepared to accommodate new clients which result from the quick decisions made on many occasions by American companies. A recent example of need for immediately space involves a company that decided to relocate its production from China, due to bureaucratic processes and operations in force there. This company asked an industry located in Santiago to manufacture one million units for the 1984 autumn season. Production was to commence in January. Although the company could easily prepare itself technically and obtain the equipment necessary for this massive production, the Santiago zone did not have the buildings available. A four month wait would be required to complete the construction of the building and an additional month to make the necessary installations. The process could not begin before April, so the offer had to be turned down.

This situation is typical of the zones throughout the country. The zone

in La Romana does not have any available space. In San Pedro de Macoris, all the existing buildings are assigned and the Industrial Development Corporation, which manages the zone, requires an advance of 40 percent of the cost of the necessary building. Additionally, the zone in Puerto Plata, which has four buildings, is 100 percent occupied.

E. Cost of Energy

Both the cost of the electric energy and the cost of fuel are higher in the Dominican Republic than most neighboring Caribbean countries. The main reason for this is that these services are also paid on a par with the U.S. dollar. Even more important than the cost of power is the availability of the energy that the industry requires. Unfortunately power failures occur in the zones up to five times a day with an average loss of 15 to 20 percent. The majority of zone occupants own their own electric generators to circumvent this problem.

F. Bureaucratic Problems

Progress has been very slow and difficult in obtaining changes in the bureaucratic systems established by the government. Most of the officials do not understand that the needs of the free zones are different from those that exist in their customs jurisdiction, which is why they oppose any amendment to the established systems in order to adapt them to the requirements of the new institution.

Companies in the free zones have registered complaints on numerous occasions, that the formalities of reception and shipment of goods be speeded up. All merchandise, before being moved from the place of arrival, must have been previously authorized by an official located in Santo Domingo. This rule is still imposed even though the merchandise will be moved from one customs territory to another with the due vigilance and must be verified upon reaching its final destination by the officials established there. Thus, if merchandise reaches the Puerto Plata airport destined to Santiago before it can be moved, its documentation must be sent to Santo Domingo, the customs officials must initial it and return it to Puerto Plata and then move it to Santiago. The time consumed and the cost of these measures are incalculable and produce serious harm and annoyances. Several firms mentioned that if the customs official in question is not in his office on a Friday, the documents will have to wait until the following Monday because there are no substitutes provided for in these cases. Additionally, customs officers work only a 34 hour week. This make it necessary for the customs officers to work overtime, which increases the cost to the companies.

VII. FUTURE ZONE DEVELOPMENT

The industrial free zone program has been most successful in the Dominican Republic. The Government intends to increase the number of active zone from the present number of four, to eleven. Communities expected to develop these zones are Barahona, Bani, Azua and El Seybo, San Francisco de Macoris/Provincia Duarte, Higuey/Villa Altagracia, La Vega, The following represents the status of each project as of Spring, 1984.

Bani-Persvia--Asian investors have committed partial development financing for this project in Bani. The Zone Corporation has been selected and activated.

Barahona--A feasibility study has been performed and submitted to the government for approval. The city has proposed that the zone be privately administered and financed. The Zone Corporation anticipates activating the zone by mid-1985.

El Seybo--The city has secured the participation of Gulf and Western in the zone development program. The feasibility study has been completed and submitted to the government for approval.

San Cristobal-- La Vega-- San Fransisco de Macoris/Provincia Duarte -- Higuey/Villa Altagracia--In each of these cities, commissions have been established to study the feasibility of zone development.

VIII. RECOMMENDATIONS

A. Access to Parallel Market

Although the industries in the free zones are not subject to foreign exchange restrictions, they are required to pay all local costs of production in pesos converted at the over-valued official rate. In April, 1983, the Monetary Board passed a resolution that set the exchange rate at US\$1 = RD\$1.48. This is an improvement over the previous rate of US\$1 = RD\$1. The new rate is still expensive because the parallel rate is DR\$1 - US\$2.60. This restriction, combined with the recent increase in the minimum wage, makes the Dominican Republic zones unnecessarily more costly than neighboring islands. To remain competitive, the government of the Dominican Republic should consider adjusting the official rate to a more favorable exchange for the zone industries.

B. Instigate Marketing Program

The free zone association, Consejo Nacional de Zonas Francas Industriales, recently formed to assist in the promotion of all the Dominican Republic zones, should be strengthened with additional monetary support from the government. This council, as it presently stands, is integrated as follows: the Secretary of State for Industry and Commerce; an Undersecretary of State for Finance; an Undersecretary of State for Labor; a Technical Undersecretary of the Presidency; the Director General of the Industrial Development Corporation; the Executive Director of the Dominican Export Promotion Center (CEDOPEX); the Manager of the Central Bank of the Dominican Republic; the Executive Secretary of the Council and a Representative of each of the Free Zones Corporations and Associations.

The objectives and functions of the National Council of the Industrial Free Zones are as follows:

- to trace the general policy of the industrial free zones and establish the program to be developed on a national scale.
- to recommend to the executive the reforms to the legislation on the free zones.
- to propose the adoption of new ways and regulations of an operative type, that may expedite the procedures of the installation and operation of the free zones and of the companies that will be installed in them.
- to participate in the negotiations of international agreement related with products manufactured in the zones.
- to standardize the total exoneration of the equipment necessary for the operation of the free zones and its industries.
- to offer technical advice to potential investors in order to obtain more effectiveness in the area of the free zones.

If this effort is given the requisite support from the government and the zone administrations, it could make a substantial difference in the Dominican Republic's visibility in the world market.

C. Increase Labor Productivity

The rising cost of labor can be offset by increased productivity. To achieve more efficiency in a unit of labor, improvements can be made in the capital equipment used in the production process. Additionally, training programs can be tailored to specific industrial processes to improve productivity. Interestingly, as wage rates rise, industries either move from labor-intensive to technology-intensive operations or relocate to a low-wage country. With the recent minimum wage increase and the offsetting effect it had on the more favorable exchange rate, the government should promote itself to more sophisticated technologies.

D. Increase Technology Transfer

Deliberate steps should be taken to encourage technology - rather than labor intensive industries. The zones were originally created as a job creation mechanism for the country. Although reducing unemployment remains a major goal of the country, the foreign exchange situation has steadily been getting more critical. Studies indicate that higher levels of foreign exchange per employee are generated in high technology industries. For example, in the Dominican Republic, the electronics sector earns more foreign exchange per employee than does the apparel sector. Encouraging new investment in technology - rather than labor-intensive industries, would serve to (a) increase exports; (2) upgrade labor skills, (3) diversify the industrial sectors in the country; and (4) increase foreign exchange earnings. To make the Dominican Republic more attractive to high-technology industries, a free zone could be developed offering special incentives tailored to the high-technology firms.

E. Create Linkages with Domestic Firms

There is a need to create linkages between the local economy and the firms located in the export-processing zones. Linkages created in this fashion will serve to encourage more stability of investments and result in higher foreign exchange earnings. To date, the Dominican Republic has not been successful in developing these important linkages. The major reason for this failure is the requirement that industries in the zones must pay local costs of production using an artificially low exchange rate. Even though the official rate was recently increased from US\$1 = RD\$1 to US\$1 = RD\$1.48, it is still below the free market rate of RD\$1 = US\$2.60. This policy diminishes the overall cost competitiveness of the country relative to its true potential. It also serves to discourage use of local raw materials.

INDUSTRIAL FREE ZONES OF THE DOMINICAN REPUBLIC



EXISTING



PROPOSED

PUERTO PLATA



SANTIAGO



★ SAN FRANCISCO
DE MACORIS

LA VEGA



★ EL SEIBO

S. PEDRO DE MACORIS

★ HIGÜEY

SAN CRISTOBAL

AZUA

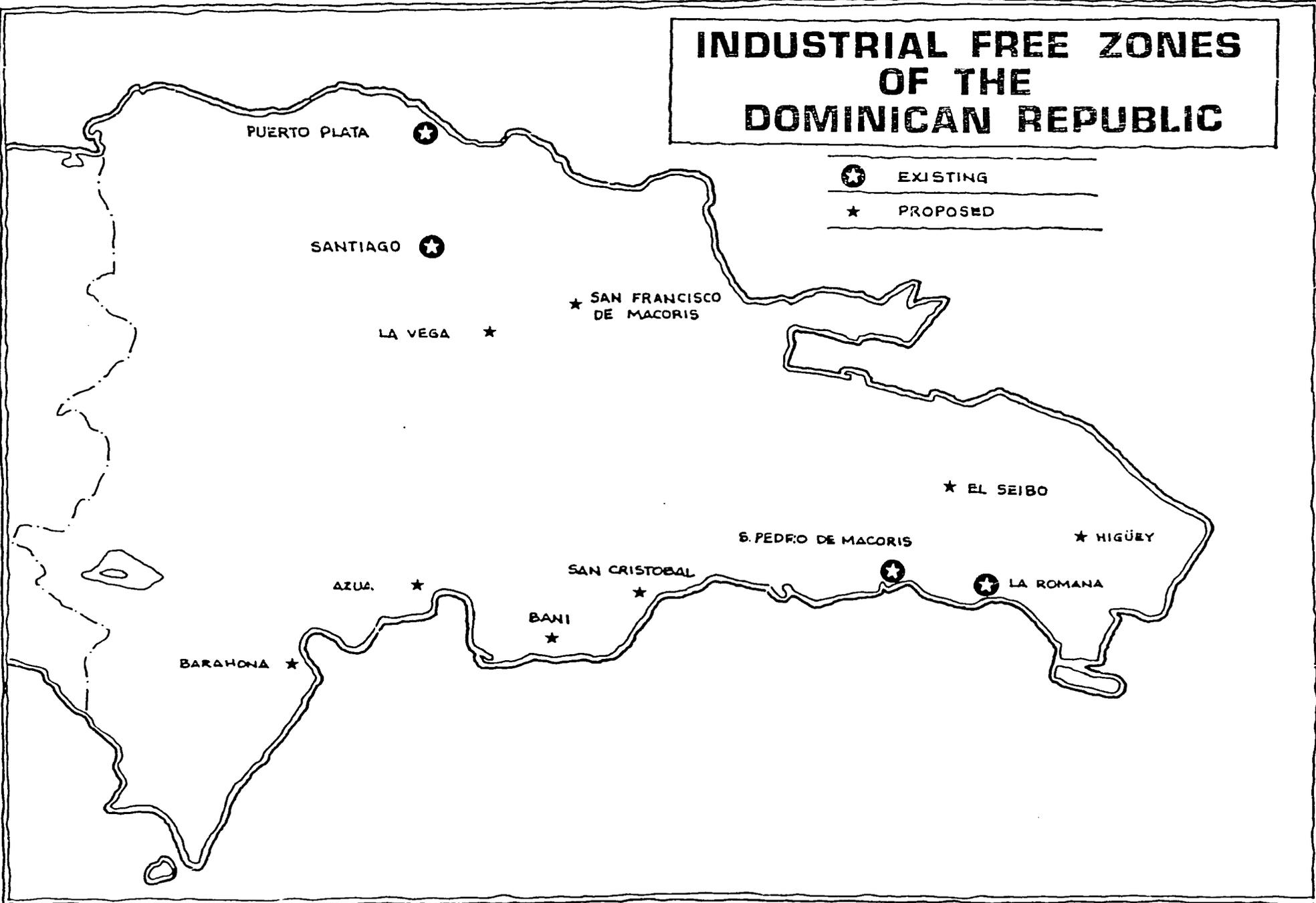


BANI



LA ROMANA

BARAHONA



Annex 2

Mauritius Free Zones Case Study

Agency For International Development

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I. INTRODUCTION

Over the past decade, Mauritius has achieved growth rates in its export industrial sector that have placed it in the vanguard of Africa's developing nations. Implementation of free zones has accounted for the majority of this growth.

"Export processing zones," as the zones in Mauritius are called, reflect a range of free zone policies. Although the basic element of free zones--targeting of automatic tax, tariff, and regulatory relief--is found in all the zones, important variations in their approaches remain.

A basic distinction exists in the ownership and management patterns of the Mauritian zones. Two of the principal export processing zones in Mauritius were developed and are operated by a public sector institution. The remaining zones are under for-profit private sector ownership and administration.

This case study examines two major export processing zones in the country--one, the Coromandel zone, an undertaking of the public sector, and the second, the St. Antoine export processing zone, an indigenous private enterprise. Their experiences provide guidelines on financial, administrative, marketing, and physical planning approaches of potential benefit for free zone developers elsewhere.

The study begins with a review of Mauritius's manufacturing sector and economy as a whole. Following this, the country's export processing zone program is described, along with factors contributing to the public and private sector zones' successes and shortfalls. Finally, the implications of the Mauritius experience are reviewed, with a particular emphasis upon the complementary roles and comparative advantages of private and public sector institutions.

II. COUNTRY BACKGROUND

A. Location and Physical Character

Mauritius is an island of 1865 square kilometers located in the Indian Ocean, approximately (1000) kilometers east of Madagascar. It has large expanses of flat, fertile soil, a tropical but pleasant climate, and attractive coastlines and topography.

B. Characteristics and Past Performance of the Country's Economy

The economy of Mauritius has historically been dominated by sugar production and ancillary activities. Until the early 1970s, industrial and manufacturing activities other than sugar refining were non-existent in the country.

Out of a desire to lessen dependence upon a single crop, the government of Mauritius began in 1964 to encourage manufacturing enterprises. Its Development Incentives Act offered incentives for import-substitution activities, but failed to generate significant industrial growth. In 1971, sugar production and manufacturing still accounted for 86.6 percent of total exports from the island.¹

Opportunities for import substitution were inherently limited, because of the small size of the domestic market (1981 population of 971,626) and the lack of local raw materials. Accordingly, by the end of the 1960s, the government reoriented its policies. Following the model of successful Asian export-oriented industrial free zones, the government enacted in 1970 a liberal incentive package, The Export Processing Zone Act, in the hopes of stimulating export assembly and light manufacturing industries and generating attendant jobs and foreign exchange. The principal incentives included:

- duty-free importation of capital goods and components
- free repatriation of capital
- a tax holiday of up to 20 years on profits earned from export sales
- exemption of payment by shareholders of income taxes on dividends paid by EPZ firms;
- issuance of permanent resident permits to EPZ shareholders;
- and some relaxation of the Mauritian labor code.

The new incentives demonstrated the desired effects. The manufacturing sector of the economy grew vigorously, accounting for close to 40% of total exports by 1982.³ Employment in manufacturing also experienced high growth, rising from 8,000 in 1970 to 38,000 in 1981.⁴ But the pace of growth was not sustained evenly over the period; expansion of the manufacturing sector occurred primarily from 1971-1977. The annual growth rate of exports dropped from a high of nearly 27 percent in 1976-77 to less than seven percent between 1977 to 1982.

At present, two categories of industry comprise the manufacturing sector of Mauritius: export-oriented firms (EPZ users) and import substituting firms (Development Certificate holders or DCAs). The EPZ firms, although fewer in number, employ almost three times the number of workers as do the DCA enterprises. Textile and apparel manufacturing are the dominant

activities in export firms. DCA firms reflect a more diverse spectrum of industries, by virtue of high protection against foreign competition (up to 200 percent in ad valorem terms).

Both EPZ and import-substitution firms are found scattered throughout the island; Mauritius offers incentives to firms locating either on or off the industrial estates. Within the public sector industrial estates, (40) percent of the sales are generated by firms engaged in import substitution rather than export. In private sector industrial estates, the export orientation of firms is far more pronounced.

C. Zone Profiles

Five major export processing zones have been established in Mauritius, two of which have been developed by the public sector and three of which are owned by private firms. All are overseen by the Ministry of Commerce, Industry, Prices and Consumer Protection. Development and implementation of the public sector industrial estates is carried out by the Development Bank of Mauritius through the industrial estate division; for-profit companies--usually capitalized by sugar producers--have undertaken most of the private EPZ projects.

The five principal zones are:

(public sector)

a. The Plaine Lauzan Estate, located on a 13 acre site, was started in 1968. Standard factory buildings (multi-story) have been erected by the DBM and cover a total area of 425,000 square feet. The zone was fully leased out within three years of its completion in (1970).

b. The Coromandel Estate, constructed in 1973, covers 70 acres. Standard factory buildings have also been constructed by the DBM on this estate, covering 628,000 square feet. As with Plaine Lauzan, the Coromandel estate is located just outside the boundary of the capital city of Port Louis. Port facilities are less than 6 kilometers away and the island's international airport is approximately 35 kilometers from the site.

(private sector zones)*

c. The St. Antoine Export Processing Zone, established in 1974, is a privately-developed industrial estate on a site of 12.5 acres in the northern part of Mauritius. It offers 90,000 square feet under roof and is ultimately projected to cover 25 acres. The developer of the zone is the St. Antoine Sugar Company, Ltd., which has minority ownership shares in all of the companies operating there. These joint-venture firms produce for international rather than domestic markets. The site is 20 km. from the port and more than 45 km. from the international airport.

* In addition, more than (70) companies have qualified for individual export processing zone status. Because these decentralized site-specific operations do not fit clearly within the international definition of Export Processing Zones, the focus of this presentation will be on the industrial estate-based zones.

d. The Bel Air St. Felix was established (four) years after the St. Antoine industrial estate in eastern Mauritius, to cater for garments and sugar processing operations. It offers approximately 25,000 square feet under roof and is primarily export-oriented. The zone is about 25 km from Port Louis and about 18 km from the international airport.

e. The Bonaire Export Processing Zone was developed in 1979, also by a sugar company, near Triolet in northwest Mauritius. The estate offers about 30,000 square feet of factory space, and caters to export-oriented knitwear and garment manufacturers. The zone is about 11 km from Port Louis and more than 35 km from the international airport.

For the balance of this case study, the Coromandel estate will be compared with the St. Antoine estate. These zones are examined in some detail both because they are representative of the public and private sector experiences respectively with zone development in Mauritius, and because the timing of their development was so parallel. It should be noted, however, that conclusions from the comparison must be qualified for an intrinsic reason: a three-fold difference in size of the respective zones.

III. ZONE CONTRIBUTIONS

During the period of 1972-76, the export processing zone program in Mauritius had a tremendous impact on the economy. In addition to creating 24,270 jobs country-wide and generating US\$140 million in net foreign exchange earnings, the EPZ industries diversified a one-crop economy and developed an industrial base in manufacturing. During the most dynamic growth period for EPZ industries (1972-76), an average of 17 new firms were created every year.

From 1976 through late 1983, the performance of the EPZ sector throughout Mauritius was comparatively disappointing. The average number of new EPZ firms established per year fell to 12. Nearly one third of the firms which started operations closed down, with the highest number of closures in any one year reaching 15 enterprises in 1978. Growth in exports declined on average to six percent per year and net employment has stagnated.

Since late 1983, however, the EPZ sector has shown a strong rebound in the public and private industrial estates. The surge is attributable primarily to the greater number of Far Eastern investors interested in diversifying their investments, for reasons presented later in this case study.

Before examining the economic contributions of the EPZs, it is instructive to compare the respective performance of Coromandel and of the St. Antoine Industrial Estate from the standpoint of their attractiveness to industry.

The Coromandel industrial estate for most of its existence has experienced lower than anticipated occupancy. Original plans called for developing a total of 900,000 square feet of factory space in two phases, with the second phase being undertaken once the first phase was leased out. In 1974, however, the Development Bank of Mauritius won approval by the International Development Association (IDA) to consolidate its building program; as a result, approximately 628,000 square feet of prebuilt space was constructed at once.

In large part because of the world recession, demand for space fell well below expectations. During the first four years of operation, the occupancy level remained well under 175,000 square feet--just over 25 of the prebuilt factory space available. Between 1977 and late 1983, the Coromandel Industrial Estate rose slowly to a 55 percent occupancy level. Most of the firms located in the zone, however, were DCA enterprises rather than export industries.

The occupancy level in the Coromandel estate improved markedly in early 1984. An influx of Hong Kong and other Far Eastern investors has resulted in virtually all of the remaining factory space being committed; in light of the absorption of all unused space in Coromandel, the Development Bank of Mauritius is planning to develop in the coming year an additional public sector-sponsored industrial estate.

The St. Antoine Industrial Estate has enjoyed a far higher percentage of occupied to unoccupied factory space than Coromandel throughout its

development history, as a result of a more cautious approach to building construction. The private developer of the zone from the beginning has paced factory construction in direct proportion to market demand, never building more than one facility "on spec" at a given time. When one 20,000 square foot is leased, the developer proceeds to the next.

At present, 90 percent of the zone's 90,000 square feet of factory space is leased out. The majority of the construction occurred during 1974 through 1977, at a time when large quantities of unoccupied factory buildings were available at the Coromandel estate. Notwithstanding the competition from its public sector-sponsored counterpart, the St. Antoine estate succeeded in attracting seven companies by 1979--all of which were export oriented rather than import substitutions firms. The number of companies based at St. Antoine has since risen to 10, and the estate's developer reports firm demand for an additional 20,000 square feet.

A. Employment

The EPZ firms have been quite cost-effective in generating employment. In contrast to import-substitution enterprises, the investment cost of creating a new job in Mauritian EPZs averages only about \$4000--just over a fourth of the \$15,000 average capital investment cost per job in DCA firms.

The employment contributions of EPZ firms have been timely as well as cost-effective. With increased mechanization of the sugar industry over the past 20 years, employment in the agriculture sector has been declining. At the end of 1982, approximately 17 percent of the work force was officially registered as unemployed. The EPZ sector has had a significant impact in generating employment, particularly during the period of 1972-77 and from late 1983 to the present.

In 1982, the total direct employment in the EPZ sector was 23,420. This represents approximately 47 percent of all employees in the manufacturing sector and seven percent of the total officially registered workforce.⁸ Net employment creation in the EPZ sector fell from an average of more than 4,000 new jobs a year in 1974-77 to less than 1,000 annually in 1978-81. The knitwear and garment factories provide over 85 percent of the employment opportunities.

More than 80 percent of employees in the EPZ enterprises are women. In addition to the alleged technical expertise of the female employees, the predominant reason for the large number of women in the workforce is pay differential. During the first year of employment, women are paid approximately 40 percent less than their male counterparts and 30 percent less thereafter. Wages paid to workers at Coromandel and St. Antoine, however, compare favorably to those paid in the import substitution sector of the economy.

The social impact upon the labor force has not been altogether positive. In the initial years of development of the EPZ sector, numerous industrial disputes occurred because of delinquent wage payments and strenuous working conditions. Labor legislation was enacted in 1975, which attempted to accommodate the needs of the industrialists and protect the rights of the workers. The number of industrial disputes has decreased in recent years, but foreign investors are still granted certain exemptions from standard

labor practices prevalent in other sectors of the economy.¹⁰

Several differences were observed in labor relations at the Coromandel and St. Antoine industrial estates. Companies operating at St. Antoine attributed their location decisions in large measure to the more tranquil labor-management relationships in the area, which was removed from the political pressures and agitation of the capital city. Because many of the St. Antoine-based companies relied upon semi-skilled and skilled workers, grievances over pay were minimal. Executives of the Mauritius Development Bank noted that labor actions had markedly subsided in Coromandel during the past four years, partly because several major employers at the zone attributed their closing to union unrest.

B. Export Diversification

The EPZ sector in Mauritius has been very successful in diversifying the economy from sugar exports. In little more than a decade, exports of manufactured goods from EPZ firms have increased from 1.1 percent of all exports in 1971 to 33 percent in 1982. EPZ exports have accounted for an average of 92 percent of total manufactured exports from Mauritius.

Disaggregated figures are unavailable on the relative contributions of the Coromandel and St. Antoine EPZs to the overall export earnings of Mauritius. Because import substitution rather than export firms have accounted for a majority of Coromandel's tenants (until the past three months), the St. Antoine industrial estate has been proportionally more successful than Coromandel in generating export sales. The greater size of the Coromandel zone, however, means that the absolute contribution of its EPZ firms outweighs that of the St. Antoine companies in export sales.

The industry mix of the St. Antoine industrial estate contrasts markedly with that of Coromandel. Of the 10 EPZ firms operating there in early 1984, none were engaged in textile or garment manufacturing. The companies instead produced watch movements, cut gems, rubber masks, ship models, lead and plastic figurines, and brushes. In both Coromandel and St. Antoine, exports of EPZ products are oriented overwhelmingly to the EEC market.

C. Foreign Exchange Earnings

Despite the high import content of manufactured goods, EPZ firms have provided substantial foreign exchange earnings. From 1974-1981, the total net foreign exchange earnings from EPZ industries was \$159.8 million. Net foreign exchange earnings grew at a rate of 16 percent per year in real terms between 1976 and 1981. No comparison is possible between the relative contributions of the Coromandel and St. Antoine industrial estates because statistics are unavailable.

D. Backward Linkages

High levels of protection for domestic producers have inhibited the development of linkages between the EPZ sector and indigenous entrepreneurs. Sheltered from international competition, the DCA firms have generally failed to offer products with prices and qualities equal to world standards. One local DCA manufacturer of thread, benefiting from Mauritius's

protectionist policies, attempted to sell to the EPZ garment manufacturers. The poor quality and high price of the thread resulted in the termination of the supply contract. No differences were observed between linkages at Coromandel and St. Antoine.

E. Transfer of Technology

EPZ firms have proven instrumental in the transfer of marketing and managerial skills to indigenous enterprises. Through the vehicle of joint ventures, foreign investment and marketing specialists have strengthened the capabilities of local entrepreneurs. In some instances, the local partner has taken over the running of a company after increasing his shares, or after buying out another local partner.

The Coromandel industrial estate, as opposed to St. Antoine, seemed to be more effective at diffusing technical know-how to indigenous enterprises. At St. Antoine, the zone development company held large minority ownership shares in each of the export firms operating at the zone; the operational know-how acquired through these joint ventures remained restricted to the development company. By contrast, the Coromandel estate created no barriers to the diffusion of technical, managerial, and marketing knowledge to a wide variety of Mauritian enterprises.

IV. ZONE DEVELOPMENT PROCESS

A. Planning

1. Legislative Planning

The need for legislative planning by zone developers was minimal for both the Coromandel and the St. Antoine Export Processing Zones. Both projects were eligible under the already enacted Export Processing Zone Act passed in 1970. This act, patterned after enabling instruments used by successful Far Eastern export-oriented industrial free zones, offered such incentives as duty-free importation of capital goods and components, free repatriation of capital, tax holidays of up to 20 years on profits earned from export sales, exemption of payment by shareholders of income taxes on dividends paid by EPZ firms, relief from some labor code requirements, and issuance of permanent resident permits to EPZ shareholders.

2. Zone Management Planning

The administrative structure for Coromandel was planned to reside with the Development Bank of Mauritius, the only institution with successful prior industrial estate development experience (the Plaine Lauzan industrial estate, begun in 1968). Other factors working for the DBM's selection were the strength of its political standing within the government, and the fact that the Development Bank is the major source of medium and long-term lending for investment in industry. Other organizations involved in the project planning included the Water Department, Energy Department, and Department of Works. The Development Bank found that the key to effective zone planning was to involve these and other critical institutions at an early stage, preferably by having top ministers participate in the project planning meetings. In a move that gave important financial institutions a stake in EPZ development, zone planners decided to allocate 20 percent of the ownership interest in the Coromandel project to the Bank of Mauritius and five percent to the State Insurance Corporation of Mauritius.

From the beginning, there was little doubt where ownership and management responsibilities would rest for the St. Antoine Industrial Estate. The project was initiated by the Compagnie Sucriere de Saint Antoine Ltee, a major sugar producer based in Goodlands, a rural area in the northern part of the island. Planners for the zone envisaged the company retaining title to the land, constructing standard factory buildings for tenants, and leasing out the properties at rates slightly below those of the Coromandel estate.

3. Financial Planning

At an early stage in planning of the Coromandel Estate, the Development Bank of Mauritius identified the World Bank's International Development Association affiliate as an optimal source of financing. A feasibility study was conducted to establish the market demand for, and the financial and economic viability of, the Coromandel zone. Financial planners explicitly sought to de-emphasize the goal of maximizing the project's financial return, in favor of keeping lease costs low for industries and hence maximizing economic benefits. The feasibility study

consultants determined that the project, under the most likely scenarios, would generate a financial rate of return of between 5.5 and 6.5 percent, and an economic rate of return of between 10.4 and 12.6 percent. On the basis of these results, the project planners approached the IDA for financing half of the project's total anticipated \$8 million cost, through a 20-year 7.5 percent interest rate loan, with a five year grace period. The balance of the investment was to be provided by the Government as a capital contribution.

Financial planners for the St. Antoine project undertook far less rigorous efforts to establish financial feasibility. Instead, they planned to carefully phase the construction of buildings to keep pace of demonstrated market demand. As with the Coromandel project, the financial planners did not see maximizing lease rental income as their foremost objective. They sought instead to have the parent company take equity holdings in the zone's tenant companies, ranging from 10 to 49 percent ownership interests. The advantages of this approach included the ability to reap greater than normal returns that would be available solely as the landlord to industries. Concurrently, however, this financial plan would expose the developer to greater risk of loss should any of the zone tenants fail.

4. Site Selection Criteria

The Coromandel industrial estate was selected after a comprehensive review of six potential locations. The Lower Coromandel area, near Port Louis, was chosen because the Development Bank of Mauritius already owned the land, the site was close to a large labor pool (major upgrading of transportation infrastructure in the area was to be undertaken to facilitate labor movements), the property had good slope and soil conditions, and there was an economical hook-up potential to water, electricity, and telephone systems.

Developers of the St. Antoine industrial estate, by contrast, went through no comparable site selection search. The company owned the land, which was level, serviced by roads and basic infrastructure, and had soils suitable for factory construction. Although handicapped by a somewhat remote location, the site in Goodlands had an offsetting advantage--its distance from the more densely populated and unionized "big city" was recognized as a powerful inducement for companies desiring peaceful labor relations.

B. Implementation

1. Engineering and Construction

The DBM and the World Bank report general satisfaction with the quality of engineering and construction work undertaken for the Coromandel zone. In retrospect, however, both institutions believe that initial construction plans should have been adhered to, rather than the more ambitious construction program that was actually undertaken. The Coromandel plan at first called for two phases of construction, in step with market demand. As a way to achieve economies of scale, however, DBM successfully proposed to the World Bank that the two phases be consolidated. The proposal arguably achieved savings in unit costs of the Standard Factory Buildings, but at the

cost of a large debt overhang for the project. Until the early 1980s, more than half of the Coromandel's 625,000 square feet of standard factory space went unoccupied.

St. Antoine adhered to its original program of phasing construction in keeping with demonstrated market demand. The zone's construction program to date has consisted of five buildings averaging 20,000 square feet. Construction of new factory buildings as occurred at intervals ranging from 12 to 36 months, depending upon the economic climate in a given period.

2. Management

Coromandel's zone management system evolved from the experiences gained by the Development Bank of Mauritius in administering its earlier, smaller estate at Plaine Lauzan. The Bank's industrial estate section at present consists of six full-time people, who maintain the buildings, collect rents, ensure provision of water in drought periods, and otherwise perform the functions of landlords. The small size of the staff relative to the volume of EPZ tenants has caused problems at times in meeting the needs of zone users on a timely basis. Because of the staff's small size, however, problems of internal bureaucracy have been minimal.

At the St. Antoine zone, management responsibilities were transferred in 1975 from the original developer, the Compagnie Sucriere de Saint Antoine Ltee, to SOGISA, the Societe de Gestion de la Zone Industrielle de St. Antoine. The shift involved no change of ownership, but grew out of a recognition by the sugar company that the zone's interests would be better served by transferring administrative functions to an organization specifically dedicated to zone management. At present, five full- and part-time people run the zone.

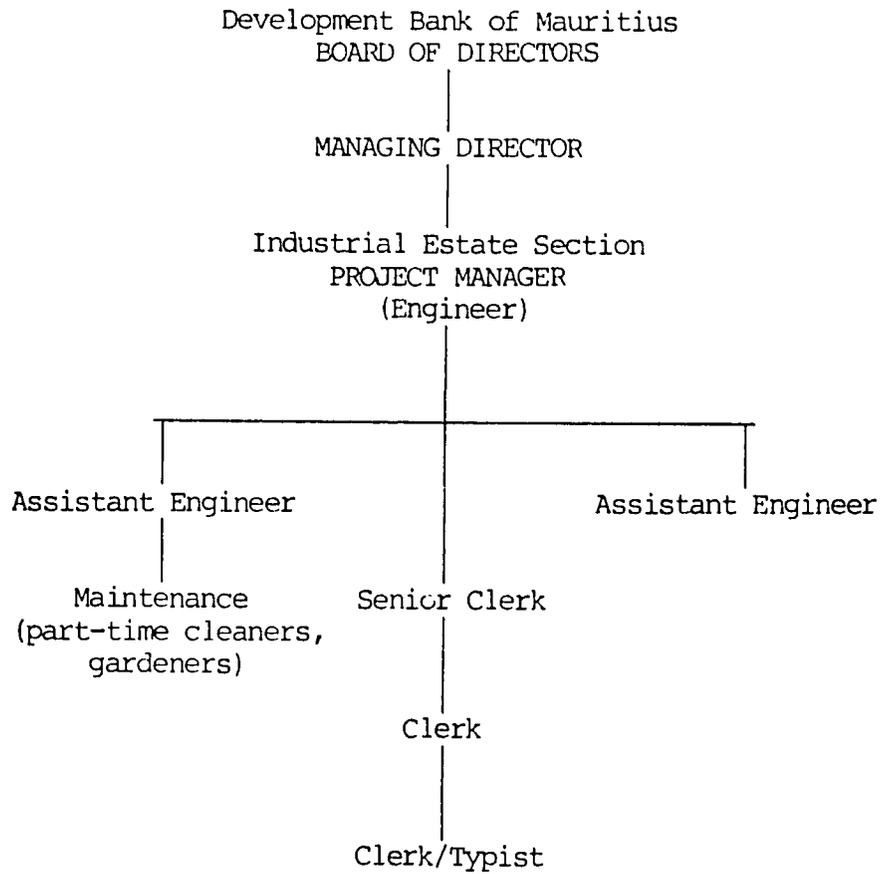
Both Coromandel and St. Antoine have lean administrative staffs. Coromandel has only six full-time staffers; St. Antoine has five people working on a part or full-time basis. The structure of the respective organizations are presented on the following pages.

3. Marketing/Promotion

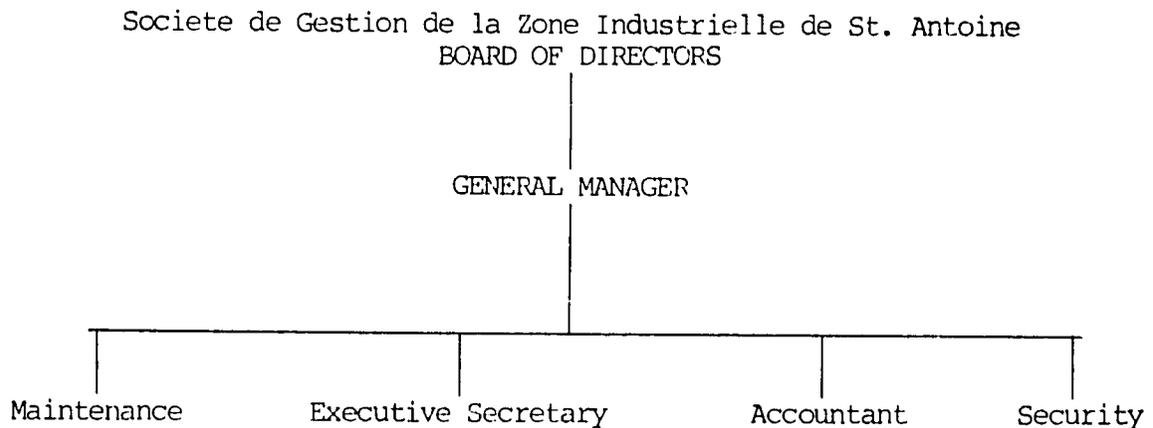
Both the Coromandel and St. Antoine estates have made only fitful international marketing and promotion efforts. In the case of Coromandel, marketing responsibilities were neglected for nine years following the establishment of the Coromandel estate. Initially, the marketing efforts were viewed as unnecessary because of the influx of foreign investors during the early 1970s; subsequently, the adverse world economic climate was viewed as making promotional efforts of doubtful benefits. Since late 1983,

ORGANIZATIONAL STRUCTURES OF MAURITIUS EXPORT PROCESSING ZONES

I. COROMANDEL EPZ (Public)



II. ST. ANTOINE EPZ (Private)



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however, high level governmental missions have promoted Mauritius as an export manufacturing center to Far East companies, with very impressive results. Coromandel has gone from approximately half-empty to completely committed in this period, principally because of successful appeals to Hong Kong-based firms.

The St. Antoine estate has relied primarily on personal contacts made by its investors and existing joint venture partners at European trade fairs and seminars, as a means of recruiting new tenants. It reports spending less than \$5000 annually on promotion. Although the stipulation that all zone tenants must share equity with the estate developers has been unattractive to some firms, others have welcomed the participation of a successful, experienced, well-financed Mauritian company. Among the benefits of the approach from the perspective of existing zone tenants have been faster startup and more tranquil labor relations. The willingness of the existing zone tenants to assist in promoting the zone at European business conferences attests to their overall satisfaction.

4. Financial Performance

The financial performance of the Coromandel Estate has fallen short of expectations. In response to the feasibility study and financial plan, the IDA approved a credit of \$4 million was provided to finance approximately 50 percent of the total project cost. IDA's contribution was passed on to DBM in local currency at 7.25 percent interest and repaid over 20 years, including five years grace. Although the Government has provided a similar amount as a capital contribution to the project, the DBM has also drawn loans from the government of Mauritius that are to be repaid at 2.5 percent interest over 12 years including two years grace. The availability of resources at significantly below-market rates has been a major factor in avoiding a more disappointing financial outcome.

As a condition of its loan, the IDA and the World Bank established reporting and accounting criteria for the site engineering and construction phases. With the exception of a period during which the regularity of reports declined, the DBM appears to have observed the agreed upon monitoring functions. The DBM and the World Bank, however, have disagreed over the accounting procedures to be used regarding accrued operating losses; DBM believes that such losses should be "capitalized" into the project, while the World Bank believes that such an approach will understate the opportunity costs of the funds used to meet the deficiency.

To date, total costs of the Coromandel zone have exceeded revenues by about \$8.8 million. The principal reason for the financial problem was the decision to build 625,000 square feet of factory space, in advance of demonstrated market demand. This has forced the Coromandel project to bear unduly heavy debt servicing burdens. In recent months, however, the large inventory of idle standard factory buildings has proven to be an advantage rather than a disadvantage. Anxious Hong Kong and Sri Lankan investors have located in Mauritius as a means of hedging against political instability at home. Because of this change in market demand, the Development Bank of Mauritius now expects that the zone will break even by 1988 or 1989.

Financing for the St. Antoine industrial estate has come from three

sources: the parent company (\$100,000 loan in 1974), the Sugar Fund of Mauritius (two loans totaling \$600,000 in 1974 and 1976, at interest rates of 10 and 11 percent over ten years), and a commercial bank (\$100,000 in 1980, at an interest rate of 15 percent over seven years).

Although figures on financial return are not disclosed by the developers of the St. Antoine industrial estate, field research suggested that the break-even point for St. Antoine will be reached considerably sooner than for Coromandel. Although the Coromandel estate broke even on its operating costs in 1982, it is unlikely that the capital costs will be repaid until 1988 or 1989. The St. Antoine zone managers, while more reticent about releasing figures on their financial performance, indicate that their zone will repay its investment costs and initial operating losses by the end of 1984.

V. POSITIVE FACTORS IN THE DEVELOPMENT PROCESS

The following discussion highlights noteworthy factors that have contributed to the success of the EPZ sector in general, and of the Coromandel and St. Antoine zones in particular.

A. Stability of Investment Groundrules

Since the country won independence, changes of government in Mauritius have occurred by peaceful, democratic means. Although politics have been highly polarized in the country, EPZ legislation has been exempted from effects of national economic policy shifts. The acceptance of the EPZ sector even by left-wing parties has apparently arisen because of a recognition that EPZ firms account for much of the country's non-agricultural employment and foreign exchange earnings.

B. Low-Cost, Productive Labor

The Mauritian labor force is generally very well educated and easy to train. Composed of a diverse mixture of African, Indian, Chinese, and European peoples, the labor force is generally literate and multilingual in both English and French. Labor costs run approximately \$2.35 to \$3.75 per day for unskilled production workers—a figure that compares favorably with labor costs in most Asian countries. Hong Kong garment manufacturers report that when measured on a productivity/dollar basis, Mauritian workers are 40 percent less costly than their counterparts in Hong Kong.

C. Business-like Zone Development and Management Organizations

As noted previously, both the Coromandel and the St. Antoine EPZs have been developed and operated by lean, business-like organizations. In response to severe budgetary constraints, the industrial estates branch of the Development Bank of Mauritius has employed innovative strategies to meet tenant needs, including the formation of a tenants' association to help provide security and maintenance services. The St. Antoine EPZ management company has outright investment interests in the tenant companies; as a result, its grounds and facilities are attractive and well maintained, and tenant concerns are quickly addressed.

D. Access to Export Markets

Companies based in the EPZs give as a key reason for locating in Mauritius their duty-free access to markets in EEC countries under the Lome Convention. Under the Lome II Convention of 1979, preferential market access is given to exports originating from former European colonies. Some EPZ exporters also cited their favorable geographic position to access markets in Southern Africa as a factor in the zones' success.

E. Living Conditions/Amenities

As noted earlier, Mauritius has a peaceful, multi-cultural population and favorable climate. It is abundantly endowed with recreational opportunities. The prevalent use of English and French in schools as well as in business life make Mauritius an attractive destination for foreign investors and entrepreneurs.

VI. BARRIERS TO FULL ACHIEVEMENT OF ZONE POTENTIAL

Although Mauritius is well endowed with human and physical resources, development of the EPZ sector has been inhibited by several major factors. They include the following:

A. Lack of Marketing/Promotion

Promotion activities on the part of Coromandel to attract foreign investment until recently have been inadequate and performed on an ad-hoc basis. The Ministry of Commerce and Industry is the main body responsible for promotion, but four other organizations are also involved in this activity. Investment promotion offices in Europe are also used, which are financed by the EEC. The total budget for promotion activities has been less than US\$100,000 per year.

Since late 1983, marketing activity oriented toward attracting EPZ firms has increased substantially. High government officials have travelled to the Far East to conduct promotional visits to Hong Kong, Sri Lanka, Singapore, and Taiwan. These efforts have been rewarded with a surge in investment from firms (primarily in the garment sector) concerned over the political future of Hong Kong and Sri Lanka. Nonetheless, no systematic promotional campaign is being mounted in the Far East or in the United States on behalf of the EPZ sector.

The St. Antoine industrial estate, similarly, has placed a low priority on international marketing and promotional efforts. It relies principally on efforts by the development company's European agents and joint venture partners to identify prospective investors. The company does send representatives to trade fairs, however, to identify potential tenants and new joint venture prospects.

B. Shortcomings in Property Development/Management

The financial performance of the Coromandel estate has been disappointing until the recent influx of investors from the Far East. The problem has been heavy fixed debt service obligations incurred as a result of the decision to build massive amounts of factory space in the mid-1970s, far in advance of market demand. Although the shortfall in demand was largely caused by the troubled world economic conditions of the mid-1970s, in retrospect it appears that the Development Bank of Mauritius and the World Bank failed to follow a business-like strategy of building space only one step ahead of demand.

Some tenants felt that the design of the Coromandel standard factory buildings was also insufficiently responsive to the market. The buildings have proved unable to be readily partitioned into sizes accommodating smaller firms, and their multi-story construction has caused difficulties with movements of raw materials and finished products.

Management by the Development Bank of the Coromandel estate also came under some criticism. Tenants stated that the industrial estate branch of the Bank was doing the best it could on a limited budget, but that buildings and grounds maintenance was not yet fully adequate. Improved cash flow resulting from increased occupancy of the Coromandel estate, however, should

enable the Development Bank to undertake needed improvements.

St. Antoine's development and management shortcomings were of a different kind. Because of the heavy building materials sales taxes levied on private sector construction, and a low depreciation rate for physical structures, the zone developer has lacked the cash flow needed to build a new 20,000 sq. ft. structure.

C. Inefficient Local Suppliers

Garment manufacturers, in particular, reported dissatisfaction with the high cost of importing textiles and other apparel-related raw materials and intermediate goods to Mauritius. In contrast to Hong Kong and Taiwan, where indigenous manufacturers operate with little or no protection from international competition, export-oriented firms in Mauritius felt that the price and quality of products from DCA (import substitution) firms was non-competitive. Accordingly, EPZs may be losing in two ways--first, the absence of competitive local suppliers may incline potential investors to locate in other countries, and second, the foreign exchange earnings of the country may be suffering because of relatively weak "backward linkages."

D. Red Tape

Permit approval procedures for public sector EPZs are cumbersome. A total of six ministries must approve a project which normally takes two to three months if all necessary documents are complete. Also, although export firms are not subject to import duty, they have to complete customs procedures similar to those imposed on firms paying duty. In St. Antoine, the private sector management of the zone is reportedly better able to resolve problems without experiencing bureaucratic delays.

E. European and U.S. Protectionist Policies

Criteria for exporting duty-free into the European Economic Community have become more stringent in recent years, to the detriment of Mauritius. Britain and France in recent years have imposed "voluntary" restrictions upon Mauritian exports. Tighter rules of origin requirements under the Lome II convention have also curbed export growth of EPZ firms. Given the overwhelming orientation of Mauritian exporters to the European market, continued erosion of access to this market would greatly reduce the appeal of Mauritian export processing zones to export manufacturers. Already, some export manufacturers have attempted to diversify by producing garments for the U.S. market. But U.S. quotas also have constrained Mauritian garment manufacturers; knitwear exports triggered quota restrictions after EPZ firms penetrated 4 percent of the U.S. market in only two years.

F. Shortcomings in Utilities

Many EPZ firms identify the lack of a fully reliable water supply as a major problem for EPZs in Mauritius. During the dry season, interruptions in water supply are common. For example, one knitwear manufacturer interviewed during the course of this research had stopped production for four days due to the lack of water for washing the garments. Power outages, although less frequent than in the past, also have caused problems for some firms.

VII. FUTURE PROSPECTS

The recent acceleration of foreign investment in Mauritius, triggered by flight capital from Hong Kong and Sri Lanka and by the world economic recovery, augurs well for Mauritius. Fundamental economic trends are working in favor of further EPZ growth, including continuing migration of low-wage manufacturing operations from the Newly Industrialized Countries. Mauritius appears to be one of the more promising candidates for economic take-off, on the model of Malaysia, Taiwan, and Singapore, over the next 15 to 20 years.

Government policies, for the most part, are working to reinforce development of the EPZ sector. The Development Bank of Mauritius in the past six months has decided to develop a third public sector EPZ estate at Phoenix. It will differ from its two predecessors in that virtually all of the buildings will be one or two floors, and will be readily partitioned into increments as small as 5000 square feet. The site's size, moreover, will be a manageable 35 acres (10 nonleasable). Construction of the first building is scheduled to be completed by the end of 1984.

The government also has established plans for a one-stop service agency and a promotion agency. A number of different public sector bodies, including international organizations, are intended to participate in and support this program. Plans have been moving somewhat slowly, because of differences among the participants regarding the proposed funding and implementation plan for the organization.

In sum, EPZs in Mauritius have a bright future. Provided the country's investment groundrules remain stable, and the world avoids new eruptions of protectionism and/or recession, opportunities for further private and public sector EPZ development in Mauritius appear to be excellent.

VIII. RECOMMENDATIONS/CONCLUSIONS

Mauritius has found EPZ development to be an effective way of diversifying the economy away from reliance upon a single crop, and a powerful mechanism for employing new entrants into the workforce. Jobs created in the export sector tend to be far less capital intensive than those created in the import substitution sector.

The parallel experiences of public sector and private sector-developed EPZs provide a useful base for recommending EPZ policies for the future. The public sector EPZ at Coromandel languished for many years at less than 50 percent occupancy, while carrying an expensive burden of public debt incurred because of massive overbuilding. By contrast, private developers, such those who own the St. Antoine zone, risked their own capital for zone development, and built facilities in a manner more closely corresponding to market demand. The private sector approach is clearly the best approach for easing governmental fiscal strains, by releasing resources that would otherwise go to zone development for other uses.

The potential of Export Processing Zones to contribute to the development of Mauritius could be more fully realized by taking the following steps:

-- Encourage private developers and managers to assume greater responsibility for zone development and management. An important means for encouraging indigenous developers to erect the needed space consists of lessening the taxes they now pay upon building materials for the EPZ factories. Introducing accelerated depreciation for EPZ structures would also be a powerful spur to zone development in Mauritius. Within public sector zone development organizations, incentives should also be introduced that gear the compensation of key executives to the economic and/or financial success of the zone.

-- Begin a concerted EPZ marketing and promotional program. To date, both the private and public EPZs have undertaken promotional efforts on an essentially "hit or miss" basis. The attractive incentives and production factor costs of Mauritius make the country a strong candidate for continuing EPZ growth, provided the benefits are communicated to potential foreign investors. In addition to encouraging Mauritius officials to travel for meetings with Far East, European, and U.S. companies, EPZ developers should increase their visibility in trade fairs outside of Europe, and perhaps establish a continuing zone promotional presence in Hong Kong, where flight capital is expected to continue leaving. To capitalize on the country's low labor costs and high quality of life, zone promotion efforts should also focus on labor-intensive segments of the information and service sectors. Many "back office" functions, such as keypunching and large-scale text entry, could be economically performed in Mauritian free zones. Such marketing strategies would minimize the risk to the Mauritian economy of over-dependence on the garment and textile sectors, and would position the country to benefit from emerging technologies.

-- Establish a true "one-stop" permitting center, to expedite approvals of investment applications. Although large corporations have the resources and staying power to wade through a lengthy investment approval process, small and medium sized firms--the kind which make up the vast majority of

EPZ tenants world-wide--cannot readily afford delays. Creating a one-stop permit process is a powerful inducement for such companies. The process must work in practice as well as on paper, which entails delegation by high government officials of multiple responsibilities to a single government unit. Mauritius could minimize grievances from departments who felt they were giving up their "turf" by appointing the heads of the relevant departments to the board of directors overseeing the one-stop center.

- Dismantle present import-substitution policies. As noted previously, the absence of locally-produced raw materials and intermediate goods is a key barrier to the further development of EPZ activity in Mauritius. The trend of international trade barriers has been to require ever-higher "value added" contributions on the part of the exporting country to qualify for duty-free access to final markets. Under the current rules of origin in the Lome Agreement, at least two stages of production must take place in Mauritius or materials must be purchased from other Lome signatories. Developing backward linkages with the domestic economy is imperative if Mauritian exporters anticipate further penetration of the EEC countries. Mauritius would be well-advised to remove trade barriers that now nurture import substitution firms and impede development of backward linkages by the EPZ firms.

- Phase construction of standard factory buildings in future EPZs to keep pace with market demand. As the experience of Coromandel demonstrated, the temptation to overbuild can be costly if indulged. A better approach is to phase the construction schedule to keep from 20,000 to 40,000 square feet available at any one time, to accommodate investors who need immediate space on a basis that avoids inflating the zone's debt service burdens. Experience also indicates that EPZ tenants prefer one or two-story buildings far more than four-story structures, such as those constructed in Coromandel, as well as buildings that can be partitioned in units as small as 5,000 sq. ft.

Mauritius--and other countries--may also benefit by viewing their zones as proving grounds for new economic policies that may later be adopted for the nation as a whole. The People's Republic of China has officially stated that its new "Special Economic Zones" represent a demonstration area for market-oriented economic reforms. On the strength of the proven performance of EPZs in Mauritius, and the recent surge in new zone investment, it may be a propitious time for the Government to consider extending free zone incentives to the domestic economy. Tax reductions and regulatory relief for small business in areas of high unemployment--two key incentives found in free zones world-wide--could help stimulate further growth on the part of Mauritian-owned enterprises.

FOOTNOTES

¹Ministry of Commerce, Industry, Prices and Consumer Protection, Mauritius. January, 1983.

²The manufacturing sector, as defined in this paper, does not include sugar and tea processing.

³Central Statistical Office

⁴Central Statistical Office

⁵The Export Processing Zone Act No. 51 of 1970 permits EPZ firms to locate anywhere within the country.

⁶Central Statistical office and Mission data.

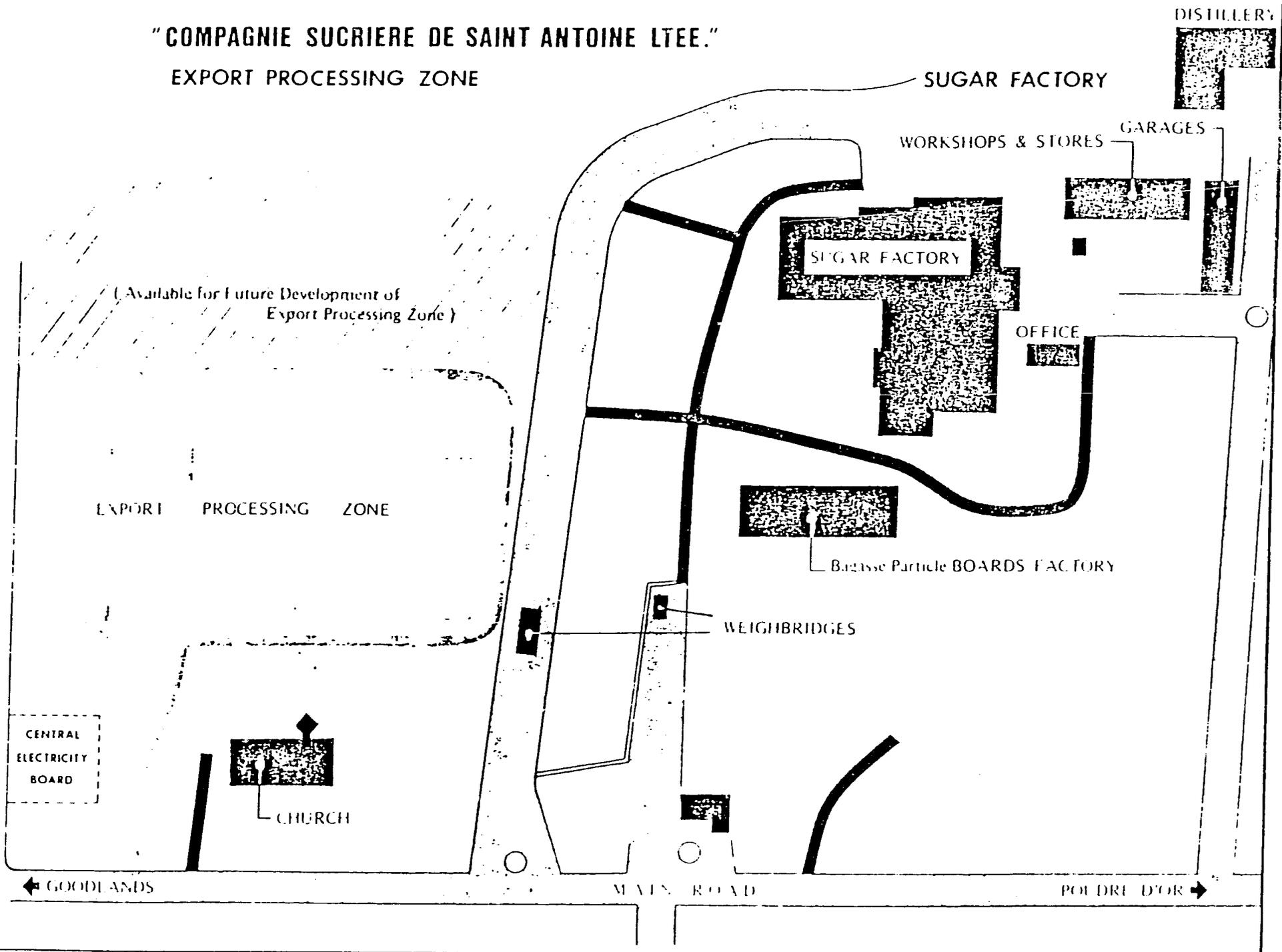
⁷Two weaving factories have closed operations in Mauritius since 1978.

⁹The sugar industries are the only other sector which employs a pay differential between men and women.

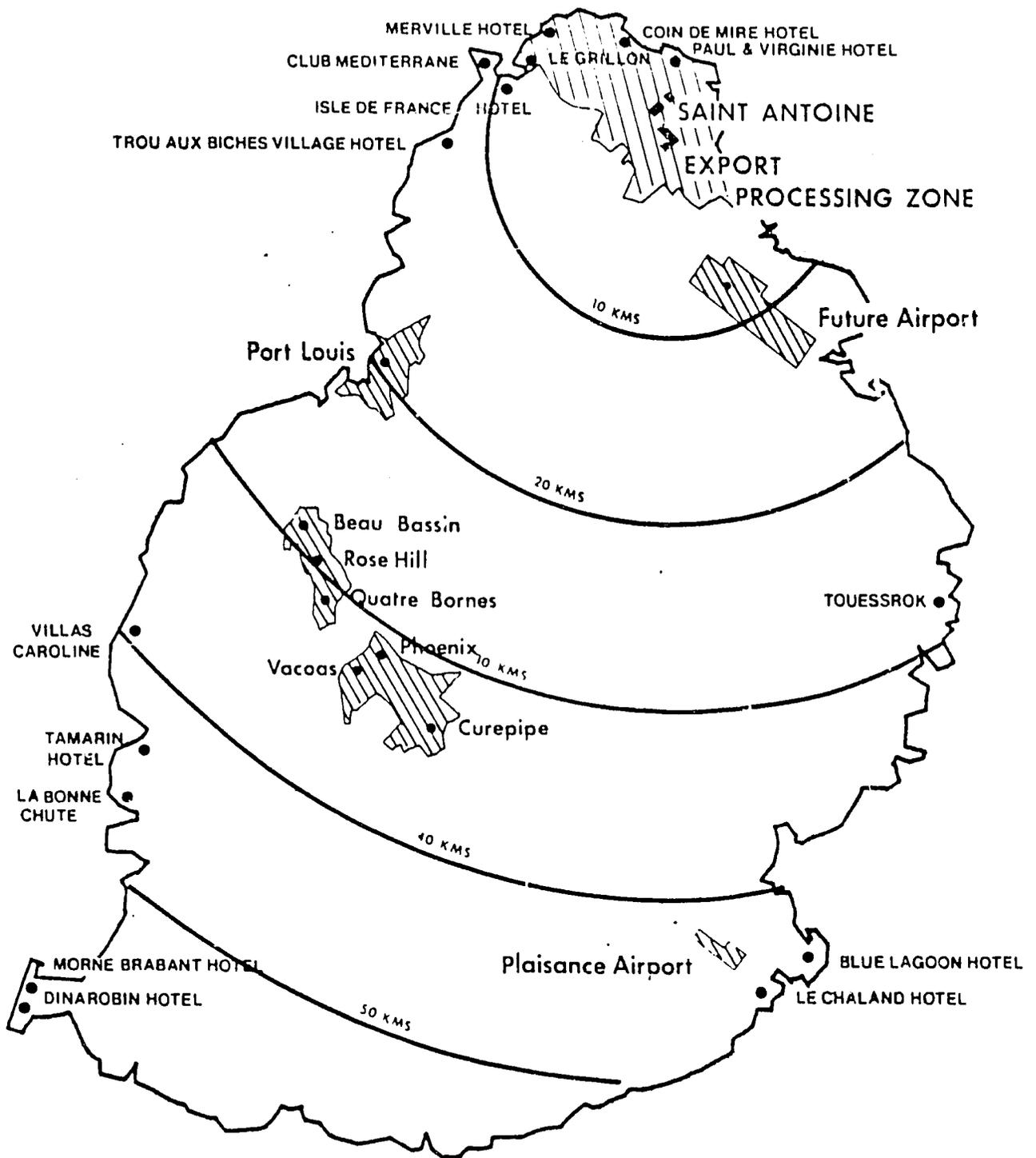
¹⁰Paid public holidays and the pay differential are the main exemptions granted.

"COMPAGNIE SUCRIERE DE SAINT ANTOINE LTEE."

EXPORT PROCESSING ZONE

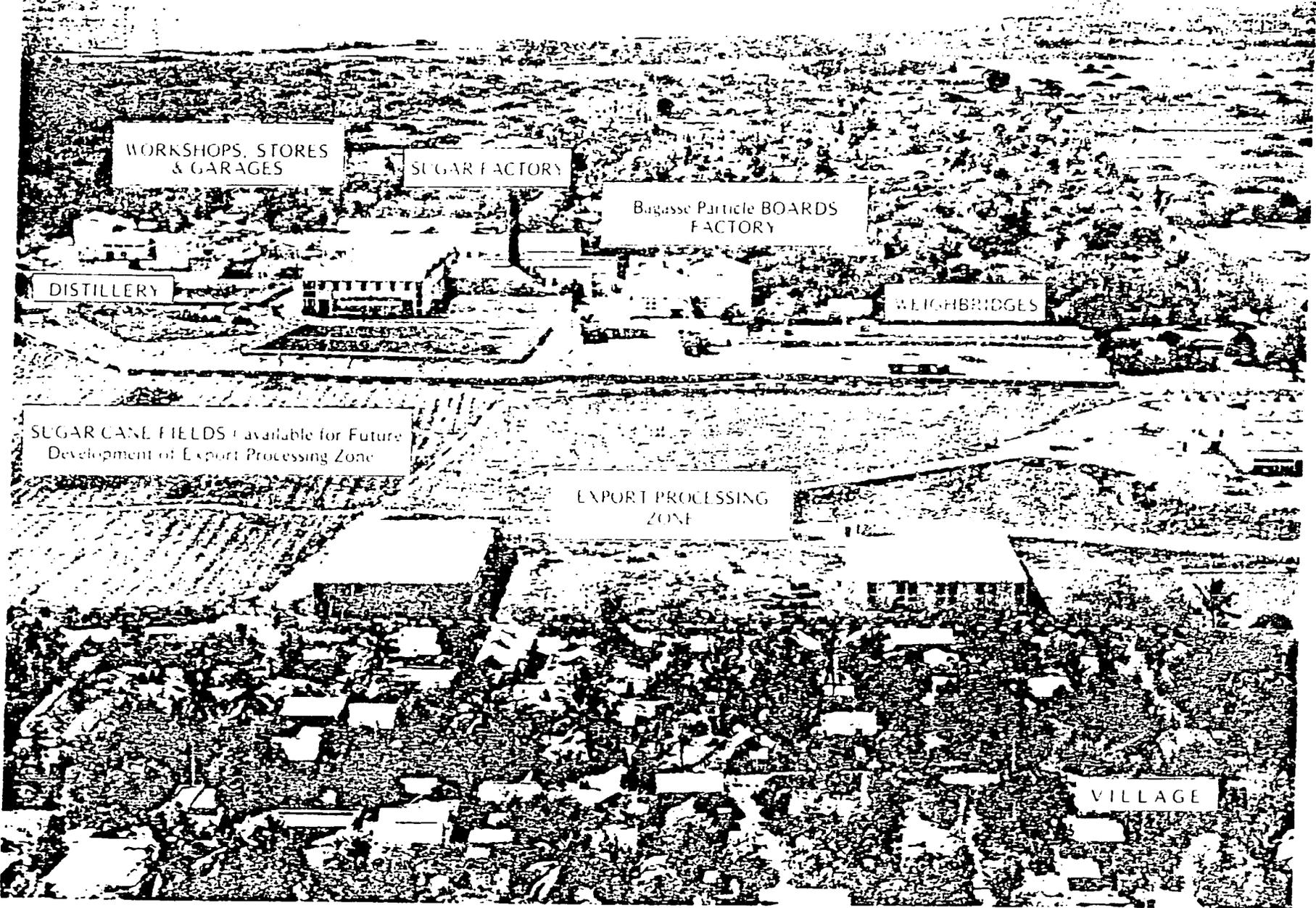


situation of SAINT ANTOINE in Mauritius

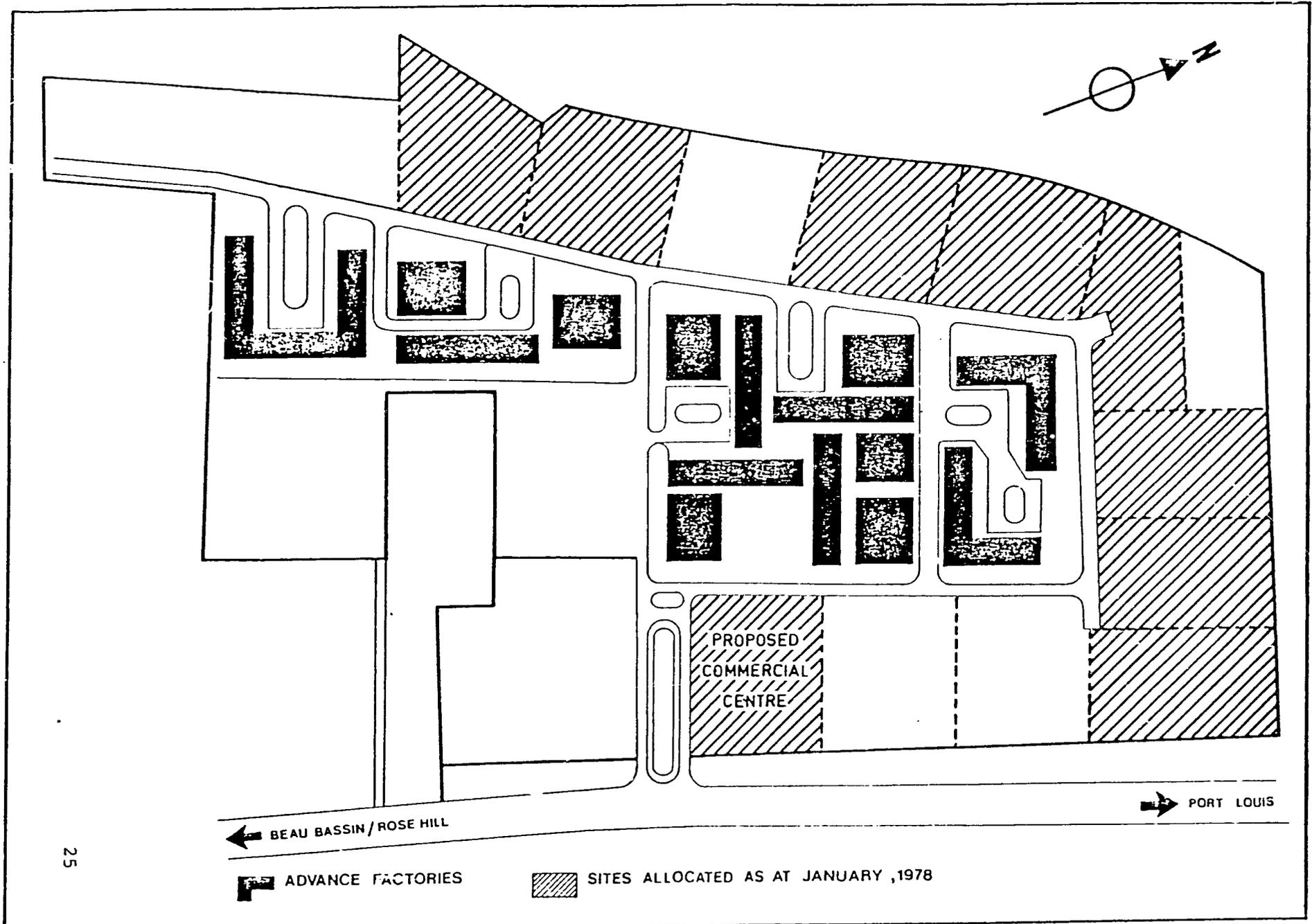


Aerial View of SAINT ANTOINE

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COROMANDEL INDUSTRIAL ESTATE



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Annex 3

Indonesia Free Zones Case Study

Agency for International Development

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I. Introduction

Indonesia has two areas that are export processing zones (EPZs). This study concentrates on P.T. Bonded Warehouses Indonesia (BWI), an EPZ located in the port district in the capital city of Jakarta. The zone encompasses 10.5 hectares of garment factories.

The freeport island of Batam, 20 kilometers south of Singapore, is also examined. Although this zone presently has several petrochemical factories, it is still in the process of being developed into a capital-intensive adjunct to Singapore.

These two EPZs represent very different approaches to economic development. BWI is a 'conventional' EPZ with standard factory buildings housing garment-manufacturing concerns. The Batam Island development is an atypical EPZ; it is a freeport which will include residential housing, duty-free importation of materials and will not be limited to an industrial enclave. Indonesia administers Batam almost as if it were a separate nation. Batam's impact on Indonesia's international standing may be great. For if the government is successful in promoting it as an outpost for free enterprise, drawing investors away from Singapore, it could evolve into an international trade center.

This paper will also discuss the evolution of Indonesia's export processing zone policies, examining why no other zones have been established, and why, in the future, EPZ development may be superseded by 'export estates' in which duty-free importation is not allowed.

II. Country Background

A. Location of the EPZs

Indonesia is an archipelago of more than 13,000 islands, stretching across the Pacific Ocean from New Guinea (which it shares with Papua New Guinea) to the South China Sea, South of the Malaysian peninsula. Its 1980 population of 147.5 million makes it the fifth most populous country in the world. Indonesia has problems resulting from its scattered location, since although its population and natural resources are plentiful, they are geographically distant. Consequently, the population itself consists of several diverse groups, and the government is faced with the difficult task of creating a sense of national identity.

The only developed export processing zone in Indonesia is P.T. Bonded Warehouses Indonesia. ("P.T." at the front of a business name is the equivalent of 'Inc.' or 'Ltd.' Governmentally established and owned P.T. companies like BWI are customarily used by the Indonesian government as day-to-day zone operators.) It is located at the port district of the capital city of Jakarta.

Crowding is BWI's biggest problem. The zone is fully occupied, with 70 or more companies awaiting admission, and there is no room for zone expansion in the surrounding port. Yet no move has been made to relocate BWI or give it noncontiguous expansion space. In the past, government policy, focused upon the creation of additional EPZs rather than the improvement or expansion of existing facilities. The large number of investors seeking entrance to the BWI zone was seen as an indication of a burgeoning demand for industrial space throughout Indonesia. Recently, however, the Indonesian government has made efforts to develop several alternative forms of industrial estate projects and has consequently individualized its promotional initiatives for each specific site.

The major long-term EPZ project of the Indonesian government is on the island of Batam, just south of Singapore. Although it has been a freeport island since the 1970s, actual investment to date has been disappointing. The 20-year development strategy for the island focuses upon the duty-free importation of raw materials as an element of a general industrialization program.

Unlike other EPZs, 'in-bond' firms are not confined to a specified industrial enclave on Batam but are located throughout the island. In addition, the Indonesian government has made efforts to encourage the construction of housing to induce population relocation and foster balanced regional development. The basic infrastructure on Batam has been heavily subsidized by the government and its future development will require further subsidy or the participation of new intermediate developers.

B. Manufacturing in the Local Economy

Increased foreign investment has helped to make traditional industry the fastest growing sector of the Indonesian economy since the late 1960s. Nevertheless, private investment and manufacturing growth slowed during the 1970s due to recession, limited growth in domestic demand, uncertainty over

investment policies and problems with production efficiency.

Indonesian government development programs in the last decade have targeted large-scale industrial projects with a rapid return on investment, especially in the oil industry. This overwhelming emphasis has resulted in lack of available funding for equipment replacement and undercapitalized small- and medium-sized businesses. Industrial machinery in need of repair, outdated equipment and a shortage of intermediate goods have hampered the establishment of an integrated industrial base and depressed overall productivity. Investment in expanded facilities has not been matched by capital infusion to existing businesses.

This imbalance in government industrial policy is evidenced by the low level of employment generation. The Indonesian population growth rate necessitates the creation of over a million jobs per year to simply maintain current unemployment levels. By focusing government programs on capital-intensive large-scale projects, export earnings have increased, but fewer jobs have been created. If the present policy is maintained, one fourth of the needed jobs, at best, will be generated through government programs.

Indonesia is the world's eighth largest oil producer. The revenues generated by Pertamina, the state-owned oil company, have been the principle source of government investment funds. Understandably, the government has endeavored to increase its foreign exchange earnings by further investment in this profitable enterprise. Pertamina accounted for 54 percent of the 1981 total petroleum production in Indonesia and the industry revenues nationwide are a crucial element in the country's balance of payments. However, in its emphasis on exploiting these oil resources the government has paid little attention to the small-scale industries that contribute the highest percentage of jobs to the domestic population. The lumber industry, second only to oil in terms of its foreign exchange earnings, is a labor-intensive development alternative, yet has been largely neglected by government programs. The majority of Indonesians continue to work in the agricultural sector at depressed wage levels and without benefit of government subsidization.

The composition of Indonesian imports has changed considerably as the manufacturing sector has grown. Today, raw materials and capital goods make up the majority of imports. Japan and the United States are, by far, Indonesia's major trading partners, although the government is attempting to diversify its markets worldwide. Its exports, as mentioned above, are heavily reliant on oil products. From January through June 1982, exports (US\$) were as follows:

--Mineral fuels and lubricants	\$11,807,699,301
--Crude materials, inedible	1,165,190,560
--Manufactured goods	961,930,107
--Food and live animals	761,563,254
--Special transactions	146,525,398
--Misc. manufactured articles	144,266,907
--Animal/vegetable oils & fats	108,818,917
--Machinery/transport equipment	92,353,032
--Chemicals	79,759,129
--Beverages and tobacco	41,818,628

Source: Ekspor, September 1983. Indonesian Central Bureau of Statistics.

The textile sector is Indonesia's oldest and largest manufacturing activity, largely fueled by foreign capital. From 1967 to 1981, \$1.3 billion in new foreign investment was received in textile manufacturing.

The Indonesian government projects the following annual growth rates for the various economic sectors:

--Manufacturing	11%
--Building and construction	9%
--Transport and communications	10%
--Other non-agricultural and non-mining	8%
--Agricultural	3.5%
--Mining	4%

Source: Indonesia: A Guide for Investors, The Investment Coordinating Board. Jakarta. April 1983.

Detailed historical growth rates are not available from the documents provided by Indonesian officials, consequently, the accuracy of these projections is difficult to verify. However, in recent years, GDP growth rate has steadily declined from a 1980 peak of 9.8 percent to 4.6 percent in 1982. The national economic picture is brighter when viewed in terms of inflation which fell from an astronomic 47.4 percent in 1974 (due to skyrocketing oil prices) to 9.69 percent in 1982.

C. The Recent Tax Law Revisions

On January 1, 1984, Indonesia began a major revision of its tax laws following a 30-month review of national tax systems worldwide conducted by the Ministry of Finance. A government summary of the revisions makes no mention of EPZs, but subsequent interviews indicate that the duty-deferral privilege is intact. Although provisions discussed here are applicable to all Indonesian taxpayers, they also affect the incentives for EPZ investment. In essence, the reform includes:

- Elimination of all tax holidays.
- Simplification and possible lowering of corporate tax rates; and for the upcoming year.
- Elimination of payments-in-advance for anticipated corporate taxes.

The basic impact is the removal of incentives (except the duty-deferral privilege in EPZs), while leaving the tax paid by each individual or corporation "virtually unchanged or in many cases slightly lowered." It is hoped that the new system will increase government revenues by broadening the tax base and foster taxpayer compliance through income-tax withholding and a self-assessing value-added tax.

In the past, the Indonesian government relied primarily on its crude oil and natural gas production to provide revenues, since the inherited colonial tax system was largely ineffective, requiring an individual official assessment of each taxpayer. Consequently non-oil taxes amounted to only 6 percent of the gross domestic product, well below the typical rate for middle-income oil-exporting economies. Given the uncertainties in the world oil market, Indonesian officials are now attempting to

raise non-oil taxes to ten percent of total GDP.

The former complex system of separate tax schedules for individuals, businesses, dividends, et al, has been replaced by an income tax that is applied across the board. The Indonesian government believes that the lower maximum tax rates and accelerated depreciation will produce a strengthened incentive system, since tax holidays affected only the early, less profitable years of a company, while reduced rates will be available throughout the life of the venture.

The old corporate tax rates ranged from 20 percent to 45 percent. The new income tax rates are:

- 15% for income up to 10 million Rupiah, (to \$10,101.01)
- 25% on Rupiah 10 to 50 million, (to \$50,505.05)
- 35% on Rupiah 50 million and above.

(US\$1 = Rp990)

The elimination of proactive payment of taxes will aid the cashflow of investors. As a whole, these tax revisions appear to be modeled after those of the Newly Industrialized Countries, although they are not so far-reaching in their market orientation. The reform itself is commendable, however, it remains to be seen whether the Indonesian government can successfully build a national economic identity through the imposition of legislative incentives and constraints.

For EPZs, the simplification of procedures is completely beneficial, although the elimination of the tax holiday, may deter garment factory operators who have been the primary users of Indonesia's BWI zone. These "footloose" investors expect to turn a profit early on and may now be drawn to other EPZs that continue to offer tax breaks in the initial years of operation.

III. Zone Contribution to the Economy

A. Employment

Historical employment figures are limited, however it is known that EPZ employment has increased from 7,200 in 1981 to 8,300 at present. In keeping with worldwide trends in the garment industry the zone workers are overwhelmingly unskilled females. Table 1 outlines employment by skill level and Table 2 indicates the wages in effect for various positions.

Table 1

EMPLOYMENT BY SKILL CATEGORY
P.T. BWI, DECEMBER 1983

	MALE				FEMALE				TOTALS			
	Indo.	Non-Indo.	Resi- dent Aliens	TOTAL	Indo.	Non-Indo.	Resi- dent Aliens	TOTAL	Indo.	Non-Indo.	Resi- dent Aliens	TOTAL
Management	43	10		53	6			6	49	10	0	59
Tech./Supervisory	60	22	1	83	22	1		23	82	23	1	106
Skilled	170		3	173	186		2	188	356	0	5	361
Unskilled	535		1	536	7095			7095	7630	0	1	7631
Total	808	32	5	845	7309	1	2	7312	8117	33	7	8157

Source: Documentation of P.T. BWI

Table 2

WAGES BY SKILL CATEGORY
P.T. BWI, DECEMBER 1983

	Wages per Month U.S. Dollars
Management	N/A
Technical/Supervisory	200-300
Skilled	50-300
Unskilled	50

Source: Interview with Zone Management

As in factories outside the zone, government minimum wage requirements determine the income of unskilled laborers. In addition, bonuses of 50 dollars per month are paid for productivity that exceeds standard quotas. These wages are paid directly to workers in Indian rupiahs. A 40-hour work week is the "official" norm, although interviews indicate that the actual average hours worked may be closer to 45. Overtime pay is said to be in effect for additional work performed. Employee health benefits are limited to sick leave and access to an on-site clinic.

Zone managers maintain that the government forbids the hiring of unskilled foreign labor. However, Table 1 shows a total of 33 expatriates and 7 resident aliens employed at the EPZ in skilled, technical and managerial positions with one resident alien employed in an unskilled position. No difficulty was reported in locating qualified Indonesian management, technical or supervisory personnel. Yet, zone users have generally brought in managerial staff from abroad.

Indonesian labor is described both by zone managers and by zone users as 60 percent as productive as Hong Kong or Taiwanese labor. A factory of 300-400 workers can reportedly produce 6,000 pieces daily. Turnover rates are low -- 2 or 3 percent of total annual employment -- high unemployment levels have increased the value of a permanent position. Zone management alleges that labor unions are very active in social areas but that their activity is carried out 'in an Indonesian way;' that is, strikes are prohibited.

The attractiveness of zone employment is evident when one views the poverty surrounding the port district. While it would appear that employment generated by the zone has helped to keep area unemployment levels down, it is also possible that the proximity of the EPZ has encouraged the entrance of young women into the labor force who might have otherwise remained at home. Consequently, the impact on unemployment has been partially offset by the introduction of these new members to the labor force.

BWI workers make up only 0.2 percent of Indonesia's total manufacturing force. However, indirect employment in support services and industries generated by the zone is an important additional benefit. Because of its strong linkages to the Indonesian textile industry, BWI is estimated to generate one job in a feeder industry for every three EPZ jobs, double the EPZ indirect employment average worldwide.

B. Export Performance

On the following page, Table 3 presents BWI's export record from 1978-83, during which the growth rate exceeded overall Indonesian export growth. The United States is the destination for roughly 30 percent of the zone goods, while European Economic Community countries account for roughly 35 percent. The balance is exported to Africa and the Middle East.

Table 3

TOTAL VALUE OF EXPORTS, FOREIGN AND DOMESTIC RAW MATERIALS
PT BONDED WAREHOUSES INDONESIA
(U.S. \$million)

	FOREIGN RAW MATERIAL	DOMESTIC RAW MATERIAL	OTHER VALUE ADDED**	EPZ EXPORTS	EXPORTS FROM PORT	EXPORTS FROM INDO.	EPZ EXPORTS AS % OF TOTAL EXPORTS
1978	\$12.7	\$0.004	\$0.096	\$12.8	\$1,159.0	\$11,643.2	0.109%
1979	\$7.5	\$0.4	-\$2.0	\$5.9	\$1,025.7	\$15,590.1	0.037%
1980	\$1.2	\$1.2	\$16.3	\$18.7	\$435.9	\$21,908.9	0.085%
1981	\$14.1	\$3.4	\$11.3	\$28.8	\$410.9	\$22,260.9	0.129%
1982	\$12.3	\$8.1	\$14.0	\$34.4	\$889.2*	\$9,942.5*	
1983	\$12.1	\$13.8	\$11.2	\$37.1			
TOTAL	\$59.9	\$26.9	\$50.9	\$137.7			

* January through June 1982. ** Labor, rent, services, profit, etc.

Sources: Documentation of P.T. BWI and Statistical Pocketbook of Indonesia, 1982. Central Bureau of Statistics. Jakarta.

After a prosperous beginning, second year exports faltered only to rebound in 1980. Since that time, EPZ export earnings have steadily increased as has the utilization of domestic raw materials in the production process. Physical constraints on zone expansion may have contributed to the tapering off in foreign raw materials usage and the diminished "other value added" by zone industries.

C. Linkages to the Domestic Economy

The increased use of domestic raw materials by zone textile operations is an indication of their successful integration with the domestic Indonesian manufacturing sector. These linkages are invaluable in that they encourage the development of competition and, consequently, the increased productivity of zone industries. When both domestic factories and zone operations are competing for the same resources, the "protected" character of zone businesses is diminished and the benefits to the national economy increase.

Indonesian-produced cotton is used in 70 percent of the gross exports from the BWI EPZ. Non-cotton corduroy and denim for jeans manufacture are entirely imported, as are the materials for the one electronics plant. Although the use of local raw materials is not mandatory, approval priority is given to those companies which create such domestic linkages.

Zone management said that most companies at BWI have non-zone factories for sales to the domestic market and also for additional exports due to the

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space shortages at BWI. Duty drawback (rebate) is used for exports from these facilities.

Though allegedly no law prevents full foreign ownership of a business operating in Indonesia, officials strongly encourage a maximum of 80 percent foreign ownership and within ten years of production start up, the business must be 51 percent Indonesian-owned. This requirement helps insure that local savings are not directed towards relatively unproductive or speculative activity. Currently, 60 percent of the EPZ firms are Indonesian-owned.

D. Technology Transfer

According to the zone operators, there is essentially no technology transfer in the BWI EPZ. The garment-manufacturing operations rely on traditional sewing machines. It is clear that the investors are attracted to Indonesia by low-wage labor, and production methods reflect this orientation.

However, some transfer of expertise has occurred on the managerial level from local contact with foreign technical experts in areas such as quality and process control and labor management. Backward linkages with the domestic textile industry have also helped to stimulate the modernization of the manufacturing sector. EPZ firms have been known to share technology with domestic suppliers in order to insure trouble-free production, product quality and timely deliveries.

IV. P.T. BONDED WAREHOUSES INDONESIA

A. Legislation and History

In February 1969 a Feasibility Study of Bonded Warehouse Organization in Principal Ports of the Republic of Indonesia was presented to the Indonesian Minister of Trade by Pakhoed N.V. of Rotterdam. As a result, the "Walisonga Team" was established by representatives of the Ministries of Trade, Finance and Communications to open a market for foreign investment in Indonesia.

In April 1969, Jado Warehousing was established by the government as a general entrepot facility in Jakarta. As has been the case with all Indonesia EPZs, the zone was managed by a limited-liability corporation owned in majority by the national government as a pilot project for Indonesian EPZs.

The early 1970s brought the introduction of a more complete EPZ incentive package, culminating in the establishment of BWI in 1973 at Tanjung Priok in Jakarta. BWI merged with the Jado Warehouse facility in 1974, at the Tanjung Priok site. The government originally invested 60 percent of the capital needed for the zone, anticipating that the remaining 40 percent would come from private investors. This has not occurred; the corporation is now fully owned by the Indonesian government, which now appears to have no interest in privatizing the zone. Potential investment in zone ownership seems to have been drained off by foreign investor interest in domestic joint-venture partners.

Tanjung Priok was clearly the optimal location for Indonesia's first EPZ due to its port facilities and ample labor force and no formal site selection procedures were undertaken. Government development strategies highlighted the potential social benefits of the zone. Stimulation of employment, manufacturing and foreign investment were given emphasis over financial return. At this time, the zone is running on a self-sustaining basis.

The two original on-site warehouses were supplemented by ten factory buildings on the site constructed from 1973 through 1976 and financed entirely by the Indonesian government. The estimated construction cost was \$2,000,000, which, when combined with expenditures for infrastructure and equipment resulted in a total development cost of \$5,000,000. The port land, however, is valued at several million dollars. Although this was not a cash expense, it nonetheless represents an additional subsidy.

The first occupants for the bonded warehouse and the FPZ were installed in 1973. Because of fluctuations in occupancy levels and the inexperience of zone management during the first years of operation, the zone was not profitable. Productivity was extremely low and training programs were initiated to increase zone competitiveness. By 1978, garment manufacturers had established productive operations but few other industries had been attracted. A broad industrial base still has yet to be developed.

In 1977 the Indonesian Capital Investment Coordination Board (the BKPM) gave BWI autonomy in approving foreign investment for the zone. The company also has the authority to handle day-to-day customs matters for zone users. The Batam freeport also has this privilege. In the rest of Indonesia non-zone foreign investment is required to go through a five-phase review

process by the BKPM, involving up to six months of delays. Although the BKPM is a 'one-stop' approval center, it does not function as efficiently as it might. The BKPM has delegated its authority to BWI (and Batam), although copies of the investment forms are passed on to the Board.

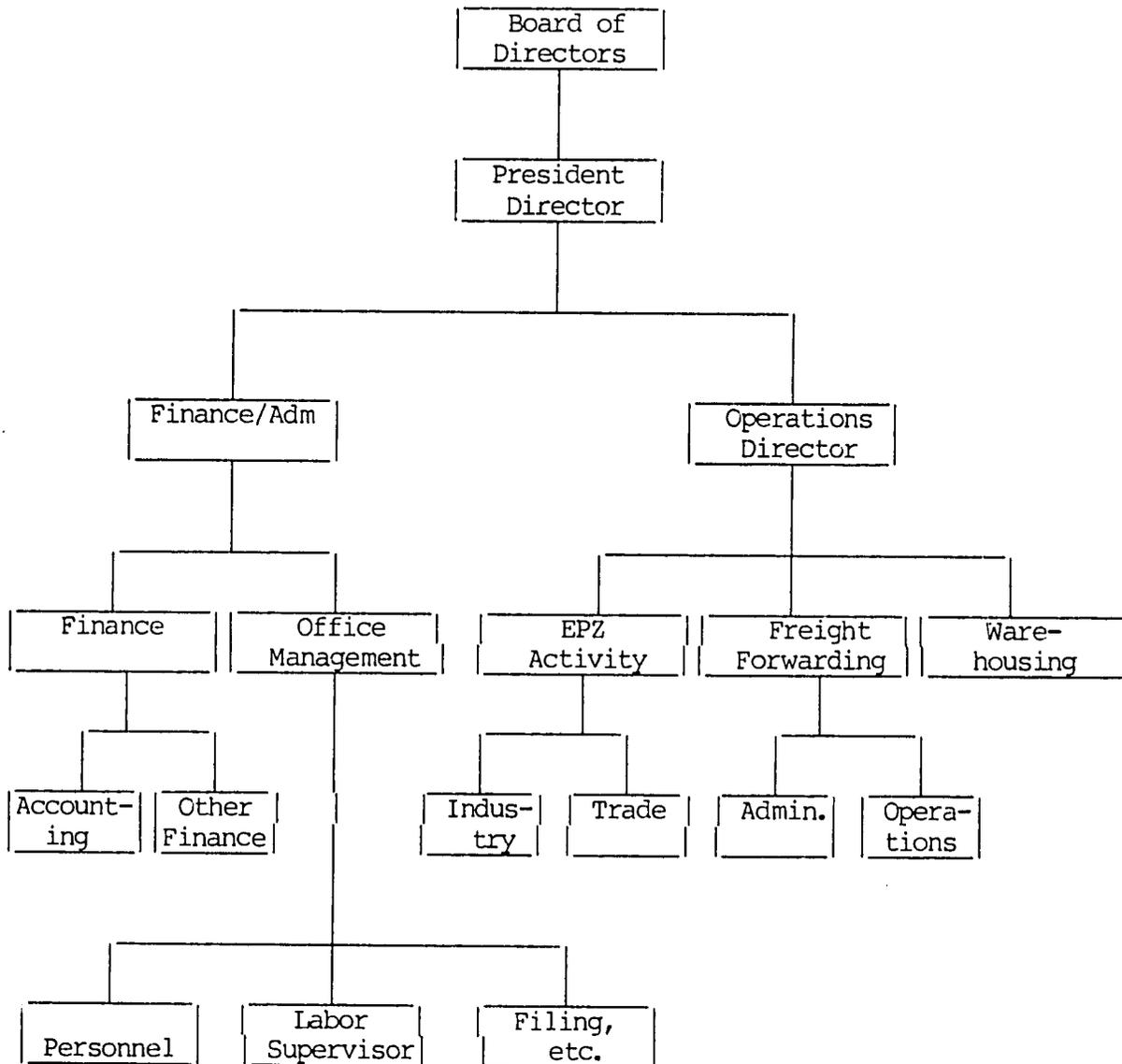
B. Administration

The BWI board of directors consists of an army representative (similar to the U.S. Foreign-Trade Zones Board) and two civil servants. This board appoints zone managers who serve as liaisons to the government for three-year terms. Zone managers furnish quarterly inventory-control reports to Customs and annual reports to the Ministry of Trade. (An administrative organizational chart appears on the next page.) Although the titular head of the zone, the president appears to be less important in the administrative hierarchy than the operations director.

The major administrative problem expressed by the EPZ Operations Director is the lack of space at the Tanjung Priok port. Site inspection revealed substantial crowding in the portside container storage area, although one lot was apparently available for an additional building. The EPZ director also mentioned that problems had resulted from the government's ongoing modification of the regulations concerning everyday zone activity. For example, every 6 months there is a change in the national list of those industries given priority for investment.

ORGANIZATIONAL CHART

P.T. BONDED WAREHOUSES INDONESIA



Source: EPZ Activity Director of P.T. BWI.

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BWI has essentially no marketing program. The absence of expansion space and the number of potential investors already on a waiting list has diminished the zone's promotional activities. BWI will send information to Indonesia's attaches abroad on request and is sometimes represented at international trade exhibitions. Little interest was expressed by zone officials in the provisions available to the zone via the U.S. Generalized System of Preference (GSP). While appreciative of its intent to aid Indonesian exports, officials maintain that restrictive garment quotas are usually the stronger influence on exports.

The BWI zone has a staff of 533. There are 32 people at the assistant manager level or above, and three doctors with three assistants. The balance are in accounting, office work, personnel, and forwarding, warehousing, and EPZ workers. Studies of EPZs indicate that in most zones approximately 10 percent of all workers are in management or technical jobs. According to Table 1, only 2 percent of BWI's employees hold managerial or technical positions and 7 percent are medical or management personnel. The balance, of the staff appear to be support workers for zone users. This is clearly far above the established levels worldwide. The zone management, however, claimed to provide no services to zone occupants beyond the basic industrial facilities. The definition of those facilities would be of interest since, as seen above, the operating staff does engage in warehousing and forwarding, as well as supplying EPZ workers. It appears this may be a hidden incentive for the zone users and a hidden subsidy by the zone operator. Since the policy behind the BWI zone is to promote social goals, such as job generation, this subsidy may be seen as a willful part of the zone package and the staff size should not be viewed as excessive, as it might be for a profit-oriented zone management.

C. Finance

The sources of revenue at BWI are leases, warehouse and import fees and electricity charges. Although no breakdown of relative percentages were available from zone management, the March 1984 total was US\$82,671.50. This figure annualizes to approximately US\$1,000,000.

Table 4

INCOME AND EXPENSES AT P.T. BWI		
	<u>March 1984</u>	<u>Annualized</u>
Direct Expenses	58,882.10	706,585.20
Indirect Expenses	21,787.90	216,454.80
Total	80,670.00	968,040.00
Revenue	82,671.50	992,058.00
Net	US\$2,001.50	US\$24,018.00

Source: EPZ Activity Director, P.T. BWI.

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The failure of zone officials to provide cost breakdowns prevents any attempts to discover the expense of possible subsidies to zone firms in the way of additional staff. A similar absence of a dollar value for the port land itself results in a similar unquantified development subsidy. It is common for public zone developers not to regard the project as a real estate development process, but rather as an effort to maximize factory absorption, capital investment, and employment generation. 'Social' reasons--job creation and skills development--were the explicit purposes of the BWI development process.

D. Site and Facilities

The EPZ lies on 10.5 hectares in the heart of Jakarta's port. The area is almost entirely improved, although grounds maintenance appears unreliable (at the time of the site visit one lot was covered in rubble and trash). Ten two-story standard factory buildings of 2,000 square meters each are in the EPZ, as are two warehouses totaling 8,000 meters used for bonded warehouses purposes (2,000 sq.m. are used as a pass-through for the JIEP industrial estate a few kilometers away; the rest is used by the EPZ companies). An additional 10,000 square meters of bonded area is located at Jakarta Kota in downtown Jakarta. Factories are leased for 20-year periods, but the lease may be cancelled by either party with three months notice. Building maintenance is the user's responsibility with open areas used for container stacking.

Ninety-five percent of the industrial building space is used for manufacturing, three percent for warehousing and two percent for a container depot. This is a fairly standard distribution of usage for manufacturing-oriented EPZs. These figures do suggest that the 8,000 sq.m. of bonded area available for EPZ users is not fully utilized.

Non-factory areas include an on-site health clinic and the zone management building. In addition, three hundred square meters of space is available for labor meetings and is intended to be used for training in the future.

Security for the zone is adequate. The area is surrounded by a double fence and there are security checkpoints at entrances to the port as well as the zone gate. Visitors are required to identify their purpose for being at the zone and must leave some piece of ID for "collateral" during their visit.

The zone has highway access, though it is not near a major expressway. Railroads are infrequently used but easily accessible. Jakarta's Halim International Airport is also only twelve miles away however, much of the freight activity takes place through the port. BWI has no separate wharf facilities but utilizes those of the city. The zone has installed power line extensions across its lots to the factory buildings and energy costs were not reported as a problem.

E. Zone Users

Fifteen garment factories and one electronics company are currently operating in BWI. This number is slightly lower than in past years; the operator says that though ownership of companies has changed, the companies themselves do not have a high turnover. The zone operator claims about 70 other companies are on a waiting list for zone space. This may be a list of interested parties, or it may be prospects turned over to JIEP. It is hard to believe that foreign investors in the garment sector would not be looking for available facilities at other locations.

Most foreign EPZ users/investors come from Taiwan and Hong Kong. They are garment manufacturers escaping western quotas, according to both the zone operators and the users themselves. For example, since Taiwan faces a quota on items that cost less than \$50 a dozen companies making these goods are looking elsewhere for production locations. Another factor that draws investors to the zone is low labor costs, despite the low productivity relative to Hong Kong.

Foreign investors provide 40 percent of the private funds invested in BWI. The remaining 60 percent comes from local banks acting as equity investors in the joint venture arrangements as required by law.

F. Incentives/Constraints

As noted above, Indonesia's tax laws have been recently revised and the two-year tax holiday eliminated. However, other incentives remain in place. EPZ investors still pay no duty on imported material which is reexported. Beyond this, a major incentive offered by BWI, as reflected in the statements of users, is the availability of standard factory buildings for rent (investors are also allowed to build at their own expense).

The possible undervaluation of rents in light of their port location appears to be a hidden incentive. The provision of additional services or support personnel to zone firms at management expense may also contribute to its attractiveness.

Zone users also enjoy Indonesia's liberal treatment of foreign exchange transactions. Profits may be freely repatriated, and foreign currency can be sent overseas for payment on foreign loans, training Indonesian citizens abroad, or as an allowance for depreciation of capital assets. Additionally, when stock is sold to Indonesian citizens, foreign currency equivalent can be sent out of the country.

As stated above, ultimate freehold ownership of all real estate in Indonesia is given only to the national government. This restriction was not reported as a problem by the investors at BWI, who, by and large, have little interest in owning land.

The overriding incentive that the zone provides, however, is the opportunity to circumvent garment quotas imposed by the U.S. and EEC. Such opportunities have been a major stimulus to EPZ growth in the past decade. Far Eastern manufacturers, such as those at BWI, are often limited by these quotas in their home countries, and will diversify into EPZs.

G. Development of Government Policy Toward EPZs

Although government policy has tended to favor large-scale projects, EPZs have also enjoyed ongoing government support. In recent years, initiatives have been taken to foster the development of alternative forms of industrial estates. In the early 1970s the World Bank funded the development of the P.T. Jakarta Industrial Estate Pulogadung (JIEP), Located 6 km. south of the BWI export processing zone, JIEP is jointly owned by the national and Jakartan governments.

Though its financial situation is shaky, the JIEP estate has been largely successful in generating employment and new enterprises and clearly has more support and prestige than the small BWI EPZ. The location of the JIEP estate is superior to BWI as well. Although imported goods must be trucked further distances, there is more land for expansion. A neighborhood development effort is underway in the zone area and the labor supply is plentiful.

JIEP essentially was the expansion site, if not for BWI as an entity, at least for the EPZ potential and unsatisfied demand from investors that BWI represented. In the late 1970s and early 1980s, the Indonesian government and the World Bank discussed potential funding for the development of JIEP into a model for a number of new zones in Indonesia.

However, a 1983 study for the EPZ funded by the World Bank recommended that 100-percent foreign ownership be allowed for user firms. According to Asyik Ali of the Indonesian Department of Trade, the World Bank would finance the Indonesian projects only if they followed the suggestions set down in the study.

The Indonesian government found complete foreign ownership politically unacceptable and was thus forced to abandon its hopes of funding EPZs through the World Bank. At present, the government intends to explore the possibility of non-Bank funding, either through their own revenues or other international borrowing.

Nonetheless, the old EPZ program has, in fact, 'evolved' into an alternative that may be fundable through the World Bank. The concept of the 'Export Estate' has been introduced as a development alternative for the JIEP. This would be an industrial estate for export industries, but would not provide an EPZ's exemption from duties for imported raw materials. The Indonesian export certificate (rebate) system is to be used instead. Manufacturers will pay duties on the materials they import, but when they re-export the finished product, they may apply for a duty rebate on the foreign raw materials now being sent back out of Indonesia. Additional streamlining of importation procedures will be attempted, an incentive shown to be important in the success of many EPZs.

Export estates may be feasible. The high value added at BWI indicates that Indonesian industry (at least textiles) is increasingly competitive in the international market. Thus, Indonesia's export processing zone policy is in a time of transition. But, if financing is available and the program is administratively possible, EPZs or in-bond factories are probably still preferable to the unproven export estate concept.

An additional--and unique--component of Indonesia's free zone development is the massive development of the freeport island of Batam, discussed in the next section.

V. Zone Development on Batam Island

The type of development underway on Batam is far removed from the orientation of the BWI EPZ. Given the island's proximity to Singapore, it may be a development opportunity unique in the world. However, it can serve as an alternative model for an aggressive and largely market-oriented regional development plan. The government's goals are to encourage private developers to participate in infrastructure construction, increase foreign investment, relocate workers away from crowded urban areas, and to build an area for the transshipment and manufacturing of raw materials from other Indonesian islands.

A. Legislation and History

In 1972 a feasibility study recommended the development of a petroleum refinery and related enterprises on Batam Island. The Indonesian government envisioned the development of Batam as an entrepot trading center for capital-intensive industry, by virtue of its proximity to Singapore. The Pertamina oil company had administrative control of Batam at this time and was attempting to promote the island as a major petrochemical center.

In 1977, a second study examined the decline in the petroleum market and recommended a broad-based development of the island. In the same year, EKPM gave the Batam Island Industrial Development Authority extensive autonomy in approving investments in an effort to attract high-tech industry. The island was later designated as a bonded zone. A new master plan is currently being completed.

Three years ago, administrative authority for development was withdrawn from Pertamina and given to the Minister of State for Research & Technology, Dr. Ing. B.J. Habibe. He has emphasized the governmental development of Batam infrastructure, and is the driving force behind the new plans for the island.

Batam presently has 100 firms. Twenty are in oil-related industries for export; the others produce for domestic consumption. Nagoya, with a population of 20,000, is Batam's boom town, but is also plagued by overdevelopment and widespread smuggling. Batu Ampar is a port and industrial development on Batam, as is Sekupang. Currently, the population of the island is 42,000, with government efforts underway to relocate Indonesians to the area in hopes of a future population of 700,000.

B. Administration

Three bodies are responsible for the administration of Batam Island:

The Supervisory Board of the Batam Island Industrial Zone is directly responsible to the president of Indonesia and is composed of cabinet members and other senior government officials. The supervisory board oversees the coordination and implementation of government policy.

The Batam Industrial Development Authority (BIDA) is chaired by B.J. Habibe and is also responsible to the Indonesian president, charged with:

- Planning and development of infrastructure,
- Management of land, allocation and collection of rents,
- Ensuring efficient services at competitive rates,
- Assisting investors in obtaining sites, labor, immigration approval and vessel clearances.
- Ensuring good labor relations.

The lowest administrative level is P.T. Batam, a state-owned company, headed by a member of the board of BIDA. It is responsible for the flow of goods through Batam, collecting customs duties, and developing trade and private investment.

P.T. Batam is charged with managing its own warehouse and services. (Indonesian planners feel that Singapore warehousing is no longer cost-efficient on the international market. Individuals interviewed differed in opinion over the extent to which Batam can and should serve as Singapore's warehouse. Evidently, planners would prefer that Batam develop manufacturing, but will settle for warehousing if the market warrants.) P.T. Batam oversees the development of the industrial estate/EPZ. An agreement with the JIEP industrial estate has been made whereby the latter will help upgrade Batam's industrial facilities, further evidence of JIEP's role in government free zone planning.

Despite very little marketing in the past, promotional programs with an international orientation are currently underway. The island's Wisma Batam guest house features expensive exhibits for impressing upon potential investors the island's development potential and an American firm is negotiating to lead the marketing efforts.

The multi-level approach to management indicates that Batam is presently a planning/marketing project, rather than a 'business' endeavor. The structure appears too bureaucratic for a private development framework. Presumably, when Batam is operating successfully BIDA's work will be largely completed, and P.T. Batam will become the sole functioning administration.

C. Plans for Various Sites

The Indonesian government is building the basic infrastructure--the main roads and utilities and will provide finished "lots" for private developers to construct buildings and local roads.

An arterial road of 83 km. length is planned with 60 km. completed. Thirty-three kilometers of communicator roads from this main road have also been laid down. Six dams or reservoirs are under construction. Batam also has a hospital and several banks and hotels are available for tourists and visitors. The airport can handle DC-9s and Airbuses, and will be improved to accommodate B-747s. There are three port areas, that will be expanded and three additional ports are planned for the future. Vessels of up to 150,000 dwt. will be able to dock at Batam.

The fresh water supply dictates the targeted population for Batam. Due to the relatively low population density this will allow (14 person/hectare) land values are anticipated to remain reasonable. High-rise buildings are prohibited on the island, but no land-coverage regulations are planned.

Private developers can build entire private industrial estates in conjunction with Indonesian partners. Singapore investors have already leased the northeast side of the island for tourism purposes. In addition, a Dutch firm is updating the master plan for the east coast, which has the main deep water port and will have the major industrial facilities. The neighboring small islands have bauxite deposits and a bauxite refinery for aluminum production is also planned for east Batam, using a power station fueled by LNG and Australian coal.

Although a fishery has been planned for the southern coast, the government of Singapore has expressed an interest in establishing a pig farm at this site. Indonesian authorities fear the environmental effects of this venture and no agreement has yet been reached.

A new town, Batam Centre, is planned to be developed on the north central coast as the administrative core of the island. It will also include a 40-hectare model industrial estate as a seedbed for small-scale industries, offering governmental assistance to firms locating there. A polytechnic training center will be constructed nearby and cooperative education and work-study programs will be used in a curriculum jointly designed by government and industry. Batam Centre will cost \$1.2 billion. It is to be developed on 1,300 hectares of land and to provide residence for 147,000 people with the opening of the first phase is scheduled for 1987.

These plans illustrate the genuine interest that has been shown by some developers and investors. The question remains whether government expectations are realistic. The lease rates are very generous and it is uncertain whether they will be enough to recover costs in the future. Studies show that once governments have given massive subsidies to EPZ projects, recurring subsidies are often necessary.

D. Incentives and Constraints on Batam

According to BIDA, foreign investors are already eager to begin operations: the annual lease rate for land is about US\$2-2.5 per square meter for a 30-year period. This is clearly an extraordinary subsidy that may help private developers recover costs while furthering national government interests. However, development may be delayed since the infrastructure that the government is building is not scheduled for completion until the end of 1985.

Batam residents are not subject to the regular exit tax (\$150) that other Indonesians must pay when even temporarily leaving the country. Other visitation and immigration procedures have been simplified. Employment restrictions have been established that limit the use of non-managerial foreign labor in Batam and require firms to provide training programs for Indonesian labor.

As a freeport island, there are no duties on foreign goods or raw materials which are consumed on Batam or later reexported. The import/export process has been simplified. Batam has Indonesia's usual freedom of foreign-exchange transfer and repatriation of capital.

Lease arrangements are obtained from BIDA. Foreign investment can be

approved relatively faster than in the rest of Indonesia. As usual, joint venture partners are required, and must in time become majority owners. Although this has not been a problem for BWI, larger, established developers may be more concerned with the long term implications of these constraints.

E. Indonesia's Projected Economic Impacts from Batam Island

At present Batam Island is largely undeveloped. The original populace had been predominantly employed in the fishing industry but have shifted production toward agriculture. Current export statistics on Batam were not available since the Central Bureau of Statistics treats Batam essentially as a foreign country. Figures are kept for goods 'imported' or 'exported' between Batam and the rest of Indonesia, but not from Batam to the rest of the world.

Income is expected to be above the Indonesian average, but below the norm for Singapore or Hong Kong. At the time of full development, average annual worker earnings are projected to be US\$4,200, two and a half times the current average in Jakarta. Median household income for Batam Centre is projected at about US\$4,500 annually. The figures in Table 5 are speculative projections by planners for Batam's 20-year development.

Table 5

PROJECTED EMPLOYMENT AND POPULATION OF BATAM CENTRE

<u>Employees with place of work located in Batam Centre</u>	Stage of Development:			
	I	II	III	IV
Number of employees:	7,700	34,700	49,600	69,200
% of employees living in Batam Centre:	90%	80%	75%	75%
Number living in Batam Centre:	6,900	27,700	34,700	48,400
Labor force participation rate:	42%	42%	41%	40%
Supported population in Batam Centre:	16,500	66,100	84,700	121,100
<u>Employees with place of work located outside Batam Centre</u>				
Number of employees:	34,000	85,300	134,400	210,800
% of employees living in Batam Centre:	5%	5%	5%	5%
Number living in Batam Centre:	1,700	4,300	6,700	10,500
Labor force participation rate:	42%	41%	40%	40%
Supported population in Batam Centre:	4,000	10,400	16,800	26,400
Total population in Batam Centre:	20,500	76,500	101,500	147,400

Source: Planning in Action Andrew Lemer. Cities magazine. Feb. 1984. P.286.

Note: The above figures are reproduced as published. The calculations for the total percentages of employees living in Batam Centre and the total population in Batam Centre are incorrect.

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F. Conclusions on Batam Development

Batam is presently a rural island with incongruous signs of development: a bank in a cinder-block building, a 'country club' whose tennis court is fenced in to keep out the goats. Some industrial facilities have been established, but whether the intricate drawings the planners have made will be realized depends on the actions of private developers. The Sino-British agreements over Hong Kong may affect the number of relocating companies that Indonesian officials anticipate will come to Batam. Some of the zone officials expressed hope that the Hong Kong situation would help Batam.

The development of Batam Island is not a traditional industrialization program. It is an attempt by the Indonesian government to gain status as a newly industrializing country. The relocation of 700,000 Indonesians to Batam will not significantly affect the population problems of that country. Although the total cost of development is unknown, if Batam Centre costs \$1.2 billion and supports a total labor force of 58,900, the cost per job could be as high as \$20,373.

Batam Island may never generate a measurable financial return for the government. However, the potential is great for developing both backward linkages to Indonesian raw materials) and forward linkages to further processing of zone products in the Indonesia, perhaps for reexport through Batam. With its emphasis on free trade and increased private investment, the expertise and technology acquired on Batam would almost certainly reach Indonesia. The government could well make progress toward its goal of increasing international competitiveness.

Success hinges on the attitude of private firms--developers and investors. So far, some interest has been shown. However, as an industrial site, the zone is well located for certain raw materials, but the existing labor force is small. The ability of the Indonesian government to draw workers to the island is uncertain.

It may be that developers or investors, anticipating that the Indonesian government will safeguard its investment, will ask for new subsidies to be thrown after old. Private sector developers in at least six developing countries have developed export processing zone projects and have been able to charge users market-rate rents. Whether Batam will follow suit depends on the island's comparative advantages: its proximity to Singapore, its bauxite, and whatever labor and other raw material can be brought in from the rest of Indonesia.

VI. Positive Aspects of Zone Development

Exploitation of Textile Quotas. Both management and users of the P.T. BWI zone mentioned the existence of quotas on the investor nations' textiles as being the impetus to relocate. Similarly, the crowding of Singapore is viewed as being the 'hook' on which Batam can hang its development.

Under the Multi-Fibre Arrangement, many traditional Far Eastern centers of garment and textiles are quickly reaching their export limits for the United States. Numerous EPZs in Asia and the Caribbean have been stimulated by investment from firms in search of more lenient quotas.

Additionally, impending changes in the U.S. General System of Preferences are accelerating investment in EPZs by the Newly Industrializing Countries. The GSP rules for duty-free entry of 3,000 items are to be renegotiated in 1985. It is expected that the number of items will decrease and these countries will lose their favored status. As a result, their investors are now evaluating alternative GSP-favored sites for duty-free manufacturing.

The Lome Convention, despite modifications, has enabled more than 40 developing countries to export to the European Community at little or no duty for the past eight years. This agreement has been a great stimulus for EPZ growth in countries like Indonesia that were once European colonies.

Low Labor Cost. Where labor is relatively unskilled and unproductive, its cost must be low if the unit cost of production is to be competitive. Indonesia is the fifth most populous country in the world, and Jakarta is a densely crowded city. The labor population is easily available to BWI firms although distant from Batam. With the population of Indonesia growing faster than jobs are being created, the manufacturing sector is likely to have an abundance of unskilled workers willing to take low wages. Efforts should be made to increase productivity and raise worker skill levels through training programs and incentives systems to diversify the available work force.

Ease of Repatriation of Profits. Like most successful EPZs, Indonesian zones place no limitation on the repatriation of profits. Foreign currency can also be sent overseas as an allowance for the depreciation of capital assets, or for the sale of stock shares to Indonesian citizens. Business expenses can be sent abroad including expenses incurred in training Indonesian citizens overseas, for foreign personnel assigned to the project, or payment on foreign loans.

Streamlined Investment Approval/Customs Supervision. Studies have shown that a liberal, businesslike administration of customs regulations are of great importance to EPZ users. In Indonesia, non-zone foreign investment is required to go through a five-phase review process by the Investment Coordinating Board, involving up to six months of delays, multiple copies of forms, additional-information requests, and repetitive reviews. Finally, the actual licenses must be obtained. Although the Investment Coordinating Board is a 'one-stop' approval center, it does not function efficiently.

Great autonomy has been given to both BWI and the BIDA of Batam. The Investment Coordinating Board has delegated its authority to those agencies, although copies of the investment forms are passed on to the Board. The zone managers can also handle day-to-day customs matters. BIDA claims that it can process foreign applications within twelve weeks, far superior to the normal Indonesian process.

Providing Infrastructure in Advance. Discounted prices for standard factory buildings are very common subsidies in EPZs. However, inexpensive buildings do not necessarily mean that a zone will be successful. Colombia, Guatemala and Senegal provide such incentives, but have yet to reap the benefits. BWI users feel that building subsidies are an important factor and there is also the possibility of a hidden subsidy of support services. The Batam project will have basic infrastructure and model industrial estates developed at the government's expense and is thus riskier.

VII. Limitations to Zone Success

Joint Venture Requirements. Not reported as a constraint at BWI, this requirement may even play a helpful role in increasing net foreign exchange, and backwards linkages. When local partners push for increased usage of local materials, those materials are bought with foreign currency. However, since Singapore allows 100-percent foreign ownership, the type of development in Batam may primarily be in less stable businesses that use Indonesian currency for only a short time. Established investors that could contribute economic stabilization must determine if a reasonable profit can be made in the 30 years before their leases come up for renegotiation. The fact that an Indonesian enterprise must eventually become completely Indonesian owned is seen as a sign of a closed economy. As the Indonesian economy matures, it must become increasingly competitive.

Land Ownership Restrictions. That foreigners may not own land, that even nationals may not truly own land without restrictions, is another sign of the Indonesian government's basically overprotective attitude toward its constituency. This restriction on foreign influence seems to reflect the Indonesian government's effort to mold a single national identity from several diverse groups of isolated peoples. Hong Kong and Singapore are evidence that national identity can be retained without such constraints.

Poor Site Location. BWI was developed in the already existing and fully occupied port. Although this helped a bit in the short run, the zone now has no room to expand, and the government seems more interested in developing other projects managed by other entities.

Disruption of Financing. The unfortunate loss of World Bank financing for Indonesia's EPZ program was due to political insensitivity or miscommunication. Indonesia was politically unable to end its joint venture requirements, as required by the World Bank for funding. Indonesia's planned series of EPZs has been, if not severely delayed, at least forced to convert to the 'export estate' concept which will not allow duty-free importation of foreign materials for reexport.

Mismatched Locations of Basic Factors of Production. The majority of the Indonesian population lives on the main island of Java where Jakarta is located. However, Indonesian raw materials are spread through the far less populated islands of the archipelago. This has not been a problem for BWI, but Batam's basic comparative advantage--its proximity to Singapore--is offset by the relative lack of raw materials and labor. Population relocation will be required for developmental progress beyond warehousing and tourism.

VIII. RECOMMENDATIONS

Re-establish a Clear Government Policy. With the failure to receive funding for EPZ development from the World Bank, Indonesia's plans have fallen into disarray, leaving only one small, if successful, EPZ and a massive plan for Batam that is too elaborate to serve as a national model. The viability of the 'Export Estate' concept is yet to be proven. A clear government EPZ policy is essential for their future development.

Reform Joint Venture and Land Ownership Laws. Clearly, 100 percent foreign ownership of both land and businesses should be permitted in EPZs, but the likelihood of this revision is small. These constraints may confine EPZ investment to the sectors that require little capital investment and unskilled workers, thus delaying more substantial forms of international economic cooperation. Indonesia will certainly be seeking alternative forms of financing for the EPZ program, assuming the Export Estate concept will not be the only development route pursued.

Make Job Creation a More Central Goal. The national economy is predominantly agricultural, although petroleum plays a major role in the cash flow. Although the Indonesian government appears to prefer large projects that, if successful, may have long-term benefits, these projects do not create enough jobs. BWI, with its small-scale industry seems a more cost-effective model for Indonesia's EPZ development program. If more jobs are not created the investment climate in Indonesia is likely to suffer, due to an underskilled labor force, increased smuggling and other social and political problems. More small-scale development will insure that industrial development does not come at the expense of community development.

Promote Agriculture. If economically feasible, the idea of agricultural export estates should be explored. There is a wealth of natural resources and the traditional orientation of the labor force is agricultural. The Indonesian textile industry is quite strong and linkages with domestic suppliers should be encouraged to bolster both the local economies and national exports.

Other Considerations. Enterprise-zone type development strategies for locales in Indonesia seem quite appropriate, given the comparative isolation of certain areas. Even Batam, though oriented toward foreign investors, will benefit by promotion of its indigenous entrepreneurs. Indonesia's poverty is not likely to be eliminated by building new urban centers, but instead is linked to the governments encouragement of new businesses and investment.

Additionally, the installation of in-bond factories should be explored. These non-EPZ firms are allowed to import duty-free to their own factories under bond, a very powerful way to stimulate exports. Four countries that allow in-bond processing--Malaysia, Mexico, Barbados, and Mauritius--account for 45-50 percent of world EPZ exports.

Annex 4

RESEARCH METHODOLOGY

The research upon which this Guide is based was sponsored by U.S. AID. The purpose of the project was to collect, analyze and disseminate information about EPZ policies and practices in order to offer suggestions that could improve the development of EPZs.

A list of priority sites for field investigation was developed in consultation with AID. Three field investigation sites were chosen based on geographic location, project age, size, ownership and host country environment (GNP per capita, size and relative importance of the manufacturing sector, investment climate, etc.). Field research was carried out in the following countries:

Caribbean and Central American Region

- Dominican Republic
 - a. La Romana
 - b. Santiago
 - c. San Pedro de Macoris
 - d. Puerto Plata

African Region

- Mauritius
 - a. Coromandel
 - b. St. Antoine
 - c. The Plaine Lauzan Estate
 - d. Bel Air St. Felix
 - e. Bonaire Export Processing Zone

Far Eastern Region

- Indonesia
 - a. P.T. Bonded Warehouses Indonesia
 - b. Batam Island

For each field visit, the consultants interviewed representatives of the business community, government and zone administration. In addition, one or two zone occupants in each of the major industrial sectors within the EPZs were interviewed to collect specific information and to clarify the data supplied by the zone administration representatives. Additional material was supplied by associate consultants working on this project, as well as information in the consultants' reference files and library.

Annex 5

FREE ZONE SERVICE ALTERNATIVES

As the EPZ matures, additional services can be developed and offered to tenants. The following are a few service suggestions.

Advisory Services

For example, assistance in recruitment and selection of personnel, advice on wage and salary scales, fringe benefits, industrial relations and work practices. In many cases these are provided by a state or regional manpower agency or the zone administration. This advice and assistance may cover all kinds of problems that the industrialist will encounter during the course of establishment, such as housing, social and recreational facilities for expatriate personnel and installation of telephones. Some zones have found it useful to have some temporary office accommodation available for incoming industrialists awaiting the completion of their own premises.

Commercial and Industrial Services

Existing zones have found the most important commercial services to have on hand include banking, shipping, forwarding agents and a general packing shop. Other commercial or industrial services offered less frequently are central office services (ranging from translating and typing, duplicating and printing to data processing and possible computer services), legal and accounting services, specialized engineering repair services and a garage for vehicle repairs. Most of these services are provided within the zone or closeby, except for shipping and the forwarding agent. These services are generally inside the zone boundary and accommodated in a special warehouse.

Public Services

These services include fire and police protection, post office, telephone and telex facilities, public transport and waste disposal if not provided by a private company. Many zone administrations provide a central telex service for firms not installing their own or awaiting their own.

Services for Workers

These services include training, welfare services, club rooms, recreational and day care centers. Training facilities are decided upon by the zone administration in cooperation with the firms in the zone and the training agencies. The other services, if considered necessary, could be provided individually or on a cooperative basis by firms themselves or private firms. Centralizing services for workers is important. A canteen, for example, must be within a short walking distance as meal breaks are usually less than an hour. In very large zones, the number of canteens and their locations must be strategically determined.

Annex 6

**EXISTING REGULATIONS AND FUTURE TRENDS THAT WILL
AFFECT EPZ CAPITAL INVESTMENT**

The projections made in Table 5 of the report are based on the following assumptions:

(1) That U.S. Tariff Regulations 806.3 and 807--which permit the export of intermediate products and components for off-shore assembly and/or conversion to finished goods and subsequent reentry into the U.S.A. subject to customs duties on the added value component only--will remain in effect. Any alternative regulatory approach imposing a constraint on the workings of Regulations 806.3 and 807 would have a tremendously negative effect on the ability of U.S. manufacturers to compete domestically and overseas with, particularly, Far Eastern manufacturers.

(2) That the Generalized System of Preferences will be modified to exclude rapidly industrializing countries, but will remain in effect for the poorer nations in Latin America and the Caribbean. Early in 1984, major reductions were made in the duty-free privileges of Taiwan, Mexico and South Korea. Imports valued at \$11.9 billion no longer will be allowed duty-free entry into the U.S. under the Generalized System of Preferences. The reduction leaves only \$10.7 billion of other imports, or about 4 percent of all U.S. imports in 1983, still eligible for the program. An exchange of trade concessions is a major part of the administration's effort to convince Congress to extend this program for another 10 years after it expires in January 1985. According to a U.S. trade official, the administration plan is to trim the benefits of the major beneficiaries and continue to expand the GSP base so that other countries can take advantage of it.

(3) That advanced industrial countries will not adopt further stringent protectionist measures that would adversely affect trade and development.

(4) That the Caribbean Basin Initiative (CBI) will be perceived as a powerful stimulant to new industrial activity for the Caribbean countries. New export opportunities offered to the Caribbean countries with the adoption of the CBI, enables most kinds of assembly and light manufacturing operations based in the Caribbean to export finished products to the U.S. on a duty-free basis, provided that the added value in the Caribbean country is more than 35 percent. According to interviews conducted during the course of this study, there has been a large increase in the number of representatives of electronics firms visiting the Caribbean zones since the early part of 1984.

Consideration has also been given to a few more subtle trends noted in recent international offshore industrial activity:

--Traditional assumptions companies have typically made about direct investment abroad are being reexamined. High inflation rates, volatile currency patterns and other economic uncertainties in recent years have

caused investments abroad to slow down somewhat.

--Governments throughout the world are playing a greater role in the foreign investment process. Countries are offering more and more incentives to attract direct foreign investment, but at the same time they are placing more conditions on foreign companies that want to operate within their borders.

--The rise of nationalistic sentiments may have caused many companies to become leery of offshore investments.

--Changes in production technologies are influencing corporate plans for future industrial locations. Those processes that can be automated will be bought back home to the corporation's main industrial plant. The cost advantages of low-cost labor in many countries must now be compared with cost benefits of automating production processes at home.

--Many believe that growing political instability in the third world will dissuade many U.S. companies from making direct investment there. Arthur D. Little, Inc. an economic consulting firm, pointed out that many companies followed an expansion formula after World War II that amounted to planting their flag in many countries and "cloning" plants everywhere they went. Having pursued growth by geographic expansion, many multinationals are now refocusing their efforts. Increasing amounts of investment are likely in the more predictable European market.

Annex 7

PRELIMINARY ARCHITECTURE/ENGINEERING PROGRAM

Summary Outline

The Preliminary Architecture and Engineering Program items are developed only to a generic and schematic level. They are not to be used as construction plans.

Site Plans; Phase I plus summary future phased development

Overall property plans and plots: Legal; photogrammetry; topographic
Schematic plans of development phases
System maps: Geologic; hydrologic; ecologic; demographic; etc.

Site preparation plans; Phase I

Major civil engineering work: marine; terrain
Major public works construction: bridges; dams; breakwaters; etc.
Finish site grading work

Ancillary site construction work: streets, curbs sidewalks; lighting;
utilities stub-outs; piers; railway sidings; etc.

Infrastructure plans; Phase I

Onsite infrastructure construction, rehabilitation and improvement;
flood control; water supply; waste disposal; power and fuel
utilities; communication systems; etc.

Offsite infrastructure work required for the Zone but owned by the
local government or by private parties

Building construction plans, schedules and specifications; Phase I

Administration facility
Trade Center
Zone Maintenance, Utilities and Service Center
Zone Cargo Facility
Turnkey industrial buildings for Zone tenants and purchasers
Other Zone-specific buildings and facilities

Technical operating systems; Phase I

Schematic plans and specifications for: HVAC; vertical/horizontal
people and cargo movers; cargo handling equipment, cranes,
conveyor belts, pneumatic systems, etc.; security systems; etc.

Research report summaries; and selected documentation

Construction logistic system analysis
Physical site study analysis
Integrated physical/financial/economic Zone operation studies
Impact effects-prediction: ecology; environment; community; etc.

Presentation aids

Graphics: charts; slides; architectural illustrations; video
Physical models

Guideline documentation

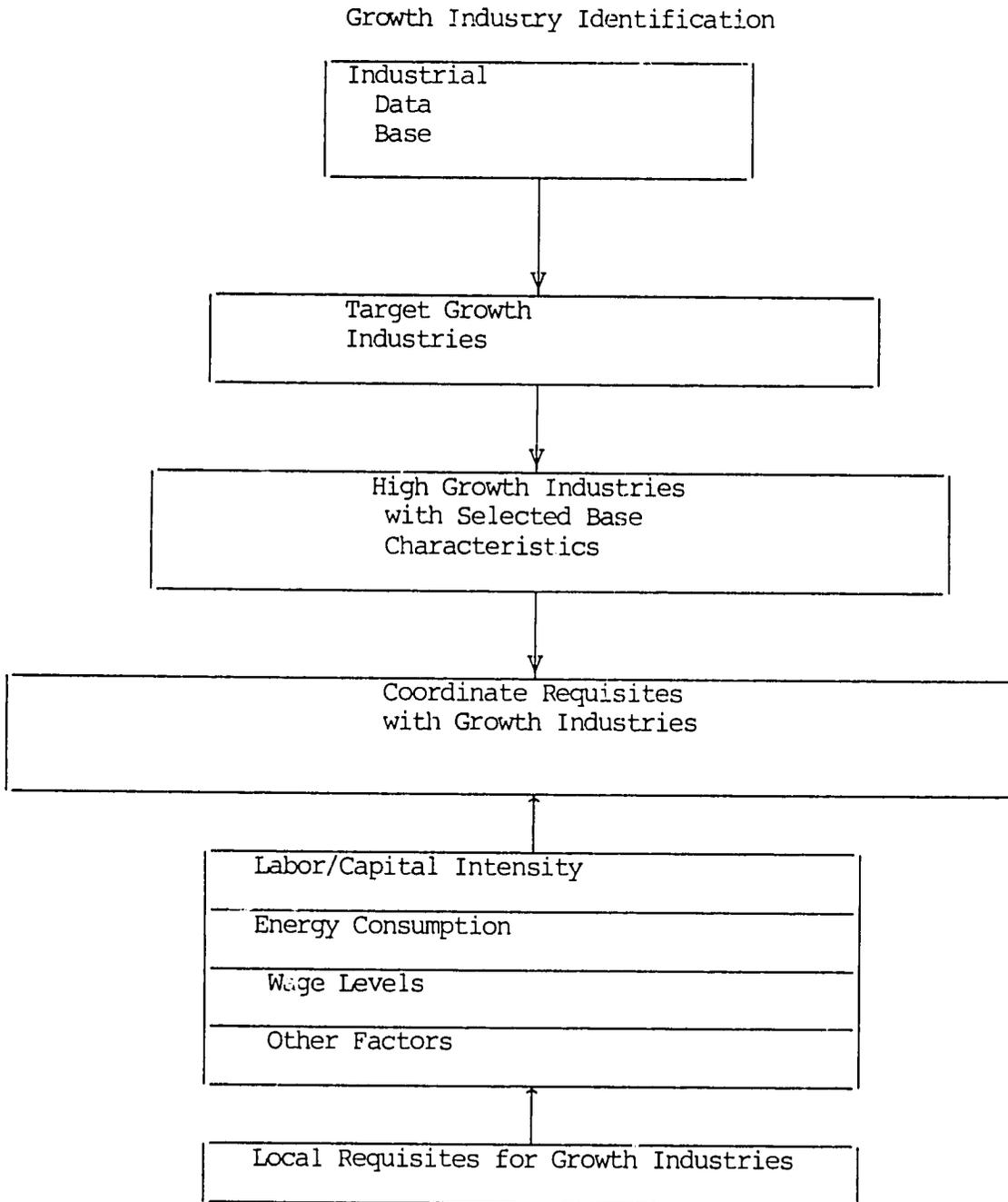
Summaries of reports; correspondence; instructions; and procedural documents from the Zone Developer; principals; and sponsoring and guiding agencies.

Annex 8

MARKET SURVEY METHODOLOGY

In order to conduct an accurate market survey the "target industry" selection process is often employed. The chart below illustrates the steps involved in the process. The steps are then discussed in detail on the following pages.

Target Industry Model for Export Processing Zones



a. Identifying Growth Industries

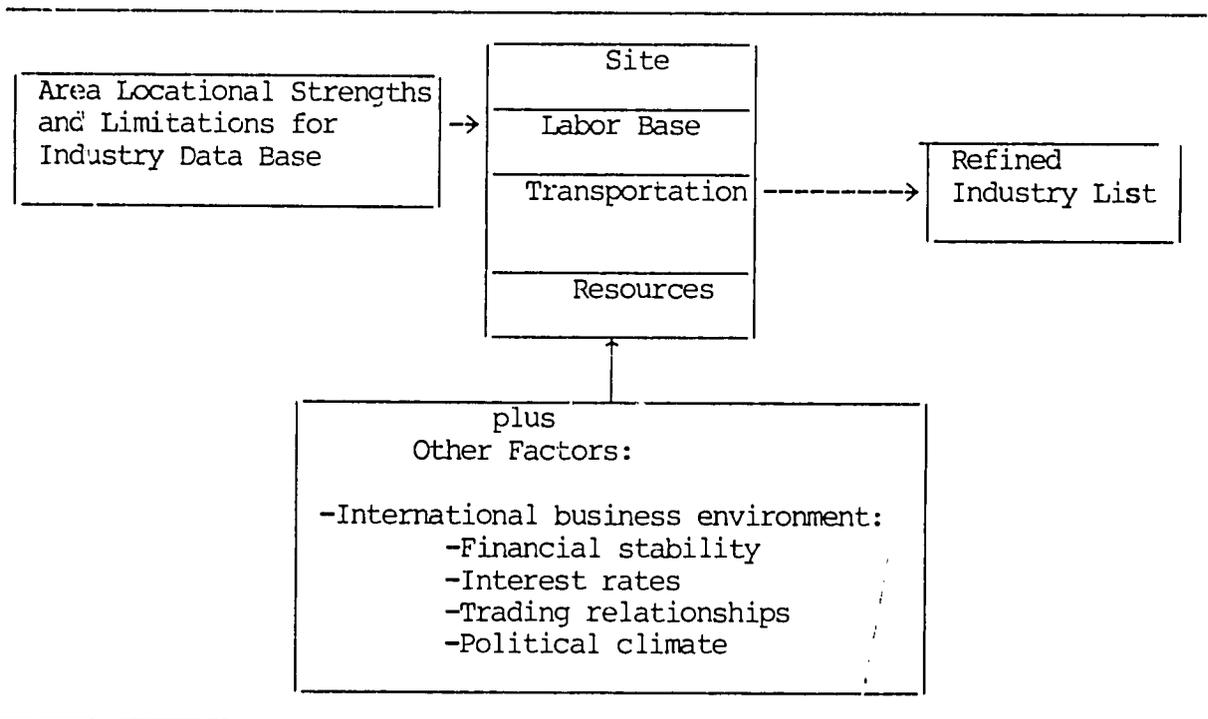
The first step is to develop an industrial data base of industries, i.e., employment, sales, value added by manufacture, value of shipments and other factors. Projections for at least five years also should be included. Sources for this type of data include: Department of Commerce Industrial Outlook, Standard and Poor Industrial Guide and Dunne and Bradstreet.

b. Local Requisites

The local requisites process is a technique which refines the growth industry list according to local needs. For example, labor-intensive industries may be most desirable in a country with high unemployment. On the other hand, if local labor rates are relatively high, then a selection of capital intensive industries would be more appropriate. Additionally, if energy sources are limited, then a conscious effort can be made to screen out industries that would tie up existing sources. The local requisites and the potential investor's objectives may differ in substance, with some conflicting and others coinciding. Industries' goals may possibly include profit maximization, diversification of markets and sources of supplies, maintaining a market position and/or achieving some rate of overall growth in sales or earnings. On the other hand, however, the country's objectives may include maximizing employment or tax revenues, earning foreign exchange, developing technology transfer, encouraging small scale industries or rural development and so-on.

It is much less time-consuming to screen the local requisites first and follow with the growth industry process. The list can be shortened considerably by screening for only those industries that suit local needs.

Locational Analysis



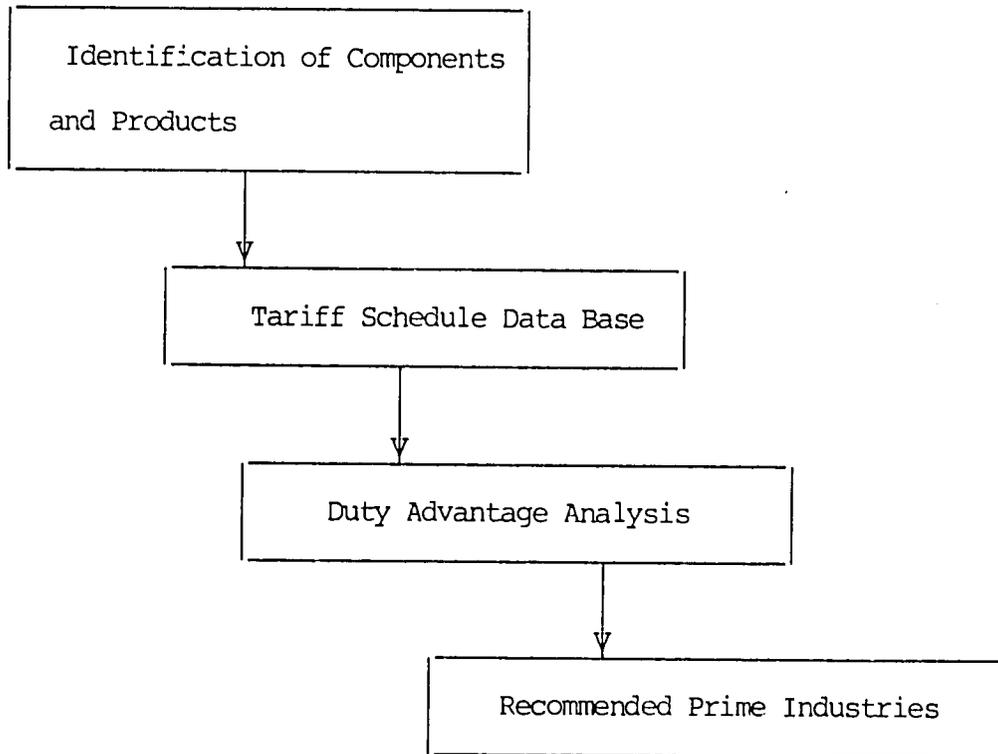
c. Locational Analysis

The locational analysis component is intended to screen for those industries that would likely relocate to an area based on its locational factors. Private firms examine a large number of factors: raw materials costs, labor skill levels and costs, utility rates, regulatory requirements, etc. The final product of the locational analysis is a refined target industry list of growth industries which match local requisites, as well as locational attributes of the area.

d. Tariff Rate Analysis

A critical element in marketing an export processing zone to an industrial user is the duty advantage inherent in zone operations. Therefore, it is necessary to include in the target industry matrix, a component to address the tariff rate analysis.

Tariff Rate Analysis



One of the first steps is to identify the international trade agreements offering advantageous tariff treatment. In the United States, three major programs serve to allow large, multinational first an opportunity to reduce overall production costs through production sharing activities in less developed countries. The next few paragraphs briefly explain these programs.

--TSUS 806.3 and 807. These provisions allows U.S. firms to assemble American-made components abroad and then return the finished or semi-finished product to the U.S. Duty is paid only on the value added in the host country. Item 806.30 states that articles of metal that have been manufactured in the U.S., exported for processing, and then returned to the U.S. for further processing are subject to duty only on the value of the foreign processing. Under item 807, imported articles assembled in foreign countries with fabricated components that have been manufactured in the United States are subject to duty upon the full value of the imported product less the value of the U.S.-fabricated components. Although the greater portion of 806.3 and 807 imports initially had been from developed countries 94 percent in 1966 the trend was toward increasing imports from LDCs in the late 1960s and early 1970s. In 1976, the share of imports from developed countries dropped to a low of 51 percent.

--Imports Under Generalized System of Preference (GSP). The GSP, unlike TSUS 806.3 and 807, provides duty-free access to the U.S. market without requiring that U.S components be used in the manufacturing process. This tariff provision, enacted in 1976, currently applies to 143 countries, and includes 3,000 categories of articles. The availability of GSP as a trade incentive may be limited when the agreement comes up for renewal in 1985. The Reagan administration recently moved a number of items produced in Hong Kong, South Korea, Taiwan and Mexico from GSP eligibility.

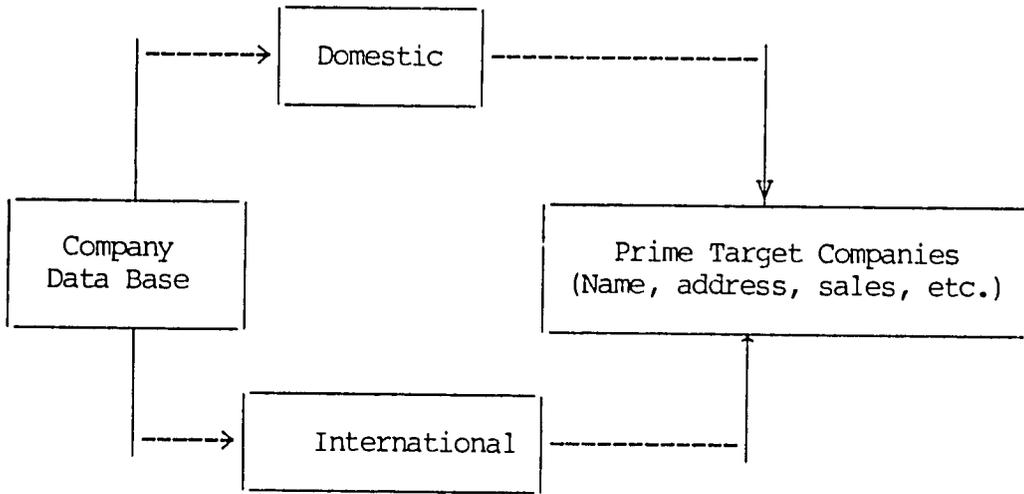
--The Caribbean Basin Initiative (CBI). The recent adoption of the CBI has created new opportunities for development of the economies of many developing nations. The CBI provisions, in effect, reduce the value-added provisions under GSP to only 25 percent for favor Caribbean nations.

The last step in the tariff rate analysis combines the data on the products with the tariff schedule data base. This step can be done either manually or by computer. The resulting duty advantage analysis further refines the prime targeted industries to include those industries which would be particularly suited to an export processing zone location.

Company Identification

The final component in the target industry process, as developed and used by MRI is the identification of specific companies. Essential to this component is a data base listing all the domestic and international companies that do business within the industries targeted as prime for a given zone. The result of this process is a list of prime target firms including the company name, its address, the chief executive officer, employment, sales, telephone numbers, and products manufactured by SIC code. Again, this component can be performed either with the assistance of a computer or manually.

Company Identification



Annex 9

LOCAL MARKETING TECHNIQUES

The following is a list of suggested methods that can be used to select those companies to be contacted in a market survey.

--Ask local business people with associates in other countries to help identify companies considering expansions or relocations. If any local business person attends a trade association meeting, ask him or her to bring back the list of exhibitors for future contact.

--Call upon local salespeople and others who visit plants and distributors in other countries to be on the alert for news of companies planning new locations.

--Ask local financial institutions (banks, savings and loan companies), electric utilities companies, transportation companies, and newspapers for names of prospects.

--Be in constant contact with regional industrial development commissions or agencies. These representatives need to know all the particulars about available sites and buildings. Many firms contact these agencies for information before approaching specific countries. Be sure to equip these representatives so they can represent your country adequately.

--Keep track of where new plants involved in light manufacturing and assembly operations have been locating. Track down names of new firms and industries that have been locating in the country within the last few years, then contact other firms of the same industrial types. These firms, for competitive reasons, may be considering branch plants in offshore locations.

--Determine what companies are suppliers to industries in the region. There may be a need to locate near customers' plants to protect their market.

--Call upon local individuals who have successfully established themselves in the United States business community. They may have developed manufacturing or business contacts and could encourage them to consider a specific country for production sharing or other investment purposes.