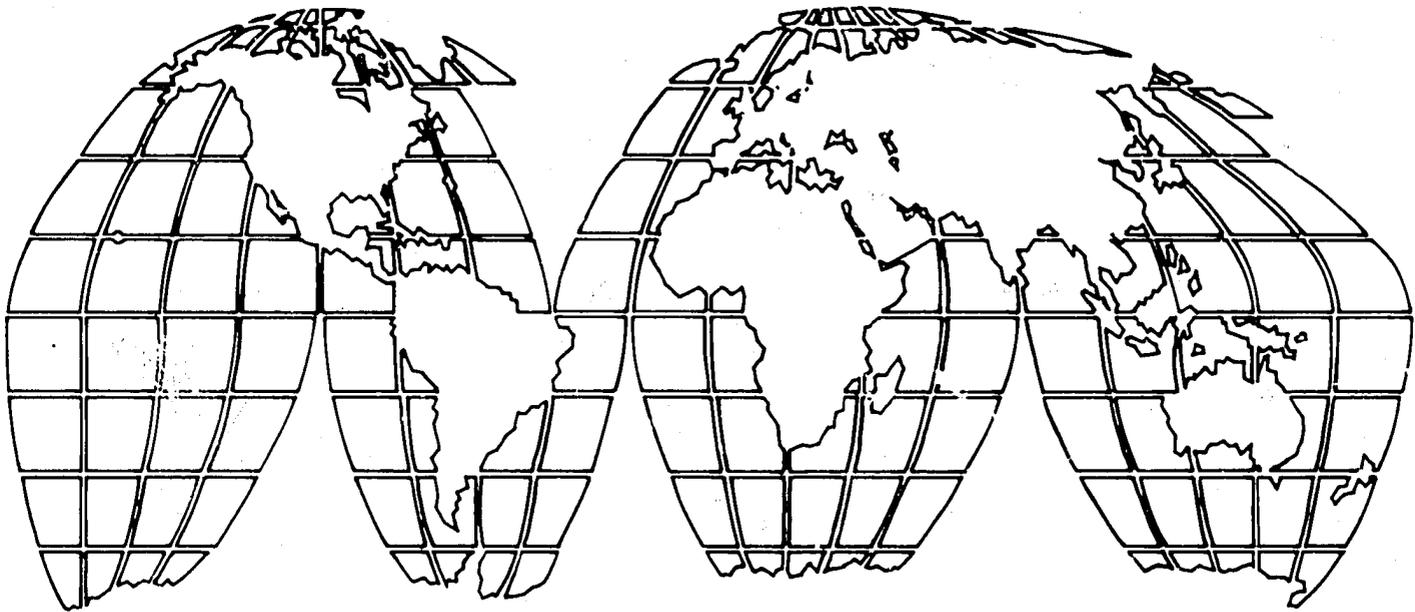


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Free Zones In Developing Countries: Expanding Opportunities for the Private Sector



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Free Zones In Developing Countries:
Expanding Opportunities for the Private Sector

A.I.D. Program Evaluation Discussion Paper No. 18

by

Sabre Foundation

Final Report
To the Bureau for Program and Policy Coordination

U.S. Agency for International Development

November 1983

The views and interpretations expressed in this report are those of the authors and should not be attributed to the Agency for International Development.

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I. PURPOSE OF THIS REPORT

In February, 1983, the Bureau of Policy and Program Coordination of USAID commissioned the Sabre Foundation to undertake initial research examining free zone growth in developing countries. The scope of the engagement called for an evaluation of the literature on free zones, emphasizing the contributions of zones to the developing nations. It also called for preliminary identification of factors which affect zone performance.

During the course of their research, project members reviewed virtually all of the existing published literature on free zones, as well as a number of unpublished documents prepared by international development organizations. This information was supplemented by interviews with knowledgeable individuals in the World Bank, the United Nations, private companies which have developed and used free zones, and nonprofit organizations which assess multinational investment patterns. By seeking out sources that were critical as well as supportive of free zones, this report reflects what the Sabre Foundation believes to be a balanced view of zone contributions to development. In addition, the report recommends possible means by which the performance of free zones can be strengthened for host governments as well as indigenous and foreign enterprises.

A special interest of Sabre researchers during the course of the project has been the potential for establishing stronger relationships between free zones and development programs. In some cases, it appears that zones may have the capability to generate new revenues for direct funding of training, technology transfer, and other assistance programs. Such linkages have the potential to benefit foreign investors as well as indigenous institutions, by improving basic conditions for economic development in the sponsoring country.

Sabre's research efforts for this report were directed by Mark Frazier; principal research was conducted by Joyce Erony. In addition, Carl Goderez, Lynda Schuler-Royster, Brett Bowring, Douglas Flack, and Alex Quattlebaum contributed significantly to review of the draft findings. Special thanks are also due to Jacob Levitsky of the World Bank and Robert Morsat of Gulf + Western. Responsibilities for any errors and omissions rest with the Sabre Foundation.

II. OVERVIEW

In recent years, many developing countries have demonstrated a new interest in stimulating the private sector of their economies. An increasingly-utilized vehicle for achieving this end is the "free zone," also known as the export processing zone, enterprise zone, freeport, or free trade zone. Such areas systematically reduce tariff, tax, and/or regulatory barriers to business enterprises.

The benefits of zone development can be substantial. Successful zones characteristically generate new jobs, foreign exchange earnings, and to a more limited extent, backward linkages to the sponsoring economy (including transfers of skills). Over a longer term, zones in some instances have played important roles as "demonstration areas"—proving grounds for economic liberalization policies that were later extended to the nation as a whole.

Free zones during the past three decades have been established in nations as diverse as Jamaica, Brazil, Malaysia, and the People's Republic of China. Although more than 400 free zones now exist, their results have been mixed. Some zones—such as those in Malaysia, Korea, Taiwan, Sri Lanka, and Mexico—have produced outstanding results. Other zones have disappointed their sponsors, consuming large sums for infrastructure development and attracting few or no investors.

This report examines existing data on the contributions, and shortcomings, of free zones in economic development efforts. In addition to reviewing the performance of existing zones, it assesses factors conducive to zone success (or lack of success). Findings of the study are based upon a review of all available published data concerning free zones, rather than upon field study. Because the conclusions are drawn from a limited number of zones, rather than a representative sample, the applicability of the study must be qualified accordingly.

For developmental economists and national policymakers alike, the study is designed to be useful for a variety of purposes and in a range of circumstances. It can help nations decide whether zone development makes sense given national goals, resources, and constraints. The report can also offer grounds for deciding which type of zone is most likely to be beneficial in a given setting: zones that assist foreign investors in export manufacturing, warehousing, or service industries, or those that stimulate indigenous entrepreneurs in producing for the domestic market, or those that strive for a combination of the above. In addition, the report explores factors which apparently play an important role in determining zone success or failure. Finally, the study suggests ways in which free zones can strengthen linkages to indigenous institutions, and can generate new resources for technical development and training programs.

III. TYPES OF FREE ZONES

Revising economic policies on a nation-wide basis has proven difficult for many governments in developing countries. Resistance from entrenched interests, including governmental departments and protected industries, can frustrate even mild attempts to bring about across-the-board reforms. Moreover, the "payoff" of such reforms is seldom visible in the short term. Politicians responsible for the economy have no assurance that the benefits of nation-wide reforms will be recognized as compensating for immediate costs.

In contrast to governmental reluctance towards introducing market-oriented reforms on a country-wide basis, many nations have become willing to apply such policies in more targeted areas. Governments in centrally planned economies, as well as mixed economies, have liberalized tariff, tax and regulatory conditions in areas designated as "free zones." The free zone approach enables countries to test strong free market policies without incurring substantial political opposition. It also holds out the prospect of near-term, highly visible benefits in jobs and export earnings.

The definition of free zone used in this paper is that of a defined geographic area offering tariff, tax and/or regulatory relief to businesses located within its boundaries. Although many zones offer nominal incentives of this type, true free zones will be defined as those providing standard incentives as a matter of course to all firms, rather than applying negotiated incentives on a case-by-case basis. The following is a summary of the principal types of free zones operating today:

1. Free Trade Zone

A free trade zone is a delineated area, usually in or near a port, where unrestricted trade is permitted with the rest of the world. Merchandise may be moved in and out of FTZs free of customs duty, stored in warehouses for varying periods, opened for inspection and repackaged as needed.

2. Export Processing Zones

Also called "industrial free zones", export processing zones are designed to stimulate export-oriented assembly and light manufacturing industries. Physically, EPZs are industrial estates located outside the customs barrier offering foreign investors duty-free movement of goods in and out of the zone and other fiscal and regulatory incentives. EPZs have since been adopted by more than 30 countries, including Korea, Taiwan, Malaysia, Brazil, Indonesia, the Dominican Republic, Sri Lanka, and the People's Republic of China. Principal users of EPZs include electronic assembly and garment manufacturers.

3. Maquiladoras

A variant of the export processing zone has been established along the U.S.-Mexican border. Mexican firms import duty-free components manufactured in the United States, perform assembly operations, and then

export the finished product back to the U.S. market. (The U.S. encourages maquiladora "twin plants" by assessing duty only on the value added in Mexico, rather than the full value of the products.)

4. Free Ports

In some instances, the port infrastructure and warehousing/industrial installations constructed for export processing zones and free trade zones have been supplemented with tourist hotels, housing projects, duty free shopping centers, marinas, casinos, etc., to create a free port. Hong Kong, Macau, and Singapore are well-known examples. In the Western Hemisphere, the extensive enclave on Grand Bahama Island and the more recent projects at Iquique (Chile) and Manaus (Brazil) are examples of this genre.

5. Enterprise Zones

Enterprise zones result from a new policy to create "climates of opportunity" for businesses that expand employment and investment in distressed areas. Reduced taxes and regulation are the incentives offered such businesses. Oriented primarily towards indigenous rather than foreign companies, enterprise zones were proposed initially in Great Britain in 1977. The British government has since established 13 zones, with an additional 12 designations in the planning stages. In the United States, 16 state governments have enacted enterprise zone legislation to date.

6. Free Banking Zones

A free banking zone or off-shore banking facility designates a city, area or country which has made a conscious effort to attract non-resident foreign currency denominated business. These zones generally attract Euromarket deposits by relaxing or eliminating foreign exchange controls, interest rate payment ceilings on deposits and reserve requirements. Free banking zones can be classified as either "paper" or "functional" centers. Paper centers act exclusively as locations of record for the purpose of tax avoidance whereas functional centers actually carry-out saving and lending functions.

The common theme of the various types of free zones mentioned above is reduction of taxes, trade barriers, and/or regulations. Specifically, free zones are meant to create an environment in which domestic policies do not interfere, as well as to allow governments to implement policies which enable firms to invest profitably on the basis of the country's comparative advantage. Free zones, however, do not create a fundamental comparative advantage. Rather, they create an environment favorable to accelerated private sector growth based upon a country's existing "inventory" of comparative advantages.

IV. ZONE CONTRIBUTIONS TO DEVELOPMENT

In the most general terms, the host country's objective for establishing a free zone is to attract foreign and indigenous incremental investment. The universal expectation is that this investment will:

1. generate employment both directly and indirectly through industries in the domestic economy which service and support activities in the free zone;
2. provide net foreign exchange earnings;
3. increase the utilization of domestic raw materials and semi-manufactured products and components; and
4. utilize new technologies which will be directly or indirectly transferable to the domestic economy (including engineering know-how and management, marketing and financial skills).

In addition to these general goals listed above, nations may have objectives reflecting special circumstances. In several countries, an important consideration for creating a zone was the perceived need for regional (as opposed to national) development. In India, for example, the Kandla Zone was established in large part to create a future alternative to the increasingly congested port of Bombay. Malaysia has also employed export processing zones as a means of attracting investment to less developed areas.

Free zones have demonstrated capabilities to substantially contribute to the emergence of modern, internationally competitive industrial enterprises in select instances. Yet, important qualifications and limitations to this capability are also evident. Many zones have manifestly failed to stimulate economic activity. Others, while effective in attracting foreign-owned industry, have developed minimal linkages with indigenous institutions and entrepreneurs and have provided few employment opportunities for skilled workers.

The following will present a brief review of the contributions and shortcomings of free zones to the economic development of LDCs.

1. Employment Generation

Approximately 3.5 million people are directly employed by free zones in developing and newly industrializing countries. Export processing zones and maquiladoras account for almost one third of this employment, or 2.6 percent of the total official registered workforce in manufacturing industries in developing countries. (1) Offshore banking facilities provide employment for perhaps 75,000 workers. (2) Employment figures indicate that free ports in developing nations and Newly Industrialized Countries, including Hong Kong and Singapore, account for more than 2,000,000 jobs. Free trade zones dedicated to warehousing and transshipment have far lower densities of employment; best estimates suggest that they have generated fewer than 50,000 jobs to date.

The effect of free zones upon living standards and working conditions has not been systematically evaluated. However, considerable evidence exists that free zones capable of significantly improving the status of workers in both respects. A recent examination by the New Internationalist of export processing zones in the Far East concluded that zones frequently established a highly-paid "labor aristocracy" in comparison with other workers in the economy. (3) In the freeports of Hong Kong and Singapore, per capita incomes are now the second highest in Asia (after Japan), and have been estimated at up to nine times more than that of residents of the People's Republic of China. Within the People's Republic of China, residents of the Shenzhen Special Economic Zone—established in 1978—today have average wages three times higher than their counterparts outside the zone. Shenzhen's population has risen from 30,000 to more than 160,000 in response to the availability of comparatively attractive jobs. (4)

Against these positive aspects of free zone employment, less favorable characteristics have also been noted. Firms operating in export processing zones tend to hire young women for the vast majority of routine jobs, often paying them far less than men (although usually more than offered to women by employers outside the zone). (5) In addition, the International Labor Organization and a variety of unions have criticized provisions in the enabling acts of some zones which discourage or prohibit union activity.

2. Foreign Exchange Earnings

Free zones generally operate as enclaves--delineated areas outside the customs territory of the country--and have little interaction with the domestic economy. Payments for wages, salaries, rental/lease expenditures, services, taxes, and the purchase of domestic raw materials are then to be considered foreign exchange earnings. However, against these payments, capital transferred abroad for repayment of foreign loans used to finance construction of buildings and infrastructure and administrative and promotional costs must be accounted for.

The Masan Export Processing Zone in South Korea has been an exceptional vehicle for earning foreign exchange (see Appendix A). The total foreign exchange earnings generated by the EPZ during the 1971-79 period amounted to US\$848.5 million, or 52% of the zone exports in 1979. (6) The purchase of raw materials and the use of local services account for these export earnings. During the early 1970s, export processing zones in Taiwan accounted for seven percent of the country's foreign trade, but almost half of its net foreign exchange surplus. (7)

Although such figures are impressive, the majority of active export processing zones generate annual net foreign exchange earnings of less than US\$10,000,000. (8) This estimate is based on the average domestic value added to each product in the host country, which is generally below 25 percent of the value of gross exports.

These domestic value added figures are low, implying minimal use of local inputs in the manufacturing sector. Export processing zones inherently encourage the import of intermediate goods in the manufacturing process because of the duty-free import laws. Nonetheless, as demonstrated in Korea, Taiwan, and Malaysia, if a reliable source of intermediary goods is available from the domestic economy at competitive prices, local value added can be

substantially increased.

There are two main obstacles to increasing the local value added content of zone exports. First, a large percentage of activity in EPZs is based on international subcontracting. In this instance, a buyer has contracted for the finished product, and the sources of supply are predetermined. Second, protection of domestic producers by the host government based on policies of import-substitution tends to suppress production for the export market. In many cases, indigenously-owned potential suppliers to zone companies are unable or unwilling to face the risks and price-competitiveness of the international market.

In offshore banking zones, by contrast, these obstacles tend not to be so severe. But free banking zones are also seldom significant generators of net foreign exchange. The major sources of foreign exchange earnings from banks are taxes and levies, annual license fees, local capital requirements, and operating expenditures directly related to on-shore operations. As indicated in Appendix C, the majority of these banking facilities do not impose taxes and levies or require local capital requirements. Further, our limited analysis of the connection between off-shore banking facilities and the linkages to the industrial sector indicates that the minimal foreign exchange earnings are not reinvested in local industry.

3. Rates of Return

The majority of export processing zones are owned and operated by the host government. (Privately owned EPZ projects are present in Mexico, Malaysia, the Bahamas, and the Dominican Republic.) The cost of developing a free zone consists of site preparation and installing infrastructure facilities, including telecommunications, electricity, water supply and commercial services. According to World Bank figures, a 100 hectare EPZ estate would cost approximately US\$25-40 million in 1982 prices. If the project were to encompass an additional construction of 100,000 square meters of preconstructed factory units, the project cost could double. (9)

The study found evidence that rates of return differ between those zones developed by the private versus the public sector. The private sector export processing zone projects in Cd. Juarez, Mexico, and LaRomana, Dominican Republic, have conducted operations at a net profit and have generated lease revenues and income tax payments for the host government. (10) In contrast, based on our limited sample of EPZ projects, the financial return on investment in government-owned projects appeared recurrently to be either nominal or negative. Many host governments appear reluctant to maximize the potential financial return on zone development, out of apparent intent to avoid deterring investors. In practice, however, privately developed and managed zones—as in the case of Mexico and the Dominican Republic—appeared to be more fully leased out than their governmentally-developed counterparts in the same country.

Income from occupants in publicly-managed export processing zones was found to be generally insufficient to cover the operating costs and investment expenditures. In instances such as the Dakar Free Zone in Senegal, subsidies are offered for fuel, electricity, and rental payments. Operating costs are not net, and no contribution to investment expenditures has been realized. In Shannon, Ireland, a non-repayable cash grant of up to 60 percent of the

total investment outlay was offered as an incentive. The impact of this subsidy on the financial position of the zone in the early years of development was tremendous. In 1974 a total of approximately US\$24 million was spent for direct cash subsidies to industry.

Although little empirical work has been done to assess the impact of free zone development upon the value of property, available evidence suggests that appreciated land values represent an important potential source of revenues for nations sponsoring free zones. Land and building lease policies often subsidize users of export processing zones (contrary to World Bank guidelines, which emphasize that lease rates should ensure cost recovery over a seven to 15 year period).

An alternative approach, which appears to offer far greater revenue generating opportunities for zone sponsors, is to lease out zone properties to high bidders. In the period immediately following zone activation, such a policy ensures that lease rates are affordable to "pioneer" investors. Following the success of the early investors, market forces can drive property values to corresponding heights. The Hong Kong government's policy of leasing out all properties at auction has enabled it to earn hundreds of millions of dollars annually from the appreciation created by policies that establish an attractive investment climate. In 1981, Hong Kong land values overtook those of midtown Tokyo and Manhattan. (Over the past two years, however, Hong Kong's property values have fallen 30 percent from their peak, principally because of doubts about the willingness of China to maintain congenial conditions for investors past 1997.)

4. Transfer of Technology

A variety of channels exist for transferring technology to developing countries, including turnkey operations, machinery imports, skills centers, educational institutions, and direct foreign investment. The present discussion will focus only on DFI, because the other mechanisms are not normally characteristic of free zone operations.

Free zones have played an important role in acquainting large numbers of people who have previously lacked industrial habits with assembly and light manufacturing procedures. For developing countries with high unemployment, zones can be a useful source of basic industrial training. The objectives of the Special Economic Zones in the People's Republic of China illustrate the importance of this industrial training.

Beyond this, technology transfer from zone operations has not been very impressive. Two general observations are common to all DFI in zones in developing countries. First, the major industries located in EPZs are electronics, apparel, footwear, leather products, electrical products, optical goods, plastics, toys, sporting goods, car parts, and minor transport equipment. Kreye and others hold that only those parts of the process in these industries requiring low level skills--essentially hand or mechanically aided assembly work of the simplest kind--are transferred to EFZ locations in the initial years. (11)

The fact that more than 70 percent of the domestic value added in export processing zones consists of wage payments strongly supports this hypothesis. Further, based on our case studies, the available data suggests that over 90%

of the employees in EPZs are assembly workers. These jobs require a minimum level of skills which are usually provided by the corporation in a 4-6 week training program. In this respect, no real transfer of skills has occurred for the majority of the workforce in EPZs.

Second, the majority of the buyers of goods produced in EPZs are predetermined. Specifically, orders are based on a subcontracting basis, which implies that there has been little exposure to the tools of effective marketing and promotion. Korea and Hong Kong are exceptions: many firms located in these areas subcontract the production of parts to domestic enterprises and also sell directly to foreign buyers.

However, there is evidence that the type of industries located in EPZs changes as the project matures. The transition from simple-assembly operations to manufacturing has occurred in Shannon (Ireland), Korea and Taiwan. Shannon, Ireland, the pioneer project in zone development, has moved from assembly type operations to more vertically-integrated high technology industries. The workforce has also changed substantially: in 1962, 13% of the workforce was employed in clerical or managerial positions in 1962, as opposed to 19% in 1975. (12)

In free banking zones, direct foreign investment has generally enhanced technology transfer to the host country. Benefits include increased sophistication in the domestic financial system and the introduction of innovative lending practices. Singapore and Panama are examples of this transfer where the banking sector has imported advanced administrative technology and has trained local inhabitants. (13) Both centers have also succeeded in attracting ancillary financial activities such as insurance and trust businesses.

V. FACTORS INFLUENCING PERFORMANCE

As noted earlier, the performance of free zones has varied within developing countries. An examination of available data suggests that the costs and benefits to host governments from free zones are determined in the short term by the zone's success in attracting of direct foreign investment. This discussion will focus on which factors influence private investors to locate in free zones.

Because differing kinds of free zones sustain different types of economic activities, no single set of factors exists as a determinant of zone success. Conditions that make a free trade zone successful for warehousing and transshipment may not be adequate for the assembly and light manufacturing activities characteristic of an export processing zone. Similarly, an area offering attractive conditions for export processing zone development may lack appropriate conditions for a free banking zone.

This chapter examines three fundamental categories of factors influencing the performance of free zones. The first category consists of factors influencing production, including the classical economic factors; tax, tariff and regulatory incentives; the stability of investment conditions; the quality of infrastructure and basic services; and the availability of direct subsidies and assistance programs. The second category consists of access to markets by zone users. Finally, the chapter reviews zone management and marketing factors that influence zone performance.

1. Factors Influencing Production

Classical Economic Factors of production--such as labor, land and buildings, and freight services--are a primary consideration for free zone investors. In export processing zones, labor costs especially are important to investment decisions. Development of an overseas, low-cost production base for export to the industrialized countries has been cited as the major motive for investment. In comparison to average wage rates for selected developing countries the average hourly wage for unskilled labor in selected OECD countries is 8 to 57 times greater. It is important to note that lower labor rates are not always synonymous with lower unit labor costs. Manufacturing enterprises are interested in the lowest labor cost per unit of production. Labor is not a homogeneous factor of production, and not all forms of labor are easily available at low costs in developing countries. Highly skilled labor--and more importantly, supervisory personnel--is scarce and generally expensive. Costs are often raised by the need for expatriates from industrial countries. It is also often necessary to have a higher ratio of supervisory staff to manual workers. In other types of free zones, including warehousing/transshipment zones and free banking facilities, labor costs tend to be less important determinants of zone success.

The availability of improved land and buildings also is usually another major factor in investment decisions. Export processing zones offering preconstructed factory shells can substantially reduce the time between approval of a factory investment and start-up operations. In general,

however, land lease prices do not appear to significantly affect the success or failure of a free zone. South Korea and Colombia have a practice of "writing down" ground lease rates to exceptionally low levels. In contrast, lease rates in Hong Kong and Singapore are set by auction and have resulted in very high rental payments.

For export processing zones and for traditional storage/distribution free trade zones, transportation costs are a further critical consideration. Zones catering to production or storage of high value, low weight/bulk goods require international air freight services. Where the size of runways and volume of cargo permits, jumbo jet freight service has made transportation costs economical in remote areas, most strikingly in the Brazilian zone at Manaus. Zones oriented towards shipment of high weight and/or bulk products require road, rail, and/or water freight services. By whatever mode, transport rates include the cost of insurance, pilferage, and loading and unloading time which are determined by the infrastructure facilities and shipping and conference line agreements in the LDC. West Africa has a shorter transit time than the Far East for American and European goods, but the cost of handling, freight and insurance from the African destination was somewhat higher than for similar items from the Far East.

Tax, Tariff, and Regulatory Incentives distinguish a free zone from surrounding areas. The package of tax incentives varies considerably between zones, but the main features include exemption from income, corporate, and property acquisition taxes. These incentives place each zone at a competitive level with other zones, yet they do not establish a comparative advantage for the LDC. The purpose of these incentives is to attract incremental capital from abroad. The actual impact of tax incentives on attracting private investment appears to be minimal. From the point of view of the foreign investor, tax incentives are only one means of reducing start-up costs and reducing taxable profit. Other common practices include offsetting losses in early years against future profits, or by reinvesting profits in expanding production. Further, if the firm is foreign owned (majority shares), income tax concessions will be ineffective if "tax credits" against host country tax payments are given in the investor's home country and if there is no "tax-sparing" provision. In this case tax concessions to foreign investors costs the host country revenue and gives the investor's home country a gain.

The ability to import materials and components duty-free is the most common feature of free zones. This concession strongly influences the demand for all EPZs, but does not provide any specific advantage for a particular LDC. Duty concessions eliminate the higher input costs those duties impose. Otherwise, the exporter would have to buy inputs at prices above world market levels.

Regulatory incentives are also offered in some EPZs. Some developing countries have enacted "no-union" guarantees. Other regulatory incentives frequently include measures to facilitate free movement of capital. Exchange rates have special significance to potential EPZ investors. Very little local currency is earned or obtained through domestic sales from EPZs. However, age, lease/mortgage payments and services are paid in the local denomination. An overvalued exchange rate can substantially increase the cost of local inputs per unit as

well as discourage their use. An undervalued exchange rate has the reverse effect on EPZ activity. Corporations in free zones may also be exempt from controls on profit remittances. The ability to freely repatriate capital also enables zone users to reap gains through transfer pricing.

A major obstacle to business location decisions in developing countries can be the delays involved in gaining approvals for relatively minor operations. Several of the leading export processing zones advertise a "one-stop" center for permit processing to avoid such complications.

Although free zones often provide regulatory relief, some zones impose on investors special performance requirements aimed at increasing employment opportunities, technology transfer, and the level of investment. Generally these regulatory restrictions decrease the likelihood of investment. Developing countries subject U.S. affiliates to performance requirements far more often than did the developed countries.

In general, LDCs sponsoring free zones compete to offer the most attractive package of incentives and privileges. When Korea established export processing zones during the early 1970s at Masan and Iri, it "outbid" Taiwanese zones by offering a seven rather than five-year tax holiday. The Taiwanese zones, in response, increased their tax-free period to the same level. In more recent years, the People's Republic of China and India have reduced regulatory obstacles--particularly in the area of labor law--to make their free zones more competitive to investors. The relaxed regulatory regimes are reported to have resulted in increased interest by investors; the Chinese zone at Shenzhen has reportedly attracted more than \$1.4 billion in investment commitments in the past four years. (1)

While much attention has been placed upon tax incentives as a means of attracting investors, a substantial body of literature suggests that this emphasis may be misplaced. The Dakar Free Zone in Senegal is an illustration of this weak relationship between incentives and foreign investment. In 1974, the initial legislation for the zone was passed, and the authorities offered limited tax holidays. In 1980, the incentives were improved, but the number of zone occupants has not increased. Another case in point is the Philippines where no income tax incentives are offered, but the EPZs have been able to attract and maintain private investment. In most zones, it appears to be more important to minimize problems with red tape and regulations than to offer long-term tax holidays. (2)

In free banking zones, however, investors tend to be more sensitive to tax incentives than are users of other types of zones. "Paper" centers--those acting exclusively as locations of record for the purpose of tax avoidance--are extremely sensitive to minor changes in tax policy. As long as a bank has little physical presence in a center, it is fairly easy to relocate operations if a center tries to impose slightly higher charges than others. In functional centers, the effect of incentives is less. Functional centers, which carry out savings and lending, generate profits in their own right rather than solely for the avoidance of taxes.

Stability of the Investment Climate appears to be the paramount concern of investors in virtually all-types of free zones. The act of establishing a free zone can be significant as a demonstration by a host government of its commitment to creating a more welcoming environment for the private sector. In order to remove the perception of political instability, many free trade zones have included "investment guarantee" clauses in the zone legislation. The effectiveness of these investment guarantees is minimal in times of severe unrest; witness Nicaragua and El Salvador where operations in the free trade zone have been disrupted by political disorder.

Physical Infrastructure/Basic Service Delivery can play a decisive role in attracting private investment to a zone. In export processing zones, the infrastructure and services tend to be very similar to those found in industrial estates. Services such as electricity, gas, water, waste disposal and telecommunications are also generally available. Port infrastructure capable of handling containers is essential to the success of transit zones. Because high value, low bulk products represent the major output manufactured in EPZs, location near airports capable of handling international jet cargo carriers provides advantages. Developed rail and road systems are also important to successful transit zones and export processing zones for import of raw materials (especially agricultural commodities used in food processing and wood used in furniture manufacture).

Modern communications systems are increasingly demanded by zone users. Industries engaged in electronics assembly and engineering equipment, in particular, tend to be linked closely to parent companies. Free banking zones are even more dependent upon a communications system of international standards.

The quality and reliability of electricity is especially critical in export processing zones. A 1981 survey of Caribbean free zone occupants conducted by Free Zone Authority, Ltd. found that a stable flow of electricity outweighed all other concerns among export processing zone industries in Jamaica, Puerto Rico, and the Dominican Republic.

Direct Subsidies and Assistance Programs are found in many free zones. Export processing zones such as Shannon, Ireland and Masan, South Korea have used these policies to attract foreign investors. In the case of Shannon, direct cash subsidies appeared to have been important in attracting pioneer foreign investors. In other cases, zones meet the part or all of the training costs of employees during the start-up period. Such benefits, however, often entail a substantial budgetary outlay in nations that can ill afford to make the expenditures.

Another subsidy common in EPZs has been the reduction of land and/or building costs to below market levels. Public monies have been spent to prepare sites and erect buildings. These properties are often leased or sold to zone industries at reduced levels.

2. Access to Markets

A major factor influencing the performance of free zones in recent years has been the proliferation of non-tariff trade barriers. The expansion in exports of certain manufactured goods from developing countries has led to the growth of "voluntary quotas" imposed by a developed country. The garment industry, the predominant industry in EPZs, is strongly affected by these quotas.

Since inception of these quotas, a number of developing countries have begun producing and exporting various garments. Available evidence indicates that as quotas in particular countries are filled, prime contractors in such places as Hong Kong will subcontract-out the manufacture of garments to other developing countries with unused quotas. The implication of these findings for developing countries is that attracting direct private investment does not necessarily reflect the "traditional" factors associated with industrial development decisions. Furthermore, these motivations also explain the "suitcase" nature of the industry. (3)

Regional market agreements such as the Lome Convention and the Latin American Free Trade Association give preferential treatment to developing country exports. U.S. Tariff Schedule Items 806.30 and 807 is a similar arrangement which provides that duties levied on the reimported products apply only to the value-added in off-shore operations. Trade agreements such as these generally provide some inducement to manufacturers to locate abroad, particularly where import quotas are imposed on the manufacturing enterprise in the home country.

3. Zone Management/Marketing

In creating an attractive environment for investors, the presence of a business-oriented zone management appears to be of the most importance factors in establishing a successful zone. The United Nations Industrial Development Organization, in a 1976 publication on export processing zones, strongly urged developing countries to establish a private or semi-private administrative body to oversee zone operations. The absence of incentives in the public sector for officials to respond quickly and efficiently to tenant needs places publicly-managed zones at a competitive disadvantage in the eyes of investors. Successful privately developed and/or managed free zones exist in the Dominican Republic, Mexico, and Malaysia. In recent years, the People's Republic of China has also invited private Hong Kong-based companies to develop basic zone infrastructure in Shekou, the major port facility in the leading Chinese free zone at Shenzhen. (4)

The final major influence upon zone development is the quality and breadth of zone marketing efforts. In the broadest sense, the marketing/promotion effort can be broken down into provision of information to suitable clients in a way that will stimulate their interests, and the effort to convince interested clients to invest in the zone. The principal source of assistance to zones in their marketing efforts has been the International Investment Promotion Service of UNIDO, which has taken an active role in promoting free zones and offering technical assistance to zone representatives. Offices in Brussels, Colon, New York, Paris, Tokyo, Vienna and Zurich facilitate contacts and provide training to government officials, partially at the expense of the host government. In other cases, zones have undertaken

promotional efforts through commercial consulates; such efforts appear hindered by conflicting claims upon the time of embassy staffs. A number of leading free zones maintain representatives in Europe and North America, operating on a fee or salaried basis. A valuable service of such representatives consists of establishing direct contact with prospective investors, providing information tailored to the needs of specific companies, and assisting in arrangements for corporate representatives desiring to make on-site examinations of the zones.

VI. CONCLUSIONS

Based upon the information contained in this report, free zones appear capable of making a substantial contribution to the emergence of modern, export-oriented industrial sectors in a number of countries. Singapore, Korea, Taiwan, Ireland, Malaysia, Mexico, Sri Lanka and Hong Kong are among the most notable examples of successful free zone implementation.

Beyond the direct economic benefits, free zones in several countries have served as useful proving grounds for economic reforms. One of the functions of the Shenzhen free zone in the People's Republic of China is to "experiment with new ways and blaze new trails," according to Gu Mu, a high-ranking State Councillor in Beijing. (1) Carl Goderez, the World Bank's recently retired free zone specialist, credits the export processing zones of South Korea and Taiwan with helping to persuade their respective governments of the feasibility of export-oriented industrialization. Similarly, the success of the Shannon, Ireland free zone proved instrumental in Ireland's 1969 decision to slash income taxes on export-oriented manufacturers through the country. (2)

Yet important qualifications and limitations regarding free zone performance are also evident. Many zones have manifestly failed to stimulate economic activity. Although a number of common factors were found in relatively unsuccessful zones, three factors appeared to be especially destructive. The first, and apparently most important, was the absence of a stable investment climate resulting from violent political or military upheavals. A second major factor impeding zone performance was inadequate or unreliable general infrastructure and service delivery. A third factor was a lack of user-sensitive zone management behavior, as evident in politicization of zone administrative and marketing procedures.

The performance of even relatively successful free zones, moreover, has also been lacking in certain respects. Most free zones operate, at least in their initial years, as "enclaves" with few linkages to the surrounding economy. With the exception of Hong Kong, Singapore, Korea and Taiwan, zone-based industries appear to rely mainly upon imported capital goods and raw materials. In many cases, this appears to be a result of host nation policies that shelter producers of intermediate goods, inflating costs for zone industries beyond levels sustainable in a competitive world economy.

Zones also appear to be most successful during a relatively limited period in a country's economic development--at the beginning of the nation's move from import substitution to export-oriented policies. Free zones in Ireland, Korea, and Taiwan have helped to bring about this transition. As a result of doing so, however, they have become less effective as magnets for foreign investment in their respective economies. Liberalization of national economic policies has since enabled foreign capital to develop export-oriented industries outside the free zones, implying a time-limited comparative advantage for zone firms.

Finally, changing global economic conditions may soon make traditional zone development strategies somewhat obsolete for many countries. Approaching revolutions in the technologies of industrial production may especially

foreclose new opportunities for export processing zones. In their first years of operation, such zones have relied heavily upon industries with routine, labor-intensive assembly and manufacturing processes. Electronics assembly, small household appliance assembly, scientific instrument, furniture, metal working, toys, textiles, and garment manufacture are, typically, the initial types of nontraditional exported from the free zones of developing nations. In coming years, however, robotics is likely to have a significant effect upon the traditional "entry level" industries now found in export-oriented free zones. Because they rely upon simple, repetitive production line tasks, these industries will be prime candidates to substitute workers with computer-aided assembly and manufacturing equipment.

Emerging Free Zone Opportunities

Free zones nonetheless appear to have a promising future in developing countries, albeit in somewhat altered form. A review of zone development contributions and limitations suggests several new options for countries sponsoring or planning to sponsor free zones. The recommendations presented below can be of particular value to nations that have already incurred substantial costs in developing zones, particularly export processing zones, with few results to date. They are not intended as fixed or final suggestions, but as possible guides for future action.

Recommendations for developing nations include:

1. Establish more private-sector oriented zone management bodies

A common shortcoming of many potentially successful free zones has been their bureaucratic approach to zone administration and promotion. Red tape and administrative indifference towards businesses can jeopardize otherwise attractive zones. Poor delivery of electrical, sewer, water and fire protection services also decreases the economic prospects of zones in many instances. To resolve these problems, countries such as the Dominican republic have encouraged privately-built and managed free zones. The presence of a businesslike zone management organization, with internal incentives to respond to tenant needs, can alleviate major problems with administration and marketing. Alternatively, public sector zone management bodies can be made more sensitive to business needs by linking their budgets to lease revenues generated by the zone.

2. Build linkages to preserve stability in the investment climate

Perhaps the most fundamental obstacle to free zone success in developing countries is the perception of an unstable investment climate. Policy shifts toward foreign investment make many potential investors wary about committing resources. To reduce political risk for zone users, two approaches deserve consideration. First, the zone developer can establish an agreement to share a portion of the zone's lease revenues in future years with influential host country institutions. In some countries, optimal recipients might be national church-related charities; in others, they might be union-affiliated skills training programs. A second approach entails the creation of additional incentives for foreign owned companies to subcontract with indigenous providers of goods and services. Under either approach, influential networks would be likely to object to any moves by government to adversely change the

zone's basic investment climate.

3. Remove barriers that reduce purchases of indigenous goods

Import substitution policies have discouraged the creation of linkages between zone-based export industries and indigenous providers of intermediate goods. Protectionist policies drive up the price and lower the quality of intermediate goods, placing the manufacturer who relies upon them at a competitive disadvantage in world markets. In the long term, tariff reductions for the host economy appear to be the optimal course of action. Free zones can help to make providers of intermediate goods in the host nation more efficient, by applying a portion of the zone's earnings to fund venture capital and/or support services to indigenous entrepreneurs, who now lack the capital and/or know-how to become competitive overseas.

4. Establish enterprise zones to assist the informal sector

For countries primarily interested in stimulating indigenous entrepreneurs, creation of enterprise zones is recommended. Unlike other free zones, enterprise zones concentrate upon reducing regulatory and tax barriers that keep "micro enterprises" from expanding. Entrepreneurs in the informal sector are especially likely to benefit from simplification or removal of requirements governing business registration, capital formation, and employment. A principal factor in the success of Hong Kong and Singapore has been their ability to establish a favorable climate for entrepreneurs, regardless of their size or paperwork skills.

5. Direct a share of zone earnings toward programs that will attract industries of the future

In light of approaching transitions toward automated industrial production processes, both existing and potential zones must examine alternatives to current free zone industries if they wish to prosper in the medium to long term. A premium will be placed in the coming era of industrial development upon skilled rather than unskilled labor; countries best able to provide adequate human resources will reap the benefits. Free zones can assist in the transition toward more technologically advanced production; the Taiwanese, for example, have established training facilities in conjunction with a new "science park" offering incentives to investors. Another possible alternative, suggested by Free Zone Authority, Ltd., is for free zones to dedicate a portion of their lease revenues to operations of zone-based Third World research, development, and training centers. The programs of these centers would concentrate upon equipping indigenous individuals with managerial and/or technical skills in fields such as communications, software development, data base-building, banking, or other growth industries. (3) To adequately fund such national development programs, free zone lease policies should move away from offering artificially low rates, in favor of Hong Kong-style auctions to high bidders. With increased revenues for training and a growing number of skilled workers, zone observers such as Asoka Moragado have predicted the emergence of "administrative free zones," serving regional corporate offices engaged in marketing, sales, purchasing, and research and development. (4)

The proposed measures could help to strengthen the capabilities of free zones to accelerate shifts by nations toward export-led development. These policies can be productively applied in both existing and planned free zones.

Equally important, such strategies can serve important near and long term goals. In the near term, they can strengthen the role of zones as "proving grounds" for market-oriented policies. Once new policies have demonstrated their effectiveness in a free zone, countries may ultimately prove more willing to extend similar policies to broader areas as well.

VII. FOOTNOTES

Chapter III

(1) The definitions provided here are drawn from a range of sources, including Tax-Free Trade Zones of the World, by Walter and Dorothy Diamond, (Matthew Bender, New York, 1982) and from interviews with the World Bank's recently retired free trade zone specialist, Carl Goderez.

Chapter IV

(1) UNCTAD, Export Processing Zones in the Developing Countries: Implications for Trade and Industrialization Policies (TD/B/C.2/211), January, 1983, p. 18.

(2) Derived from Sabre data on employment totals for the financial sector in Singapore, Hong Kong, the Bahamas, and Grand Cayman Island.

(3) Ping, Ho Kwan, "Bargaining on the Free Trade Zones," New Internationalist Magazine, September, 1981, p. 12.

(4) Weisskopf, Michael, "Four Little Hong Kongs: Capitalism Creates Chinese Boom Towns," Washington Post, April 19, 1982, p. 1.

(5) International Confederation of Free Trade Unions, "Trade Unions and the Transnationals," Special Report No. 3, -Export Processing Zones (1983), p. 16

(6) Mafez Administrative Authority.

(7) Interview with Dr. Alvin Rabushka, senior fellow, Hoover Institution of War, Peace and Revolution, Stanford, California.

(8) Estimates derived from material supplied by the UNCTAD Secretariat and the author's calculations.

(9) Devries and Goderez, Export Processing Zones, World Bank Occasional Paper, SEC M78-612, p. 18

(10) See Case Study 1 in Appendix A for further discussion of the Gulf + Western free zone in the Dominican Republic.

(11) O. Kreye, "Export Processing Zones in Developing Countries," UNIDO Working Papers on Structural Changes, No. 19, August, 1980 (UNIDO/ICIS.176)

(12) Kelleher, T., Handbook on Industrial Free Zones, UNIDO/ICD.31, 1976, p. 62.

Chapter V

- (1) UNCTAD, Export Processing Zones in the Developing Countries: Implications for Trade and Industrialization Policies (TD/B/C.2/210), January, 1983, p. 18
- (2) McCarthy, I.S., Hosting Offshore Banks: Costs and Benefits, International Monetary Fund (memo), May, 1979, Annex 1.
- (3) MAFEZ Administrative Authority, 1981.
- (4) See Case Studies, Appendix A of this report.
- (5) Devries and Goderez, op. cit..
- (6) Antonio J. Bermudez Industrial Park, Financial Statements, 1982; Operadon Zone Franca de la Romana, Financial Statements, 1980.
- (7) O. Kreye, op. cit.
- (8) Kelleher, T., op. cit., p. 62.
- (9) McCarthy, I.S., op. cit., p. 44.

Chapter VI

- (1) Keatly, Robert, "Shenzhen: China's Experiment With Capitalism," Wall Street Journal, May 16, 1983, p. 23.
- (2) Interview with John Kehoe, public relations division, Shannon Free Zone, Ireland.
- (3) Free Zone Authority, Ltd., Technology Development Zones, Washington, D.C., 1981
- (4) Moragado, A., Outline of Administrative Free Zones, Free Zone Authority, Ltd. working paper, June, 1983

APPENDIX A
CASE STUDIES

CASE STUDY ONE

DOMINICAN REPUBLIC: THE ROMANA INDUSTRIAL FREE ZONE

This case study will illustrate the public/private sector mix in free trade zones. The Romana Industrial Free Zone, established in 1969, is owned and managed by Gulf & Western Industries. In contrast to the three free zones owned and operated by the government of the Dominican Republic, the La Romana zone is fully occupied and has generated approximately 7,300 jobs in 1982. This case study will analyze the role of the private sector and the factors contributing to the success of the zone. The information was supplied to the authors by the Operador Zona Franca De La Romana, S.A., a subsidiary of Gulf & Western.

I. Introduction

Since the election of the present 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 expanded at an annual real rate of 11 percent in 1968-74, one of the highest in the world. As a result, per capita national income, expressed in US\$, more than doubled in this period. (1)

The economy has slowed down sharply since 1974 in spite of maintaining investment levels and the rise in sugar prices in 1974 and 1975. This deceleration reflects some external causes, such as severe drought in 1975 and 1976 and the rise in the cost of petroleum imports. Also, non-traditional industrial exports have declined in recent years.

Manufacturing is the third largest sector, after agriculture and commerce, in the Dominican Republic. However, this sector has been experiencing weakening international competitiveness in transforming domestic raw materials into exports. The volume of non-traditional exports has been declining since 1974, and in 1976 was 21 percent below the 1971 volume. (2)

II. Zone Profile

Law 299, which authorizes the establishment of free trade zones, was passed to stimulate industrial development. The law gives generous tax incentives to new business and incentives for investment in new equipment. These incentives include total exemption on all import duties for intermediary goods, packing materials, machinery and equipment and an 100% exemption on income tax.

The Romana Industrial Free Zone was jointly planned by the Corporacion de Fomento Industrial of the Dominican Republic and Gulf & Western Americas

(1) Dominican Republic: Its Main Economic Development Problems, Latin America and the Caribbean Regional Office, The World Bank, Washington, D.C. (1978).

(2) Ibid., p. 58.

Corporation. In May, 1969, a 30 year contract was signed between the Dominican government and G & W, empowering the latter to manage and operate the zone. This site (1,000,000 square meters) was owned by G & W; approximately 1/3 of the land is currently in use with approximately 87,000 square meters under roof.

The developed area of the zone is fully occupied. Twenty companies, all of which are completely American owned, are presently active. A total of 16 of the 20 companies are engaged in textile manufacturing. The remaining four are engaged in electronics assembly, tobacco and paint brush manufacturing. Two of the companies are owned by G & W.

III. Contributions to Development

A. Export Performance

Current information regarding the export performance of the zone is not readily available.

B. Foreign Exchange Earnings

Under the terms of the contract between G & W and the government of the Dominican Republic, the zone authorities are required to give US\$30,000 plus 5% of rental income per year to the government. Also, under Law Number 432 of 1969, foreign owned firms are required to sell to the Central Bank the foreign exchange needed to pay local costs. These costs consist mainly of payment for raw materials used in the manufacturing process, labor payments and services. Labor payments for 1982 were approximately US\$12,000,000 (3). The total rental income given to the government was approximately US\$110,000 (4). Information is not available on payments for services or the percent of profits reinvested in the country.

C. Level of Foreign Investment

As previously noted, the La Romana zone is fully occupied; the lack of additional developed space is the major reason for the absence of additional manufacturing investment. In 1976, the investment per job was DR\$913 in machinery and equipment and DR\$2,079 including the cost of land. (5) Table 1 provides a comparative analysis of the level of investment of foreign firms operating under the industrial incentive Law 299.

(3) This figure is an estimate based on 7300 employees compensated at US\$160/month.

(4) This figure assumes full occupancy in the zone based on the rate of US\$0.11 per square foot. This estimate also accounts for the US\$30,000.

(5) Dominican Republic: Its Main Economic Development Problems, op.cit., p. 57.

Table 1
Investment and Employment Creation by Firms Established Under Law 299

| | 1971 | 1972 | 1973 | 1974 | 1975 | Total |
|-----------------------------|-------|-------|-------|-------|-------|--------|
| <u>Category A:</u> | | | | | | |
| Investment (million pesos) | 2.1 | 0.9 | 7.0 | 12.0 | 6.9 | 28.9 |
| Max. # of Employees (1) | 1,199 | 736 | 3,229 | 3,215 | 1,884 | 10,263 |
| Capital/worker (,000 pesos) | 1.8 | 1.2 | 2.2 | 3.7 | 3.6 | 2.8 |
| Number of firms | 9 | 11 | 26 | 19 | 16 | 81 |
| <u>Category B:</u> | | | | | | |
| Investment (million pesos) | — | 1.8 | — | — | — | 1.8 |
| Max # of Employees (1) | — | 190 | — | — | — | 190 |
| Capital/worker (,000 pesos) | — | 9.5 | — | — | — | 9.5 |
| Number of firms | — | 3 | — | — | — | 3 |
| <u>Category C:</u> | | | | | | |
| Investment (million pesos) | 25.2 | 14.7 | 7.4 | 13 | 25.2 | 85.5 |
| Max # of Employees (1) | 2,838 | 1,506 | 938 | 2,181 | 2,055 | 14,936 |
| Capital/worker (,000 pesos) | 8.9 | 9.2 | 7.9 | 6.0 | 12.3 | 9.0 |

(1) This is the estimated number of workers that firms applying for Law 299 benefits indicated they would employ. There are no official figures on the actual employment created by these firms.

Category A: Firms producing exclusively for export
 Category B: Firms producing non-traditional goods for the domestic market
 Category C: Firms producing traditional goods for the domestic market where there is insufficient supply

Source: Ministry of Commerce and Industry, National Planning Office, and IMF.

Category A includes firms located both inside the free zones and elsewhere in the Dominican Republic. The level of investment per worker is slightly less in the zones, and when compared with firms producing for the domestic market, this figure is well below the average.

Figures are not available for the total number of firms producing goods for export that are located outside the zone. However, Table 1 does indicate that foreign investment would have occurred in the country without the establishment of free zones, but production would have been geared toward the domestic market. In this respect, the zone has been successful in attracting incremental capital from abroad for exporting non-traditional products.

D. Financial Return on Investment

The Dominican Republic has not incurred any direct costs from the establishment of the Romana Industrial Free Zone. The land was owned by G & W and the company developed the infrastructure and services. According to the Operador Zona Franca De La Romana a total of US\$8,204,355.06 was spent

for development of the zone. G & W claims that the zone has never shown a substantial profit, but information is not readily available to confirm this information.

Rent payments amount to US\$0.11 per square foot per month. Assuming total occupancy, total revenue amounts to US\$1,584,000 per year and a total of US\$109,200 is forwarded to the government of the Dominican Republic. Payment for services provided in the zone are paid directly to utility companies and, G & W has no involvement in this aspect of operations.

From the point of view of the host government, the direct payments from rent receipts are net income, although the amount is negligible. The indirect benefits from net foreign exchange earnings amount to a minimum of US\$13,000,000. An evaluation of the opportunity costs of the land is not presently feasible because of the lack of information concerning the initial sale of the property to G & W.

E. Linkages with the Domestic Economy

Processing of products from the domestic economy in the zone are minimal. A total of 90% of all goods used in the manufacturing process are imported. Local purchases account for boxes, wrapping paper, and tobacco filling for one manufacturer located in the zone.

This minimal development of linkages with the domestic economy is partly due to lack of supply of domestic raw materials. The production of agricultural raw materials suitable for processing and export such as fruits, vegetables, and textile fibers is at present small, of erratic quality and unpredictable delivery. (6) This is a result of uncertainty regarding possible land expropriations by the government and bottlenecks in administrative procedures. For example, many products of agricultural origin require a prior export permit. However, the regulatory agencies can withdraw export permits on two weeks notice, causing severe fluctuations in supply.

Transfer of technical know-how of the production process to the indigenous population has been disappointing. The enterprises operating in the zone are 100% foreign owned, and no international license agreements or the transfer of patents has occurred. Approximately 85% of the workers are engaged in assembly-type operations.

With the exception of general managers and plant managers, all of the workers in the administrative offices and in the factories are Dominicans. In this respect, a transfer of administrative and financial expertise has been realized.

F. Impact on Laborers

The zone has been experiencing a substantial rise in employment opportunities. In 1970, the first year of operations, a total of 200 workers were employed compared with 7,300 in 1982. The workforce is 80% female and the average length of employment is 4 years. The average age of the workers is 23-27 years for male employees and 19-24 for women. These statistics

(6) Dominican Republic: Its Main Economic Development Problems, op.cit.

coincide with the general pattern of employment in EPZs worldwide, indicating substantial concern for working conditions and employment possibilities after leaving the zone.

Zone authorities claim that the average monthly wage paid to assembly-line workers is DR\$160 per month in 1982 dollars. In 1976, the average wage paid to employees in the textile industry outside the zone was DR\$155 per month. (7) Figures for wages paid in the textile industry outside the zone in 1982 are not readily available, but, making an allowance for inflation, it appears that workers in the zone are paid less than those employed in industry in the domestic economy. Trainees can also be employed in the zone at one-half the minimum rate for an initial period not to exceed three months.

None of the workers employed in the zone are unionized. The Dominican Republic offers special protection from labor activity in foreign-owned firms. Reliable information concerning attempted labor organization or strike activity is not readily available.

Ancillary services have been made available to the workers. G & W has built a medical dispensary where all employees are eligible for emergency treatment and for regular medical examinations. Since 1977, a screening program for tuberculosis, parasites and venereal disease has been made available to all persons working in the zone. (8)

IV. Factors Influencing Performance

In terms of generating employment and providing net foreign exchange earnings at no direct cost to the government of the Dominican Republic, the Romana Industrial Free Zone has had a strong positive effect on the economy. Private sector involvement by Gulf & Western has alleviated all the costs of development of the free zone and has provided a precedent for other American companies to invest in the area.

The other three zones in the Dominican Republic that are operated by the government have managed to attract a total of 24 enterprises and are not operating at close to full occupancy. The reason for success in the La Romana zone vis a vis the other operational free zones is primarily due to two factors: stability, reputation and access to other investors through the involvement of G & W and geographic location.

At the same time the Romana Industrial Free Zone was under construction, G & W began to modernize and expand investments in tourist activities in Central Romana. The facilities are first class hotels offering a host of different recreational facilities. The area of La Romana is one of the major tourist resorts in the Dominican Republic and special facilities such as sports clubs and free educational facilities for general managers and their families have been established.

(7) Dominican Republic: Its Main Economic Development Problems. op.cit. p. 427.

(8) Gulf & Western in the Dominican Republic, Report No. 3, (May, 1978) (mimeo), p. 8.

The presence of G & W also enhances the perception of a politically stable environment for American investors engaging in off-shore production for resale to the United States market. The importance of G & W's presence has been crucial, and zone officials claim that few promotional efforts were undertaken. At the present time, there are more applicants than can be accommodated in the zone.

This point is further illustrated by the fact that the level of investment in the Romana Industrial Free Zone has not been affected by the problems experienced by other firms involved in export-oriented manufacturing. Inflation and the country's overvalued currency are the primary factors inhibiting investment. Officially, the Dominican peso is on par value with the American dollar, but is overvalued due to the rapid rise in inflation in the country. Between 1970 and 1976, the Consumer Price Index published by the Central Bank shows that the price of durable and non-durable goods rose by 176.9% and 96% respectively. In contrast, United States prices rose by only 65.8% (9). Thus, Dominican inflation rose relative to the United States and there was no compensatory adjustment in the official exchange rate between the two countries. The economic profitability of investing in the country has substantially declined as a result of the overvalued exchange rate.

There are other obstacles to growth of non-traditional exports, such as the administrative bottlenecks previously mentioned. In order to develop linkages with the domestic market, a secure and efficient supply of raw materials should be developed.

V. Conclusions

This case study shows that private sector involvement in ownership of EPZs has proved profitable for the host government. The only foregone revenue is rent/lease payments and the opportunity costs in land development. Based on the occupancy rates of the other zones, it appears that the government would also be operating this zone at a loss.

G & W's involvement in the zone must also be seen in the context of the company's other operations in the country. The company owns 264,000 acres of land, mostly devoted to sugar production. In 1977, the company produced 401,512 tons of raw and refined sugar, roughly 1/3 of the nation's total output. (10) In addition, the company has invested approximately US\$35 million in the tourist sector. (11) Thus the US\$8 million investment in the free trade zone was a minor investment in terms of overall operations.

Private sector ownership of EPZ estates world-wide is limited. The border zones of Mexico, Freeport in the Bahamas and a number of projects in Malaysia are the only other areas in which private companies have taken an active role

(9) Dominican Republic: Its Main Economic Development Problems, op.cit., p. 58.

(10) Gulf & Western in the Dominican Republic, Report No. 3, May 1978. (mimeo), p. 8.

(11) Ibid., p. 48.

in development and management. (12) The financial return on investment rather than the economic return is clearly the most important determinant for private sector ownership. The limited involvement in the past indicates the lack of profit incentives. Policy considerations and promotional efforts by the host government for private sector involvement on this level of participation should also be carefully analyzed to assess future potential.

(12) Note that many United States foreign trade zones are owned and operated by private corporations.

CASE STUDY TWO

PANAMA: THE COLON FREE ZONE

The Colon Free Zone is one of the major transshipment points in the western hemisphere. The Zone Authorities have recently extended the warehousing activities to include light manufacturing and additional land for an Export Processing Zone. The Republic of Panama is also one of the major off-shore banking facilities and has emerged as a regional financial center.

I. Introduction

The economy of Panama relies heavily on a diversified range of commercial, financial and administrative activities. These are strongly concentrated in Panama City, which is the only urban center of national significance. Panama City is also a major center for commercial and financial activities in Latin America because of locational advantages in domestic and international trade conferred by the canal and liberal banking regulations. These advantages brought economic growth as world trade expanded in the 1950s and 1960s, financed to a considerable extent by international borrowing channelled through commercial banks. Rapid economic growth, which averaged 8% in 1959-71 slowed in the early 1970s and the economy has been in recession since 1975.

II. Zone Profile

The Colon Free Zone was established in 1948 as a center for international commerce, storage and reshipping for all kinds of goods handled in international trade operations. Geographic location and the desire to monopolize on the Canal's strategic location was the major impetus for establishing the zone.

Beginning in the late 1950s, the city of Colon began a period of economic decline. There has been a slow migration of business and professional people to Panama City, and Colon has been experiencing severe unemployment and urban blight. In 1980, a major revitalization project was undertaken for the City of Colon, the free zone and surrounding areas. As a result of specific provisions of the Canal Treaty, a substantial portion of land has reverted to Colon for development. This property includes the Ports of Balboa and Cristobal and the France Field Airport which are all suitable for light manufactured goods. The free zone land is being extended to increase capacity for commercial activity and light manufacturing.

The free zone generates most of its revenue through real estate rentals. The zone was first occupied in 1952 with 10 companies on six hectares of land, 70% of which was covered by warehouse buildings and display offices. The facilities are fully contracted to 350 individual companies with almost 250 others using the service of agents.

The main exporters to the zone are Japan, the United States, Taiwan and Britain. The main buyers are Brazil, Venezuela, Ecuador, Peru, Colombia and Mexico. The zone serves as a major transshipment point for various electronic products on route to other free port areas in Latin America.

III. Contributions to Development

A. Export Performance

As indicated in Table 1, 92% of all goods entering the Colon Free Zone in 1978 were re-exported. The total commercial activity (importation and re-exportation) was US\$227 million for the same year. Gross income from commercial activity amounted to US\$1,141,000.

Table 1
IMPORT/EXPORT ACTIVITY IN THE COLON FREE ZONE

| ITEM | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 |
|---|------|-------|-------|--------|--------|--------|
| Commercial Activity (In thousands of B/) | 686 | 940.1 | 946.2 | 1209.5 | 1693.3 | 2279.5 |
| Importation | 309 | 462.2 | 415.3 | 560.3 | 786.8 | 1082.7 |
| Re-Exportation | 376 | 477.9 | 530.9 | 649.2 | 905.5 | 1196.8 |

Source: Bureau of Statistics and Census-Office of the Comptroller General of Republic
US\$1 = 1 Balboa

B. Level of Foreign Investment

Practically all of the 312 active firms in 1979 were engaged in either distribution or storage and handling of goods. (1) Aside from rental payments for land, the only private expenditures for zone facilities are for custom-built warehouses. Public warehouses are also available which are owned and operated by Free Zone Authorities.

The urban revitalization project undertaken in 1980 includes building preconstructed factory units. To date, the zone has continued to experience growth in commercial activity, but has failed to attract a significant amount of investment in manufacturing activity.

In contrast, the off-shore banking sector has been very successful in attracting investment. A study by the Security Pacific Interamerican Bank indicates that just before the new banking law in 1970, the national system registered a total generation of external funds amounting to US\$435 million. By 1976, the level of off-shore funding amounted to \$8,538 million. It is estimated that 75% of this funding comes from the Eurodollar market, mostly through London and Nassau. (2)

International License Banks are required to hold US\$250,000 in Panama as a permanent guarantee. General License Banks which are foreign controlled are

- (1) World Bank, Panama: Colon Urban Development Project, Staff Appraisal Report, (May, 1980), p. 40.
- (2) Euromoney, "Panama, the Singapore of the West?" (June, 1977)

required to hold US\$1 million of paid-in or assigned capital. In each case, the capital must consist of assets free from encumbrances, kept at all times within the Republic of Panama. (3) In 1976, there was a total of 19 international license banks and 39 general license banks providing US\$43.75 million in requirements to the Panamanian economy. Another source estimates some 10% of the external funds placed in Panama are used locally, which amounts to approximately US\$700 million. (4)

These additional inflows of capital due to the off-shore banking sector have, in a limited respect, filtered down to the commercial sector in Panama. For example, in 1973 and 1974, a portion of these flows were used to finance inventory accumulation in the free zone. (5) However, there is little evidence available to indicate that this capital has been used to enhance industrial and manufacturing activities in the Colon Free Zone, such as financing joint ventures. Also, the urban revitalization project for Colon was financed almost entirely through external sources.

C. Balance of Payments

The presence of off-shore banking facilities has had a favorable impact on the balance of payments. The net foreign position has increased amounting to several hundred million dollars in select years. (6) The net foreign position was calculated by separating all foreign assets and liabilities from domestic ones; the change in the net foreign position then represents the net inflow or outflow via the banking system, but an exact figure is not readily available.

The net foreign exchange earnings from the free zone are also substantial. Total revenues from rentals amounted to US\$4.5 million in 1979. (7) Wage payments account for an additional US\$2 million. (8) Expenditures for the purchase of raw materials and repatriation of profits in Panama have not been substantial due to the nature of the commercial activity.

D. Financial Return on Investment

The Colon Free Zone is financially strong, having US\$22 million in total assets as of December 31, 1979. Of this amount, about 77% was paid in capital and retained earnings and 22% in long-term debt. In the past, investments in land and buildings were mostly financed on a cash basis from net earnings. The zone has continued to show a profit: Net income for 1977-1979 was US\$1,000,000 per year. (9)

(3) Article 30, Cabinet Decree No. 238, July 2, 1980.

(4) Euromoney, op.cit., (June, 1977).

(5) McCarthy, Ian S, Hosting Offshore Banks: Costs and Benefits
International Monetary Fund (mimeo) (May, 1979), p. 44.

(6) McCarthy, op.cit., p. 45.

(7) World Bank Staff Appraisal Report, op.cit., p. 61.

(8) Zona Libre de Colon, Statistical Compendium of the Colon Free Zone,
1970 - 1978, p. 31.

(9) World Bank Staff Appraisal Report, op.cit., p. 61.

The financial picture for the Zone has changed since the urban renewal project described above. An estimated US\$50 million dollars is currently being used to expand the commercial/ warehousing facilities and construction of an industrial estate.

E. Impact on Labor

Total wage bill expressed as a percentage of total commercial activity in the zone was less than 1% in 1978 (8000 persons employed). In general, free zones primarily engaged in commercial activity do not generate substantial employment opportunities.

Since the late 1950s, Panama has had a minimum wage system by district and sector of economic activity, which is adjusted periodically. In 1977, the minimum wage levels, including fringe benefits at 36% of direct wages, ranged from US\$.77 per hour to US\$1.04 per hour depending on the type of activity and location. (10) These minimum wages are applicable only to non-skilled employees and average wages tend to be substantially higher.

Table 2
Employment in Selected Activities in Panama

| | 1976 | 1977 | 1978 |
|-------------------|---------------------|------------|------------|
| Off-Shore Banking | 5597 (1) 152 (2) | N/A N/A | N/A N/A |
| Colon Free Zone | 4673 | 5300 | 8000 |

- (1) Employment in Domestic License Banks (those which carry out both onshore and off-shore business)
- (2) Employment in International License Banks (those which are licenses solely for off-shore business)

Source: Panama Monetary Authorities
Colon Free Zone Authority

F. Linkages With the Domestic Economy

The total domestic value-added expressed as a percentage of the commercial activity in the zone was 4% in 1978. (11) The value-added consisted mostly of wage payments. In terms of the commercial activity, there has been an insignificant development of backward linkages with the domestic economy.

In the banking sector, Panama has been more successful in developing linkages with the domestic economy. The Republic has succeeded in attracting

(10) Aro Semena, Noriega y Castro Investigation y des Arrolla, Panama - A Business Profile (1979), p. 43.
(11) Zona Libre de Colon, op.cit., p. 32.

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ancillary financial business and is now an important insurance center for the region. One author notes that the hotel business has also been a direct beneficiary of the banking business. (12)

F. Technology Transfer

The acquisition of technical knowledge of the production process is not relevant to warehousing and storage activities. In contrast, in the banking sector, substantial investments have been made in training local staff. According to one observer, "a more indirect advantage is that the banking sector has imported advanced administrative technology and has trained Panamanians in its use." (13)

IV. Factors Influencing Performance

Panama's strategic location in international commerce is the single most important factor determining the commercial success of the free zone. The Republic is dependent on international trade, and urban development has been strongly influenced by the Canal and related commercial/industrial activities. Panama City is also a major center for commercial and financial activities in Latin America. This role arises from the locational advantages in domestic and international trade and finance conferred by the Canal, reinforced by liberal commercial and banking regulations.

The 1980 urban renewal project previously referred to represents a major effort to diversify the commercial activities in the free zone. To date, the zone has not been able to attract a substantial amount of investment in the light manufacturing industries. However, due to the recent construction of the infrastructure, an insufficient amount of time has elapsed for an adequate evaluation.

The success in commercial activity in the zone along with the presence of off-shore banking institutions may provide the zone authorities with significant leverage to attract additional investment.

V. Conclusions

The commercial activity in the Colon Free Zone has consistently generated a net profit. Employment in the zone has not been extremely high, but has provided a consistent, steady source of income for the local population. The Canal Treaty has provided the opportunity to increase the amount of land available for commercial activity, and an increase in employment and revenues is expected.

As a result of the development of the banking sector, the government of Panama has given significant attention to the growth of Panama City, almost to the neglect of Colon. In terms of employment, foreign exchange earnings and the effect on the balance of payments, the off-shore banking sector has

(12) Johnson, H.G., "Panama as a Regional Financial Center: A Preliminary Analysis of Development Contribution", Economic Development and Cultural Change, (January, 1976), p. 264.

(13) Johnson, op.cit., p. 267.

been successful. However, there has not been a significant linkage between the development of export-oriented manufacturing and the banking sector.

In recent years, a number of developing countries such as Jamaica and Barbados have expressed an interest in attracting off-shore business. The case study of Panama indicates the benefits--positive impact on the balance of payments, skills transfer, etc.--of hosting off-shore banks. This information, however, is not sufficient from which to draw concise conclusions regarding the connection between the banking and industrial sectors. Additional case studies of Singapore, Hong Kong, Lebanon and the Philippines are recommended.

CASE STUDY THREE

SENEGAL: DAKAR INDUSTRIAL FREE ZONE

Export processing zones operating in West Africa have, in large part, been unsuccessful. The Dakar Free Zone is one of the oldest projects established in the region, but foreign investment has been minimal. This case study will analyze the measures taken by the zone authorities to increase investment. The economics of locating light manufacturing activity in the region will also be discussed.

I. Introduction

Since national independence in 1960, the manufacturing sector in Senegal has grown at an annual rate of 5.2% and the share of GDP grew from 19% to 24% in 1980. (1) Four main activities comprise the bulk of national output: food processing, chemicals, mining, and textiles. Approximately 50% of manufactured output is exported, consisting mostly of peanut oil, phosphates and fish products.

Industrial policy in Senegal is developed and implemented in a number of government agencies. Conceptually, the policy is described as "guided liberalism"; practically, it has resulted in extensive state intervention in the ownership, management, and operations of large firms in the key sectors. The investment codes have tended to favor import substitution policies and discourage backward linkages. However, because of government budgetary constraints, active intervention in the economy has been decreasing and private sector involvement is actively being sought.

II. Zone Profile

In 1974, the Dakar Industrial Free Zone was established to promote export-oriented industries. The zone occupies 1573 acres of which 1137 is reserved for business establishments. The estate is located 15 miles from the Dakar International Airport and 8 miles from a major, well-equipped sea-port. Plots of land are available for an annual rental of \$5631 per acre on a lease basis for 99 years. (2) At the present time, no pre-fabricated factory shells have been constructed. Electricity, telex, telephone, and fuel are offered at subsidized rates. Foreign investors are completely exempt from tax payments and no performance requirements are presently imposed.

III. Zone Contributions to Development

As of May, 1981, four enterprises were engaged in production and seven additional enterprises have been reviewed, but not yet established. The four active manufacturers are producing tires and inner tubes, gloves and lighters, trailers/workshops and clothing, employing approximately 500 people. (3)

(1) Senegal Investment Promotion Project, Staff Appraisal Report, The World Bank, Washington, D.C. (1981).

(2) Exchange Rate: US\$ = CFAF235

(3) Autonomous Authority of the Dakar Industrial Free Zone, Investment Guide

Due to the very limited occupancy, the zone has provided an insignificant contribution to the economic development of Senegal. In terms of generating employment, providing net foreign exchange earnings and attracting private foreign investment, the zone has not been successful since inception. Information is not readily available regarding export performance, net foreign exchange earnings and domestic value-added. In light of these considerations, the discussion which follows will focus on those factors which have influenced the performance of the zone.

IV. Factors Influencing Performance

A. Regulatory Climate

Prior to 1980, the Dakar Industrial Free Zone did not offer substantial subsidies for services such as electricity and fuel. Further, performance requirements relating to employment and minimum capital investments were imposed. In 1980, these performance requirements were relaxed, and additional incentives and subsidies were offered. To date, no substantial investments were made as a result of these legislative changes. Not only has the effect of these incentives and subsidies been minimal, but the Zone Authority may be losing valuable foreign exchange from the present occupants.

B. Infrastructure

As previously indicated, the zone does provide adequate services and access to airport and sea-port facilities. (Specific information on the reliability of these services is not available to the authors at this time.) The zone does not, however, offer pre-fabricated factory shells. As indicated by Kelleher (4), a pre-built factory enables production to start quickly and reduces the initial capital expenditures of the project. In instances where confidence in the zone is minimal (such as the present case) overseas investors will try to avoid the financial burden of constructing a factory due to uncertain supplies of materials. A pre-built factory on a rental basis does assist in alleviating these problems.

C. The Cost of Production

In comparison to zones in the Far East, the cost per unit of production in the Dakar Industrial Free Zone is not favorable to industrial investment. Wage rates in Senegal are controlled by Collective Bargaining Agreements. As indicated in Table 1, these rates do not compare favorably with zones located in the Far East, Mexico and Latin America. (5) For example, wage rates for unskilled labor in Senegal are 556% higher than Sri Lanka. (see also Annex 4) Reports also indicate that the Senegalese workers are not as productive as their Far Eastern counterparts.

(4) Kelleher, Thomas, Handbook on Export Processing Zones (UNIDO/IOD.31) (July, 1976), p. 28.

(5) Wage rates provided in this table include a 25% allowance for benefits as specified in the Collective Bargaining Agreements.

TABLE 1
WAGE RATES IN SENEGAL

| CATEGORY | Hourly Rates (US\$) |
|------------------------|---------------------|
| Unskilled Labor | .75 |
| Semiskilled Labor | .83 |
| Skilled Labor - Cat. 1 | .91 |
| Cat. 2 | 1.06 |
| Prof. Workers - Cat. 1 | 1.12 |
| Cat. 2 | 1.27 |
| Cat. 3 | 1.43 |

Source: Autonomous Authority of the Dakar Industrial Free Zone

Further, the cost of transporting goods from Senegal (including freight, insurance, dock charges, etc.) to developed countries, particularly the U.S. and Western Europe, is not competitive with other developing countries. As indicated in Table 3, the cost of shipping from the West African destination to Western Europe was substantially higher than for similar items from the Far East. Further, transport rates to France, one of Senegal's traditional trading partners, are prohibitively high:

Table 2: Comparison of Tariffs from Dakar to France

| Freight | Unit | Port of Debarkation | Tarriff (CFA Francs) |
|---------|------|---------------------|----------------------|
| Air | 1 kg | Casablanca | 225 |
| | | Tokyo | 490 |
| | | Dakar | 635 |
| Sea | 1 m3 | Casablanca | 13,075 |
| | | Dakar | 19,000 |

Source: Dakar Industrial Zone Authority

In sum, the cost per unit of production places Senegal at a distinct disadvantage in comparison with other developing countries with export processing zones.

D. Institutional Support

Another major constraint in attracting export-oriented manufacturing enterprises to Senegal has been the lack of capital and institutional support. Two organizations, SOFISEDIT and SONEPI, have not provided access to capital or strong assistance for export-oriented industries in the manufacturing sector. Sofisedit, a development bank created and financed by the World Bank, makes loans and equity investments in industrial ventures,

but may not lend for infrastructure, consumer durables, housing or agricultural projects. Sonepi, a mixed public company, was established in 1972 to expand small domestic enterprises. The emphasis of Sofisedit has been the tourism and fishing sectors. Sonepi has been most effective in the metal working and artisan sectors. (6)

An export-incentive system was introduced in August, 1980 for textiles, shoes, processed fish, fertilizers and agricultural products (other than ground nuts). This shift to a private sector, export-oriented and better integrated industrial development policy remains hampered by extensive administrative controls, market share restrictions and the high cost of capital. In light of these restrictions, institutional support has provided little impetus to the development of export-oriented manufacturing enterprises.

E. Joint Ventures and Access to Capital

Prospects for local participation in the form of joint ventures in the free zone are very limited. The cost of financing investments in the manufacturing sector is approximately 17-20% per year, taking into account interest rates, banking fees and Taxe sur les Prestations de Services. This high cost of capital has hindered investment and a large portion of available industrial investment has been devoted to the purchase of foreign assets rather than investment in the local economy.

V. Conclusions

This case study illustrates the prohibitively high cost of producing manufactured goods in Senegal and other countries in West Africa. Part of this high cost can be attributed to wage rates in the country, but the cost of transportation, a factor not controlled exclusively by the government, must be taken into consideration. Attempts to increase tax incentives and subsidies to industry have been made, but with limited success. This illustrates the relative unimportance of these factors in the investment decision making process.

The limited access to capital, lack of institutional support and bureaucratic "red tape" has severely dampened the investment climate in manufacturing. For private investors, subcontracting would be the most likely activity to occur in the short-term due to the undeveloped marketing and promotional channels. However, due to the high cost per unit of production and the competition between developing countries in attracting private investment to free zones, prospects are very limited for success in the short-term.

In the face of Senegal's severe sectoral and structural handicaps, there is little that an EPZ can be expected to accomplish in creating a more attractive investment climate.

(6) Senegal Investment Promotion Project. op.cit. p 5.

CASE STUDY FOUR

SRI LANKA: KATUNAYAKE INVESTMENT PROMOTION ZONE

The Katunayake Investment Promotion Zone is one of the few zones established after 1978 which has received a substantial amount of foreign investment. This case study will evaluate the performance of the zone since inception and will also serve to illuminate current trends in demand for new EPZ projects.

I. Introduction

Industrialization in Sri Lanka has been based upon import-substitution policies characterized by a high level of protection. Protection was accorded through a combination of a tariff structure, direct import controls and an overvalued exchange rate. Overall, industrial performance was poor. From 1970-73, the growth rate of manufactured output was 2.2% per annum and decreased to 1.7% in 1973-76. (1) The industrial sector also exhibited a high import-dependence.

Since the election of the United National party in 1977, Sri Lanka has undergone a major transition in economic development policy. Foreign exchange and import control regulations have been relaxed and customs duties have been reduced in most industrial sectors. The government has emphasized free trade, oriented towards export, as the key element in its development strategy.

II. Zone Profile

One of the components of this strategy was the establishment of an export processing zone in Katunayake, administered by the Greater Colombo Economic Commission (GCEC). The objective of the zone, as stated by the Prime Minister, is to "attract foreign investment". "The attainment of other objectives," he continues, "such as employment generation and growth of manufactured exports are seen as being dependent on the success in attracting investment." (2)

As indicated in Table I (page 2), the majority (60%) of industries located in the zone are textile and garment manufacturers.

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- (1) S. Paine and N. Kappagoda. The Balance of Payments Adjustment Process: The Experience of Sri Lanka. (1981) p. 50.
 - (2) Ceylon Daily News. 31 October 1977.

TABLE 1
PROJECTS IN COMMERCIAL PRODUCTION, JULY, 1981

| Description | Number | % of Total |
|--|--------|------------|
| 1. Food, Beverage & Tobacco | 3 | 9% |
| 2. Wearing Apparel & Leather Industry | 24 | 68% |
| 3. Wood products | 1 | 3% |
| 4. Chemicals, Petroleum & Plastic Products | 4 | 11% |
| 5. Metal Products | 1 | 3% |
| 6. Misc. | 2 | 6% |
| TOTAL | 35 | 100% |

Source: Greater Colombo Economic Commission

Analysis of the sources of investment capital (Table 2) indicates that about half came from traditional garment exporting countries now facing substantial quota restrictions imposed by importing countries. The majority of this investment occurred in the early years during which time the infrastructure was not yet completed.

TABLE 2
FINANCIAL ARRANGEMENTS AND SOURCES OF CAPITAL
FOR GARMENT MANUFACTURERS; MARCH, 1980

| | Sub-scribed Equity | Long-term Loans | Total Equity |
|-------------------|--------------------|-----------------|--------------|
| Foreign Component | 51% | 83% | 67% |
| Local Component | 49% | 17% | 33% |

FOREIGN COLLABORATION

| Country | # OF PROJECTS |
|------------------------|---------------|
| Hong Kong | 8 |
| USA | 4 |
| West Germany | 2 |
| South Korea | 2 |
| Dubai | 1 |
| Netherlands | 1 |
| TOTAL GARMENT PROJECTS | 18 |

Source: Greater Colombo Economic Commission

From the point of view of the government, the garment industry provides a quick return on investment in terms of occupancy, employment and export earnings. Also, the industry requires no special skills. As a result, the garment industry was given high priority by the government. Exports also received preferential treatment and promotional and marketing assistance through the Export Promotion Secretariat.

In 1980, the United States imposed import quotas on garments and textiles manufactured in Sri Lanka. Correspondingly, the number of project applications in textiles has substantially declined, and zone authorities are now trying to diversify manufacturing activity.

III. Contributions to Development

A. Export Performance

Total exports for the year ending December, 1980 from the zone were approximately US\$30 million, of which 90% is attributable to garments. This represents 2.7% of total exports and 8.8% of total industrial exports in 1980. (3)

B. Net Foreign Exchange Earnings

On average, 74% of the total value of exports for all Zone projects represents the cost of imported raw materials. (4) Making an estimated allowance for dividend payments on equity held by foreigners, wage payments to foreign employees and liquidation of foreign equity holdings, the net foreign exchange earnings amounted to approximately US\$5,000,000 in 1980. (5)

C. Level of Foreign Investment

The estimated value of investment for all projects considered active as of July, 1981 was US\$116 million, or US\$1.2 million per project (5). For projects financed by foreign investment outside the zone, the total level of investment was US\$51 million or US\$2.2 million per project. The total level of investment in the zone was substantially higher, but the investment per project was approximately double for enterprises operating outside the zone.

As indicated in Table 2, 49% of the total equity was contributed by local collaborators while 17% of the long-term loans came from domestic sources for the garment manufacturers located in the zone. The high local equity position overestimates the capital inflow resulting from the establishment of the zone. However, profits accruing to local collaborators are available for reinvestment in the country.

(3) Greater Colombo Economic Commission.

Note that 1980 was the first full year of operations for the Zone. The exchange rate used throughout this study is US\$1 = SL RS18.70 (17/6/81)

(4) Ramanayake, Dennis, "The Katunayake Investment Promotion Zone", ILO-ARTEP (1982), p. 42.

(5) The net foreign exchange earnings have been based on employment of 14,740 in 1980 and a total of 35 projects.

The number of projects in production outside the zone is small. The FIACL offers a package of incentives very similar to those offered within the zone, but does not offer centrally located developed infrastructure facilities. Only three of the thirty-five projects in production as of March, 1980 are located outside the zone, but an additional 23 are considered active. (6) The investment in the zone infrastructure appears to have a strong positive effect on inducing private investment.

D. Financial Return on Investment

Due to the fact that the zone has been in operation only since 1980, an accurate assessment of the internal rate of return for the project is not possible. The total capital expenditure incurred by the GCEC was US\$16.2 million and over fifty percent of this investment was for overseas telecommunications. The main sources of income for the GCEC are long-term leases generating revenue of US\$32,000 per acre plus a nominal fee per annum. (There are no import duties on machinery, equipment, and raw materials and a 100% Tax Holiday is offered for a 4-10 year period.) At the present time, a total of 134 acres is allocated to industrial activity. Assuming full occupancy, a total of approximately US\$5 million will be generated in revenues for the first ten years, implying a US\$11 million dollar loss. (Note that this calculation assumes that zone occupants bear the full cost of a telecommunications system that is used by the entire city of Colombo.)

E. Linkages with the Domestic Economy

At this early stage of development, linkages with the domestic economy appear to be minimal. The total value-added in the zone by the garment industry was 36%. Of this percentage, 6% represents the share of goods and services bought in the country, which consisted largely of packing materials.

F. Impacts Upon Labor

Employment figures for the zone are impressive. A total of 14,740 jobs were created in a two year period. However, there is little evidence that skills have been upgraded as the majority of the jobs available are assembly work. As indicated in Table 3, 88% of the workforce is female and 60% are unmarried workers below 26 years of age. This prevalence of a very young workforce is related to the fact that the majority of workers are recent school leavers entering the labor market for the first time (80% have never been employed before). (7)

Wages paid to production workers are largely uniform and are guided by the minimum wage rates stipulated by the GCEC. In general, wage rates are slightly higher inside the zone than the surrounding economy. Females, however, are paid less than male workers and earn an average of US\$1.27 per day, the lowest wage rate of all countries operating zones in the Far East.

(6) Ramanayake, Dennis, op.cit., p. 20.

(7) Ibid., pp. 46-48.

TABLE 4
Key Indicators in Employment in the Katayanka Zone

| | Male | Female |
|----------------------------|-----------|-----------|
| Employment | 2,017 | 12,723 |
| Average Daily Earnings (a) | US \$1.52 | US \$1.27 |
| Average Work Week | 46.5 hrs | 49.1 hrs |

(a) Including fringe benefits as 33% of total wage

Source: Greater Colombo Economic Commission

Suitable accommodations and health services are difficult to find in the area. Approximately 71% of the work-force lived in parental homes, which reflects the fact that the majority of the workforce are young, unmarried females. Also, suitably priced accommodation is difficult to obtain. In light of this housing situation, over 20% of the workforce travelled over 16 miles to work and the average expenditure on transportation was 15% of total wages per week. Medical benefits are made optional by the GCEC and there is little evidence that zone occupants provide these services.

IV. Factors Influencing Performance

The most important factors influencing the successful level of foreign investment attracted to the zone are the low cost of production per unit of output and access to markets in the industrialized countries. Sri Lanka has the lowest wage rate of all countries operating zones in the Far East. There is an abundance of cheap, well-educated labor. Productivity appears to be high, and strike activity is minimal. The workers enjoy the right to form trade unions, but there is no evidence that the employees have attempted to organize. (8)

At the time the zone was established in 1980 Sri Lanka was a quota-free production center for garment manufacturing; this has strongly influenced the investment decisions of interested firms. The pattern of collaboration that is emerging indicates that half of the investment in garment projects came from traditional garment exporting countries now facing quota restrictions on their exports. In the case of collaboration from the U.S. (4 projects), the duty concessions in the U.S. Tariff Code enabling a U.S. importer to pay duty only on the value added abroad was an important factor influencing the investment decision.

(8) Industrial Disputes Act of 1971 (Chapter 131). See also Ramanayake, Dennis, op.cit., p. 61.

V. Conclusions

In terms of occupancy, employment and gross export earnings, the Katunayake Investment Promotion Zone has been able to achieve impressive results during the two years of operations analyzed in this study. The statistics indicate that 147 project proposals have been approved of which 117 were considered active and 35 are in commercial production as of July, 1981. (9) This success has been achieved by the adoption of a liberal policy designed to achieve maximum impact.

The garment industry which dominates the zone illustrates the danger of this type of industrial development. The capital investment is minimal, and the potential for "footloose" manufacturers is high. The industries' inputs are minimal and few linkages with the domestic economy have been realized. The instability of the zone is also increased as a result of recent import quotas imposed by the industrialized countries, particularly the United States.

In 1982, the Greater Colombo Economic Commission tightened its approval criteria for zone projects. Two large multinational electronic firms have signed agreements with the GCEC, indicating that some diversification in the industry mix is possible. However, there is little indication that firms utilizing local resources or developing substantial linkages with the economy have been attracted to the zone. It is recommended that a complete review of the zone be conducted within the next year to evaluate the full effect of the recent quota restrictions and the ability of the zone to diversify its industry mix and sustain the earlier growth curve.

(9) Greater Colombo Economic Commission.

CASE STUDY FIVE

SOUTH KOREA: THE MASAN FREE EXPORT ZONE (MAFEZ)

The Masan free zone is one of the oldest, well-established export processing zones. The zone is widely cited by many authors as one of the primary "success stories" of EPZ contributions to export-led industrialization. This case study will review the performance of the zone and discuss the key factors which have contributed to the zone's economic success.

I. Introduction

In the early 1960s, opportunities for import-substitution rapidly diminished and industrial growth in Korea began to falter. A number of attempts were made for economic liberalization as policy makers came to accept that rapid economic development depended on export-oriented industrialization. In the decade after 1965, the average minimal rate of growth in manufacturing output was 24%. (1) The ratio of exports more than tripled in this period, and the share of GNP originating in the manufacturing sector more than doubled. Manufactured exports became increasingly diversified, and in 1975 Korea was a major exporter of footwear, textiles, transport equipment, electrical machinery and appliances and various manufactures of metal and non-metallic minerals.

II. Zone Profile

The City of Masan is located on the southern-most tip of the Korean Peninsula. The port location provides easy access to sea transportation, and a new airport has recently been constructed in close proximity. The Kampu Ferry Line also services the area and takes approximately 8 hours to reach Shimonoshi, Japan.

The Masan Free Export Zone (hereafter referred to as MAFEZ) commenced operations in 1971. The zone covers approximately 200 acres of land. In accordance with the provisions of the Foreign Capital Inducement Law, the South Korean government exempts all foreign companies from various tax responsibilities. A 100% tax exemption is granted on all income, corporate, property and real estate acquisition taxes during the first five years of operation and 50% exemption in the following three years. Taxes on dividends follow the same exemption status. There are no performance requirements and labor regulations are partially relaxed inside the Zone.

Another important privilege enjoyed by MAFEZ occupants is the use of streamlined permitting procedures. MAFEZ is a pioneer of the "one-stop shop" which allows foreign firms to transact their business, from initial investment to export, through one authority rather than becoming involved with the central government.

The number of firms approved for occupancy has increased from 4 in 1970 to a peak of 115 in 1973. Occupancy has gradually decreased to a total of 89 firms in 1980. The firms which have suspended operation since 1975 are

(1) Westphal, Larry, World Bank, Staff Working Paper No. 469, Korean Industrial Competence: Where It Came From (July, 1981), p. 12.

relatively small scale operations, in terms of investment, that produced low technology, labor intensive products such as garments. After 1975, the occupancy of the zone appears to have stabilized. This corresponds to a shift to electronic and metal production and also provides evidence as to the "suitcase" nature of garment manufacturers. Also note that the zone at Iri was constructed in 1976 and has mainly attracted this type of investment.

TABLE 1
FOREIGN INVESTMENT AND LEVEL OF OCCUPANCY: MASAN FEZ
(As of December 31, 1980)

| Year | # of Firms | Currently in Operation | Total Investment (million US\$) |
|------|------------|------------------------|---------------------------------|
| 1970 | 4 | | 1.2 |
| 1971 | 22 | 6 | 5.3 |
| 1972 | 70 | 24 | 36.9 |
| 1973 | 115 | 71 | 82.8 |
| 1974 | 110 | 98 | 88.9 |
| 1975 | 105 | 101 | 89.0 |
| 1976 | 99 | 96 | 98.0 |
| 1977 | 99 | 97 | 103.9 |
| 1978 | 97 | 95 | 111.9 |
| 1979 | 94 | 86 | 114.6 |
| 1980 | 89 | 84 | 114.1 |

Source: Masan Free Zone Authority

As indicated in Table 1A, over 50% of the industries are manufacturers of electronic and metal products. In terms of the size of investment, no particular generalization can be drawn. Among the 89 projects in MAFEZ, 32 projects involve investment exceeding one million dollars each while 33 projects were less than three hundred thousand dollars each.

TABLE 1A
FIRMS BY PRODUCT AND INVESTMENT
(December 31, 1980)

| PRODUCT | # OF FIRMS | INVESTMENT (US\$1,000) |
|--------------------|------------|------------------------|
| Electronics | 26 | 55,505 |
| Metal Working | 19 | 28,006 |
| Precision Products | 9 | 10,099 |
| Textile products | 7 | 2,041 |
| Machinery | 5 | 3,026 |
| Footwear | 5 | 5,809 |
| Non-Metal | 3 | 784 |
| Others | 14 | 8,798 |
| TOTAL | 89 | 114,128 |

Source: Masan Free Zone Authority

III. Zone Contributions to Development

A. Export Performance

Total exports for the year ending 1979 were US\$600.5 million. This represents approximately 4% of total national exports and 4.5% of total national exports of manufactured goods. (2) This figure compares very favorably with zones in other host countries that are comparable in size and overall level of industrial development. For example, The respective shares for the Philippines and Malaysia in 1978 were 7.8% and 3.7% of national exports of manufactures. (3)

B. Foreign Exchange Earnings

The major sources of foreign exchange earnings for the host country consist of payments to the local labor force, purchase of domestic raw materials, service payments, and the percent of profits reinvested in the host country. Table 3 shows the steady growth in foreign exchange earnings. Note that this is the minimum figure because no allowance has been made for reinvested capital due to the high percentage of foreign-owned firms.

TABLE 3
RATE OF FOREIGN EXCHANGE EARNINGS
(UNIT: US\$1,000)

| | 1971 | 1972 | 1973 | 1974 | 1975 |
|------------------------|------|-------|--------|---------|---------|
| Total Exports | 856 | 9,739 | 70,374 | 181,547 | 174,803 |
| For. Exchange Earnings | 238 | 2,991 | 25,881 | 72,144 | 71,982 |
| Rate of Earnings (%) | 27 | 30 | 36 | 39 | 41 |
| Breakdown of Earnings: | | | | | |
| Domestic Inputs | 15 | 415 | 11,203 | 29,565 | 30,315 |
| Wages | 157 | 1,395 | 8,420 | 18,090 | 20,772 |
| Rent and Services | 66 | 1,181 | 6,258 | 24,489 | 20,895 |

Source: MAFEZ Administrative Authority

The amount of foreign exchange earnings in MAFEZ accounted for a mere .05% of the total foreign exchange earnings of the manufacturing sector in Korea in 1971 and reached 3.3% in 1974. Thus, whereas the rate of foreign exchange earnings continues to increase inside the zone, the overall impact on the manufacturing sector has been minimal due to the rapid increase in manufactured exports.

- (2) Kim, Chan-Jin, "Policies to Attract Export Oriented Industries: The Role of Free Export Processing Zones: The Case of Korea", OECD meeting, Paris, June 1981, (mimeo), p. 44.
- (3) UNCTAD, "Export Processing Free Zones in Developing Countries: Implications for Trade and Industrialization Policies" TD/B/C.2/211, 1983, p. 20.

C. Foreign Investment

In terms of the ownership pattern of investment, wholly-owned foreign investment accounts for 75% of total investment, while joint ventures with Korean nationals was 25%. (4) The firms that came in the initial years of zone operations usually took the pattern of sole investment, while late comers formed joint ventures. According to the Masan Administrative Authority, further increases in Korean investment are expected and encouraged as Korean general trading companies and large manufacturers are being encouraged (through preferential interest rates and other subsidies) to invest in the Masan zone, replacing small foreign firms.

D. Financial Return on Investment

A total of US\$28.8 million was spent by the Government of Korea for the construction of the Masan free zone, of which US\$24 million was expended in the 1970-73 period. In addition to the costs of zone construction, management and maintenance must be taken into account. Another cost is the subsidies offered to occupants. For example, Korean exporters, including those inside the zone, are eligible for a preferential interest rate. The rate of interest on loans for exports is 12% per year, whereas the rate for commercial bills is 19.5%.

Information about income generated by the project is not readily available. Therefore, an accurate calculation for the return on investment is not possible at the present time.

E. Linkages in the Domestic Economy

When operations began in Masan in 1971, there was a heavy reliance on foreign raw materials. The purchase of raw materials accounted for only 1.8% of total exports from the zone. However, the rate of local raw materials used in exports amounted to 24% by the year 1977 and shows a stabilized pattern around 22-24% per year thereafter. Conversely, the weight of foreign raw materials used in Masan exports exhibits a steady decrease, down to 46% in 1980. (5)

About 50 Masan firms are presently obtaining production materials, such as parts, components and other materials from about 130 locally sub-contracted firms, mainly due to cheaper wage costs outside the zone and a shortage of production capacities. Unlike other EPZs, the Masan zone demonstrates substantial backward linkages with the domestic economy.

F. Employment

Employment in the Masan zone has steadily increased since inception in 1971 to a total of 27,942 workers in 1980. The ratio of female workers has always been high, though the ratio has been steadily decreasing from 90% in 1971 to 75% in 1979. This rise in the employment of male workers is partly due to the increase in high-technology industries and the employment of higher skilled workers.

(4) Kim, Chan-Jin, op.cit., p. 41.

(5) Ibid., p. 50.

As indicated in Table 4, the majority of workers are employed in assembly type operations, although a slightly increasing number are being employed in the technical and engineering fields. This percentage remains very low, implying that upgrading of skills is minimal.

Table 4
Ratio of Employees by Skills and Sex

| | Male | Female | Total |
|----------------------|------|--------|-------|
| Clerical and Other | 5.2 | 3.5 | 8.7 |
| Engineers | 1.2 | 0 | 1.2 |
| Technicians | 1.3 | 0 | 1.3 |
| Skilled-Workers | 2.0 | 3.5 | 5.5 |
| Semi-Skilled Workers | 3.8 | 24.1 | 27.9 |
| Apprentices | 9.5 | 45.9 | 55.4 |
| TOTAL | 23.0 | 77.0 | 100.0 |

Source: MAFEZ Administrative Authority

According to ILO Statistics, the average hourly wage for workers in the manufacturing sector in Korea was US\$.91 for electronics and US\$.59 for garments in 1980. (6) In the same year, the average hourly wage for workers in MAFEZ was US\$.89. (7) These figures are comparable, but there is a sizeable wage differential between male and female workers. According to the statistics gathered by the Pacific-Asia Resource Center, women are paid approximately one-half of the total wages of men.

There are no legal means of improving working conditions for the employees in the zones. Strike activity has been reported, and the major cause of disputes is generally the deterioration of working conditions, non-payment of wages and unfair discharges. (8)

Unlike the manufacturing sector outside the zones, the MAFEZ workers are not permitted to organize or belong to any labor organizations. Article 18 of the Law on the Establishment of the Free Export Zones protects foreign industries from labor disputes in public utilities and limits the rights of workers to strike. Furthermore, the Law on Trade Union and Mediation of Labor Disputes in Enterprises Invested by Foreigners does not permit labor organizations to engage in arbitration procedures.

IV. Factors Influencing Performance

Much of the success of MAFEZ in attracting foreign investment can be attributed to Korea's renewed economic relationship with Japan in 1964. Rising

(6) ILO, Yearbook of Labour Statistics, 1980.

(7) Kim, op.cit., p. 53.

(8) Kei, Matsou, "The Working Class in the Masan Free Export Zone", Japan-Asia Quarterly Review, p. 77.

wage rates and the lack of unskilled labor at home were just a few of the reasons for Japan's economic interest in South Korea. It has been shown that Korea did not have to actively promote investment: rather, Japan has taken a preemptory role in developing the Zone. For example, close collaboration between South Korea and Japan can be seen in the process of formalizing plans for the MAFEZ. The Japan-Korea Economic Association prepared plans for the construction, infrastructure and administrative organization.

More importantly, Direct Foreign Investment in the form of equity participations has not been the major impetus for Korea's successful experience with industrialization. The initial inflows of direct foreign investment into the Korean economy were for import substitution and almost exclusively oriented toward the domestic market. DFI began flowing into the export sectors in the 1967-71 period, but only in modest volumes. Thereafter, the accelerated inflows of DFI in the 1970's led to a rapid rise in the proportion of exports by foreign firms, because most of the DFI during this period was oriented toward exporting. In 1975, however, wholly or partly foreign-owned firms were responsible for only 17.6% of Korea's manufacturing exports. (9)

The majority of this investment was concentrated in textiles and apparel and electrical machinery. During the mid-1970's foreign firms accounted for about a tenth of the exports of textiles and three-quarters of those of electrical machinery. Foreign firms accounted for approximately a tenth of exports in other sectors. (10) Moreover, foreign firms have had limited involvement in production of Korea's most important exports: wigs, plywood, transport equipment, footwear, iron and steel, and non-metallic products.

In contrast, the majority of the manufacturing activity in MAFEZ is concentrated in the electronics industry. Further, the majority of exports are intrafirm transactions based on subcontracting with Japanese manufacturers. In this respect, the zone has been successful in attracting investment, particularly in an industry characterized by rapid changes in technology. However, as noted above, the manufacturing activities in the zone do not account for a significant proportion of Korea's exports and have not lead, but accompanied overall industrialization.

Fundamental economic factors in Korea appear to be more important reasons for the country's success in attracting foreign investment than the establishment of the free zone. Free zone tax incentives, legal protections from labor disputes, and ease in permitting procedures have facilitated this investment, but do not appear to be responsible for Korea's comparative advantages vis a vis other developing countries.

Expedited permitting and administrative procedures appear to be the most important of the regulatory policies. All matters pertaining to export and import trade, acquisition of land, and approval of foreign investments are handled by one administrative agency without delay.

(9) Westphal, op.cit., p. 51.

(10) Ibid, p. 55.

V. Conclusions

During its formative years, the Masan zone had a substantial impact in creating employment for unskilled workers and stimulating the growth of small businesses in the domestic economy. Korea has also been very successful in terms of attracting private investment and generating fairly substantial foreign exchange earnings.

Some of the investment can directly be attributed to initiation of the free zone, but Korea's trade relationship with Japan must be credited as the major impetus for foreign investment in the country. More importantly, the direct foreign investment in the zone does not appear to be the primary factor contributing to the rapid industrialization of the country. This point is particularly crucial to policy makers trying to duplicate the experiences of the Masan zone.

The tax exemption period is presently expiring for most of the enterprises at Masan and new investment will only be accepted if an existing zone occupant decides to withdraw. The Korean government is encouraging occupant enterprises to increase their investment, introduce superior technology and to continue to expand subcontracting to domestic Korean firms. These efforts have not been very successful in the recent past, in large measure as a result of the global economic recession. A longer time frame is necessary to evaluate the long-term effect of the new policy.

APPENDIX B

SELECTED FREE ZONE AREAS: COMMERCIAL AND EMPLOYMENT INFORMATION

- (1) Free zones operating in the United States and Europe are omitted from this analysis.
 - (2) The term "various" implies that manufacturing and commercial and banking facilities can be established anywhere in the country.
 - (3) The date first established represents the year the first zone was activated in the country.
 - (4) Type of activity:
 - (A) EPZ (Export Processing Zone):
A specialized industrial estate located physically and/or administratively outside the customs barrier of the country. The major activity is assembly and light manufacturing for export.
 - (B) Transit Zone:
A delineated area, usually in or near a port, where unrestricted trade with the rest of the world is permitted. Merchandise may be moved in and out of transit zones free of customs duty, stored in warehouses and repackaged as needed. Goods imported from the transit zone into the host country pay requisite duties.
 - (C) Free Banking Zone:
Cities, areas, or countries which have made a conscious effort to attract nonresident foreign currency denominated business by allowing relatively free entry and adopting flexible attitudes to taxes, levies, and regulations.
 - (D) Free Port:
Free ports refer to designated areas (usually small islands) where free zone activity is extended to any area within the country or city-state. This activity includes commercial, warehousing, assembly, manufacturing, and duty-free shopping.
 - (5) N/P: Not Pertinent
 - (6) N/A: Not Available
- (a) The transit zones in these countries are restricted to trade with only one other country—usually a land-locked neighbor.
 - (b) The zones in these countries are export-oriented industrial estates.

SOURCES:

Currie, Jean, Economist Intelligence Unit Special Report No. 64, Investment: The Growing Role of Export Processing Zones, 1979; Frobels, Henrichs and Kreye, The New International Division of Labour; UNCTAD, Export Processing Zones in Developing Countries: Implications for Trade and Industrialization Policies (TD/B/C.2/211), January 1983; ILO Yearbook, 1978; Ramanayake, Dennis, "The Katunayake Investment Promotion Zone", ILO-ARTEP, (1982); Yue, Chia-Sion, "Export Processing and Industrialization - The Case of Singapore", ILO-ARTEP (1982); Castro, Judy S., "The Bataan Export Processing Zone", ILO-ARTEP (1982); Chaudhuri, Mrinal Datta, "The Role of Free Trade Zones in the Creation of Employment and Industrial Growth in Malaysia", ILO-ARTEP (1982); International Confederation of Free Trade Unions, "Trade Unions and the Transnationals", Special Issue No. 3 - Export Processing Zones (1983)

AFRICA

| Country (1) | # of Zones (2) | Date First Established (3) | Type of Activity (4) | Major Manufacturing Sectors | Employment in Export Production | # of Firms Operating |
|--------------------|----------------|----------------------------|----------------------|-------------------------------------|---------------------------------|----------------------|
| 1. Angola (a) | 1 | 1961 | Transit Zone | N/P (5) | N/P | N/P |
| 2. Ivory Coast (b) | 1 | | EPZ | Textiles, Garments | 2000 (1976) | 24 |
| 3. Liberia | 1 | 1975 | EPZ | NIL | NIL | NIL |
| 4. Mauritius | Various Sites | 1973 | EPZ | Textiles, Garments | 17,500 (1977) | 89 |
| 5. Morocco (b) | 1 | | EPZ | Textiles, Garments | N/A (6) | N/A |
| 6. Mozambique (a) | 2 | 1980 | Transit Zone | N/P | N/P | N/P |
| 7. Seychelles | N/P | N/A | Offshore Banking | N/P | N/P | N/P |
| 8. Senegal | 1 | 1974 | EPZ | Construction | 600 (1982) | 5 |
| 9. Tanzania (b) | 4 | 1967 | Transit Zone | N/P | N/P | N/P |
| 10. Togo | 1 | 1977 | EPZ | NIL | NIL | NIL |
| 11. Tunisia | Various Sites | 1972 | EPZ/ Freeport | Textiles, Garments, Construction | 14,000 (1976) | 115 |

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ASIA

| Country | # of Zones | Date First Established | Type of Activity | Major Manufacturing Sectors | Employment in Export Production | # of Firms Operating |
|----------------|------------|------------------------|------------------|---|---------------------------------|----------------------|
| 1. China | 4 | 1979 | EPZ | Garments, Footwear, Toys & Electronics | 100,000 (1982) | N/A |
| 2. Hong Kong | Various | 1842 | Freeport | Multiproduct | N/A | N/A |
| 3. India | 4 | 1960 | EPZ | Multiproduct | 9,500 (1982) | 116 |
| 4. Indonesia | 3 | 1977 | EPZ | Electronics, Garments | 11,191 (1975) | N/A |
| 5. Korea | 2 | 1970 | EPZ | Electronics, Metal, Textiles | 120,000 (1978) | 125 (1980) |
| 6. Macao | Various | N/A | Freeport | N/A | N/A | N/A |
| 7. Malaysia | 10 | 1971 | EPZ | Electronics, Textiles, Rubber Products | 56,000 (1971) | 60 |
| 8. Philippines | 5 | 1972 | EPZ | Textiles, Garments, Electronics, Metal Products, Telecommunications | 25,000 (1982) | 49 |
| 9. Singapore | Various | 1819 | Freeport | Multiproduct | N/A | N/A |
| 10. Sri Lanka | 2 | 1979 | EPZ | Garments, Textiles | 15,000 (1981) | 35 (1981) |
| 11. Taiwan | 3 | 1968 | EPZ | Multiproduct | 77,400 (1979) | N/A |

CENTRAL AMERICA & CARIBBEAN

| Country | # of Zones | Date First Established | Type of Activity | Major Manufacturing Sectors | Employment in Export Production | # of Firms Operating |
|--------------------------|---------------|------------------------|----------------------|--|---------------------------------|----------------------|
| 1. Bahamas | 2 | 1955 | Free Port | | | |
| 2. Cayman Islands | N/P (6) | | Free Banking Zone | N/P | N/P | N/P |
| 3. Dominican Republic | 4 | 1969 | EPZ | Garments, Textiles | 14,400 (1978) | 63 |
| 4. El Salvador | 2 | 1973 | EPZ | Electronics, Textiles | 6,143 (1975) | N/A |
| 5. Guatemala | 2 | 1974 | EPZ | NIL | NIL | NIL |
| 6. Haiti | 1 | 1975 | EPZ | Garments, Electronics, Sporting Goods | 40,000 (1978) | N/A |
| 7. Honduras | 2 | 1978 | EPZ | N/A | 1500 (1978) | N/A |
| 8. Jamaica | 1 | 1976 | EPZ | Garments, Leather Goods | 1000 (1979) | N/A |
| 9. Mexico | Various Sites | N/A | EPZ | Electronics, Garments, Footwear, Food | 110,36 (1979) | N/A |
| 10. Netherlands Antilles | 3 | 1979 | EPZ/Offshore Banking | Electronics | 250 (1978) | 40 |
| 11. Nicaragua | 1 | 1977 | EPZ | Electrical, Chemical & Paper Products | 5000 (1978) | 3 |
| 12. Panama | 1 | 1948 | EPZ Transit Zone | Garments, Electronics, Pharmaceuticals | 8000 (1982) | N/A |
| 13. St. Lucia | 1 | N/A | EPZ | Garments, Electronics, Metal Products | 3500 (1976) | N/A |

MIDDLE EAST

| Country | # of Zones | Date First Established | Type of Activity | Major Manufacturing Sectors | Employment in Export Production | # of Firms Operating |
|-------------------------|------------|------------------------|------------------|-------------------------------|---------------------------------|----------------------|
| 1. Bahrain | N/P | | Offshore Banking | N/P | N/P | N/P |
| 2. Egypt | 4 | 1974 | EPZ | Garments, Medical Instruments | 10,000 (1978) | 361 |
| 3. Iran (a) | 1 | 1962 | Transit Zone | N/P | N/P | N/P |
| 4. Israel | 2 | 1972 | Transit Zone | N/P | N/P | N/P |
| 5. Jordan | 1 | 1973 | EPZ | N/A | 600 (1979) | N/A |
| 6. Lebanon | N/P | | Offshore Banking | N/P | N/P | N/P |
| 7. Syrian Arab Republic | 3 | 1971 | EPZ | N/A | 600 (1979) | N/A |

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SOUTH AMERICA

| Country | # of Zones | Date First Established | Type of Activity | Major Manufacturing Sectors | Employment in Export Production | # of Firms Operating |
|----------------|------------|------------------------|-----------------------------|---|---------------------------------|----------------------|
| 1. Argentina | 18 | 1968 | Transit Zone | N/P | N/P | N/P |
| 2. Bolivia (a) | 1 | 1976 | Transit Zone | N/P | N/2 | N/P |
| 3. Brazil | 6 | 1968 | EPZ | Jewelry, Textiles, Electronics, Toys, Watches, Cars | 27,300 (1978) | 273 (1978) |
| 4. Chile | 6 | 1976 | Transit Zones | N/P | N/P | N/P |
| 5. Colombia | 8 | 1973 | EPZ-3 Transit Zones-5 | Garments, Leather Goods, Car Parts, Jewelry | 2,800 (1978) | N/A |

APPENDIX C

SELECTED OFF-SHORE BANKING CENTERS: BANKING INFORMATION

| Country | Ease of Entry | Local Capital Requirements | Taxes and Levies | Annual License Fees | Number of Offshore Banks | Total Off-Shore Assets (in billions of U.S. dollars) |
|----------------|---|----------------------------|---|--|--------------------------|--|
| | | | | | | ANNEX 2-2 |
| Bahamas | Relatively easy even where establishment of new banks is concerned. | None | None | \$300-45,000 (1) | 263 | 70 |
| Bahrain | Generally limited to branches of major international banks | None | None | \$25,000 | 37 | 21(2) |
| Cayman Islands | Relatively easy even where establishment of new banks is concerned. | None | None | CI\$15,000 (Class A) CI \$5,000 (Class B) | 260 | 12(3) |
| Hong Kong | Foreign banks are now being licensed after a 13-year moratorium. For the most part only one branch of large international banks will be allowed. | None | A proposal has been made that offshore profits should be taxed at 17%. It is not yet clear how this will be applied. (4) In addition there is a 10% withholding tax on interest paid. | — | 74(5) 200(6) | 11(7) |
| Lebanon | Foreign banks must deposit Pound 7.5 million with the Treasury. Other new banks must have 50% Lebanese ownership and deposit Pound 4.5 million. (8) | Pound 15 million (9) | None (8), (10) | — | 78 | — |

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| Country | Ease of Entry | Local Capital Requirements | Taxes and Levies | Annual License Fees | Number of Offshore Banks | Total Off-Shore Assets (in billions of U.S. dollars) |
|----------------------|---|----------------------------|---|---------------------|--------------------------|--|
| Netherlands Antilles | Extremely easy. (11) | None | 3-6% profit tax. No liquidity requirements. | — (11) | 43(11) | — |
| Panama | Relatively easy for branches or subsidiaries of international banks. | \$250,000 (12) | None | None | 66(12) | 7(12) |
| Philippines | Limited entry until profitability of existing operations has been assured, major international banks favored. | \$1 million (13), (14) | 5% profit tax on offshore to onshore transactions; 10% on offshore shore to onshore. (15) | \$20,000 (14) | 17(15) | 1 |
| Seychelles | Limited to branches or subsidiaries of major international banks. (16) | None | None | \$20,000 (16) | 1(16) | — |
| Singapore | Relatively easy, preference for major international banks. | S\$3 million (11) | A 10% profit tax is levied on offshore operations. (11) | S\$50,000 | 66(12) | 17(12) |

Source: "The Banker's Guide to World Financial Centres," Banker, May 1978, pp. 51-142, unless otherwise noted.

- (1) \$300 (non-active banks) to \$45,000 (authorized dealers and agents).
- (2) Byline, Manufacturers Hanover Trust, June 1978.
- (3) Estimated assets in September of 1977 for the Caymans and Bahamas were \$82 billion (D.F.V. Ashby, "Challenge from the New Euro-Centres," Banker, January 1978, p. 57). Estimated assets in the Bahamas were some \$70 billion ("The Banker's Guide to World Financial Centres," op. cit., p. 108
- (4) P. Fallon, "The Uncharacteristic Blunder of Philip Haddon-Cave," Euromoney, July 1978.
- (5) Full license banks.
- (6) Deposit-taking companies.
- (7) D.F.V. Ashby, "Challenges from the New Euro-Centres," Banker, January 1978, p. 57

- (8) R. Gilgan, "Lebanon: A Year of Convalescence," Banker, January 1978, p. 57
- (9) Minimum capital is Pound Sterling 15 million must be deposited with the Treasury. New branches of foreign banks must deposit Pound Sterling 7.5 million.
- (10) Since the declaration of "Banking Free Zone" in March 1977.
- (11) Chown and Kelen, "Offshore Investment Centre," Banker Research Unit, London, 1977, pp. 125-147.
- (12) Appendix.
- (13) \$1 million must be held in any foreign currency Philippine Government debt instrument.
- (14) L. Gonzaga, "Go-Ahead for Offshore Banking," Far Eastern Economic Review, December 10, 1976, p. 69.
- (15) L. Gonzaga, "Manila Gains Advantage", Far Eastern Economic Review, April 28, 1978, p. 34.
- (16) Information provided by authorities.

APPENDIX D

Developing countries and territories with export processing
free zones planned or under development in 1982

| Country/Territory | Number of zones/areas | Location |
|------------------------------------|--------------------------|---|
| AFRICA | | |
| Ghana | 1 | Near Accra |
| Kenya | 1 | Site not decided |
| Sierra Leone | 1 | Site not decided |
| Sudan | 1 | Port Sudan |
| United Republic of Cameroon | 1 | Bassa (near Douala) |
| Zaire | 1 | Site not decided |
| Zambia | 1 | Site not decided |
| ASIA | | |
| Bangladesh | 2 | Chittagong, Dalla |
| Pakistan | 3 | Karachi, La Hore, Baluchistan |
| Philippines | 12 | Various sites incl.: Cavite Davao City Tarlac Zamboanga City |
| Sri Lanka | 1 | Biyagama |
| Thailand | 1 | Minburi (Lat Krabang) |
| CARIBBEAN AND LATIN AMERICA | | |
| Costa Rica | 2 | Puerto Limon Calderas |
| Venezuela | 1 | Punto Fijo |
| EUROPE | | |
| Cyprus | 1 | Limassol |
| Romania | 1 | Site not decided |
| Yugoslavia | 1 | Sezana (jointly with Italy) |
| PACIFIC ISLANDS | | |
| Fiji | 1 | Site not decided |
| MIDDLE EAST | | |
| Dubai, United Arab Emirates | 1 | Jebel Ali |

Source: As for Annex 1, and information gathered by the UNIDO secretariat.
(UNIDO/ICIS.176).

APPENDIX E

AVERAGE DAILY WAGES FOR EPZ WORKERS
IN SELECTED COUNTRIES
(US\$ PER DAY)

| | <u>Unskilled</u> | <u>Skilled</u> |
|---|------------------|----------------|
| Africa | | |
| Mauritius | 3.20 | 11.36 |
| Senegal | 6.00 | 8.48-8.96 |
| Asia | | |
| India (Santa Cruz) | 1.26 | 2.61 |
| Malaysia | 1.50-2.00 | 3.50-5.00 |
| Philippines | 1.68 | 2.25 |
| South Korea | | |
| Sri Lanka | -- | 1.27-1.52 |
| Taiwan | 3.00-4.00 | 3.50-5.40 |
| Central American and the Caribbean | | |
| Dominican Republic | -- | 8.00 |
| El Salvador | 3.20 | 6.56 |
| Guatemala | 1.66-2.50 | 4.00-5.70 |
| Mexico | -- | 4.30 |
| Panama | -- | 6.93-9.36 |
| Middle East | | |
| Egypt | 2.50 | 10.00 |
| Jordan | -- | 7.20-8.00 |
| Syria | -- | 4.80-5.40 |
| South America | | |
| Brazil | 1.53 (MIN) | -- |
| Chile | 2.79 | |
| Colombia | 5.68 | 12.64 |

SOURCES: Currie, Jean. Economist Intelligence Unit Special Report No. 64, Investment: The Growing Role of Export Processing Zones, 1979; Frobel, Henrichs and Kreye. The New International Division of Labour; UNCTAD. Export Processing Zones in Developing Countries: Implications for Trade and Industrialization Policies (TD/B/C.2/211), January 1983; ILO Yearbook, 1978.

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APPENDIX F
INCENTIVES AVAILABLE IN EXPORT PROCESSING ZONES

| Country | List of Major Incentives |
|--------------------|--|
| Barbados | <ol style="list-style-type: none">(1) 10 year corporate income tax exemption(2) Exemption from import duties on materials and capital goods(3) Net losses incurred during tax holiday may be offset against profits for 5 years(4) Export allowance equal to 50% of profits |
| Belize | <ol style="list-style-type: none">(1) 10 year tax holiday with subsequent concessionary period(2) Import duty exemption on all capital equipment and materials |
| Brazil | <ol style="list-style-type: none">(1) Exemption from all import duties(2) Exemption of all imports from Merchandise circulation Tax and Industrial Products Tax(3) No taxes on goods produced in the zone, with the exemption of the ICM tax |
| Colombia | <ol style="list-style-type: none">(1) Exemption from duty on imported raw materials(2) Tax credit certificates equivalent to 5-12% of value added of exported products(3) Daily adjusted exchange rate to insulate investor against the effects of internal inflation. |
| Dominican Republic | <ol style="list-style-type: none">(1) Exemption from import duty(2) 20-year exemption from all taxes |
| Egypt | <ol style="list-style-type: none">(1) Exemption from income tax(2) Exemption from import duties |
| El Salvador | <ol style="list-style-type: none">(1) 10-year income tax exemption, provided at least 80% of the firm's production is exported to markets outside the Central American Common Market(2) Duty-free import of raw materials(3) Preferential export credit at 2-3% below market rates |
| Haiti | <ol style="list-style-type: none">(1) 10 year exemption from import duties and internal taxes on machinery and equipment(2) Exemption from import duty on materials(3) 5 year income tax after which tax increases gradually to normal rate over a period of six years. |
| India | <ol style="list-style-type: none">(1) Exemption from import duty on raw materials, components and capital goods(2) In Kandla, cash subsidy of 10% in the case of small scale units and 15% for medium large scale units of the fixed capital investment(3) Income tax waived on 20% of the profits for ten years |

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| Country | List of Major Incentives |
|-------------|---|
| Ireland | <ul style="list-style-type: none"> (1) Exemption from income tax and corporation tax until 1990 (2) Exemption from duty on imported materials (3) Non-repayable grants of up to 35% of fixed assets and 100% of training costs; rent reduction grants |
| Jamaica | <ul style="list-style-type: none"> (1) 10 year exemption from income tax (2) Relief of import duties on materials, machinery and equipment |
| Jordan | <ul style="list-style-type: none"> (1) Exemption from income tax for a limited period of time. (2) Exemption of imported materials and duty from taxes and fees. |
| Liberia | <ul style="list-style-type: none"> (1) Tax-free and duty-free importation of machinery, equipment and supplies. (2) Exemption from import and export duties. (3) 5 year exemption from corporate income tax. (4) Assistance in obtaining loans and finance |
| Malaysia | <ul style="list-style-type: none"> (1) Exemption from import duties on materials and equipment (2) Wide variety of tax incentives depending on the location, type of product, proportion of goods exported and percentage of domestic value added. The combined incentive may bring a tax holiday to a maximum of 8 years |
| Mauritius | <ul style="list-style-type: none"> (1) A 10 - 20 year exemption from corporate income tax, depending on merits of each case (2) Exemption from income tax on dividends for 5 years (3) Exemption from import duties (4) Loans and export finance at preferential rates of interest |
| Mexico | <ul style="list-style-type: none"> (1) Duty free imports of materials, machinery and spare parts (2) 100% income tax exemption in first 3 years of operation, reducing gradually to 50% |
| Nicaragua | <ul style="list-style-type: none"> (1) Duty-free import of materials (2) 10 year complete tax holiday, with possible extension to 15 years |
| Panama | <ul style="list-style-type: none"> (1) Exemption from import duties (2) 95% reduction in taxes for 5 years |
| Philippines | <ul style="list-style-type: none"> (1) Tax free and duty free importation of machinery, equipment, and raw materials (2) Exemption from export tax (3) Exemption from municipal and provincial taxes (4) net operating loss incurred in the first 5 years may be carried over as a deduction |

- from taxable income during the succeeding 5 years
- (5) Accelerated depreciation of fixed assets
- Philippines (cont)
- (6) Additional deduction from taxable income of labor training, organizational and operating expenses
- (7) Priority in the allocation of foreign exchange for the importation of merchandise, equipment and raw materials
- (8) Loans from financial institutions whose foreign loans are guaranteed by the Government
- Republic of Korea
- (1) Exemption from import duties
- (2) Exemption from business tax on export earnings
- (3) 5 year exemption from income, corporate, property, profit, dividend, property acquisition taxes. Subsequently, a tax reduction by 50% for the next 3 years
- Senegal
- (1) Equipment, raw materials, and semi-finished products are exempted from all taxes and customs duties
- (2) Exemption until 1999 of all taxes on profits, registration production, patents and property
- Sri Lanka
- (1) Duty-free imports of raw materials, components, machinery and spare parts
- (2) Tax holiday period up to 10 years
- (3) After initial holiday, turnover tax of 2% on export sales
- Syria
- (1) Exemption from import duties
- (2) A free market in currencies (normally all currency deals have to be conducted through the State)

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APPENDIX G

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