Employment effects of multinational enterprises in export processing zones in the Caribbean

A joint ILO/UNCTC research project

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Note: Working papers on themes studied within the ILO are intended to stimulate discussion and critical comment.
ACKNOWLEDGEMENTS

This is one in a series of Working Papers published by the ILO on the employment aspects of multinational enterprises in export-processing zones. The financial assistance provided to the ILO in support of this research by the Government of Sweden, the Central Union of Swiss Employers' Associations and the International Confederation of Free Trade Unions is herewith gratefully acknowledged.

The case studies for Latin America and the Caribbean including the present study, were undertaken by the ILO together with the United Nations Centre on Transnational Corporations (UNCTC) and cover economic as well as social aspects. A full list of the Working Papers can be found in Annex III.
INTRODUCTION

This study examines the employment effects, both direct and indirect, of multinational enterprises (MNEs) in export processing zones (EPZs) in the Caribbean.* It covers three countries, namely Barbados, Jamaica and Trinidad and Tobago where prevailing approaches to the export processing industrialisation offer both contrasts and similarities. These countries are among the most developed countries of the Caribbean Community (CARICOM) with per capita incomes varying from over US$1,000 in Jamaica to over US$3,000 in Barbados and Trinidad and Tobago.¹ The emergence of EPZs in these countries results from the failure of import substitution industrialisation to provide a basis for self-sustained growth on the one hand, and attempts at economic diversification, in particular with respect to traditional exports, on the other hand.

The small size of domestic markets, combined with moderate income levels, placed limits to import substitution industrialisation which was actively promoted in the early Post World War II era. "Industrial production has been mainly for the national and regional markets in response to favourable conditions for import substitution created by individual countries and integration arrangements."² High rates of protection, however, resulted in the emergence of high cost producers, unable to compete in the international market when domestic markets became saturated, as they were soon to become. The import substitution approach to industrialisation therefore placed special limits on the capacity of respective economies to generate growth, employment and incomes in a self-sustaining manner.³ A recent study found that "uncompetitiveness and vulnerability" are two main features of the industrial landscape of the Caribbean.⁴

Moreover, attempts to diversify traditional primary exports - sugar (Barbados), sugar and bauxite (Jamaica), sugar and petroleum (Trinidad and Tobago) gave impetus to "new exports" during the late 1970s and early 1980s. With respect to agriculture, diversification was advocated on grounds that economic vulnerability arose as a result of undue dependency on traditional crops. Further, international competition from synthetic substitutes is widespread. At the same time, due to low world prices many European countries are now finding it difficult to maintain high subsidies for sugar.⁵ In some countries, there is also a policy to reduce the area under sugar cultivation.

A recent study which makes reference to traditional agriculture in the Caribbean depicts the following picture, "production and exports have been declining".⁶ With respect to the mineral based economies, it was recognised

* This study was undertaken while the author was visiting the Institute of Social and Economic Research of the University of the West Indies, Trinidad. The author acknowledges assistance of the institutions listed in Annex II and expresses his special gratitude for advice and support received from the following persons and institutes: Jack Harewood of the Institute of Social and Economic Research, University of the West Indies, Trinidad; Oliver Francis and Anthony Travers of the International Labour Organisation, Caribbean Office; the Governments of Trinidad and Tobago, Barbados and Jamaica, and workers' and employers' organisations in these countries. Marie Madeira of the University of the West Indies is thanked for typing the manuscript.
that undue dependence on non-renewable natural resources was a poor way to insure an economy's future. Thus, "these countries have a special need to deploy the returns from their mineral sectors in high yielding investments in physical and human capital and in activities designed to diversify the economic structure so that in the long run dependency on the minerals sector can be significantly reduced." 8

Definition of export processing zones with special reference to the Caribbean

It was stated earlier that approaches to export led industrialisation in the Caribbean provides for both contrasts as well as similarities. This point is now taken up further in this section. The United Nations Industrial Development Organisation (UNIDO) in a study on Industrial free zones as incentives to promote export processing industries, adopts the following definition: "An industrial free zone permits the importation of the means of production and equipment, raw material requirements and components free of duty and without customs control, provided that these goods as well as semi-manufactured or finished goods therefrom do not cross the border limit of the free zone into the customs territory." 9

The terms "industrial free zone" and "export processing zone" which is of recent origin, are often used synonymously. "An export processing free zone is an enclave within a national customs territory, usually situated near an international airport and/or port, into which foreign capital goods, components and materials are brought without being subject to customs requirements. The imported products are processed within the zone, then exported elsewhere, without the intervention from the customs authority of the host country. The payment of customs duties is not required unless these products or the final goods in which they are incorporated enter the national customs territory of the host country." 10

In the case of Jamaica, the Kingston Free Zone and Montego Bay Free Zone operate strictly in accordance with the above definition of EPZs. These are clearly defined geographical areas, located close to ports, and aimed at using relatively low labour rates as a basis for exports and/or re-exports, mainly to the United States. Raw materials are imported duty free, and there is a customs authority located in the Free Port to facilitate the customs process. 11

In the case of Barbados and Trinidad and Tobago, export processing activities are carried out under slightly different institutional arrangements. In Barbados, enclave industries or zones are the norm. These are largely assembly-type operations, geared exclusively for exports. Enclave industries are located in industrial estates administered by the Industrial Development Corporation, and enjoy duty free imports along with other investment incentives. They attract mainly firms seeking low-cost production centres for the international market. There is, however, no special customs authority or clearly defined geographical area for the enclave industries.

With respect to Trinidad and Tobago, the Point Lisas Industrial Complex is the closest approximation to the EPZ concept as defined above. Point Lisas was specially set up in close proximity to a deep harbour facility in an industrial estate. It benefits from easy transport access, an advanced infrastructure, and cheap sources of energy as a basis for "new industrial exports". 12 The strategy embodied gives priority, however, to the natural resource sector as a basis for exports, in particular the development of the petro-chemicals, given the availability of cheap and abundant sources of natural gas. The establishment of an iron and steel complex is also based on

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the availability of cheap energy. However, unlike the petrochemicals industry, the raw material for iron and steel is imported. As in the case of Barbados, there is no special customs authority located at Point Lisas, even though there exists an agency which administers the Industrial Estate.

The basic similarity of the above approaches to exports is to be found in a concerted policy thrust to stimulate exports of non-traditional products, the establishment of production "enclave" for export industries, and in the use of prevailing comparative advantages either in the form of cheap supplies of labour or energy, in order to make domestic products internationally competitive. From this vantage point, they are therefore treated as EPZs for purposes of this study.

Notes

1 The Caribbean Community is the off-shoot of the Caribbean Free Trade Area which came into being in 1967. It is presently made up of 13 politically independent states of the English-speaking Caribbean. Data on per capita incomes are for 1982 and were obtained from the World Bank Atlas 1985 (Washington).


3 Similar experiences have been noted in other developing countries.

4 With reference to the industrial development history of the Caribbean, particularly to import substituting industries.

5 Sugar is internationally traded under guaranteed prices which tend to be higher than free market prices. The Minister of Foreign Affairs of Trinidad and Tobago, Mr. E. Mahabir summed up the Caribbean position in an interview with the BBC on 9 July 1985, wherein he stated that poor world prices for sugar meant that new export products will have to be found.

6 The Caribbean Community ..., op. cit., p. 44. Kuznets has shown empirically that the importance of agriculture declines relative to other sectors, notably secondary and tertiary ones, as part of the economic development process. However, this is a somewhat different point to that of a decline in absolute magnitudes, i.e. output or export volume. With technical progress, greater labour productivity can result in higher levels of output even with declining labour to capital ratios.

7 ibid., p. 36. Oil prices began to show signs of weakening.

8 Regulations 806-807 allow for import duties only on value added generated abroad by United States firms. It is also true that the Caribbean Basin Initiative (CBI) makes provision for duty free imports of certain agricultural goods. Furthermore, some manufactured goods such as textiles are exempt from the CBI even though they can still benefit from reduced import duties under Regulations 806-807. The Lomé Convention dates back to the 1970s; the CBI was signed as law in 1983.

9 See UNIDO: Industrial free zones as incentives to promote export processing industries (Vienna), 1971, p. 8.
10 See UNCTAD: Some aspects of the operation of export processing free zones in developing countries, TD/B/6.2/149 (Geneva), Apr. 1975, p. 2.

11 Producing goods internationally requires quick handling of imported inputs so as to ensure smooth production runs by domestic firms. In terms of marketing, quickness of operations is normally required to enable products to reach selling outlets on time.

12 There are a number of small import substituting firms at Point Lisas but the overriding thrust is on exports.

13 In the two other countries, assembly type operations such as electronics, textile and garments, etc., are stressed.

14 In Barbados and Trinidad and Tobago attempts are now being made to develop the free zone concept more formally. Bureaucratic bottlenecks in handling customs matters have been recognised as an impediment to international production due to delays which these entail.

15 A well-known study has emphasised the enclave character, and the use of comparative advantages, particularly from the point of view of low cost international operations as the main distinguishing feature of export processing zones. See F. Fröbel, J. Heinrichs and O. Kreye, The international division of labour, London (Cambridge University Press, 1980), pp. 279-301. From this point of view, there is even greater similarity in the Caribbean experience in export-led industrial development than the nomenclature would seem to suggest.
CHAPTER I

EXPORTS OF MANUFACTURED GOODS, MULTINATIONAL ENTERPRISES AND DEVELOPING COUNTRIES

Exports of manufactured goods and developing countries

Over the past few decades, exports of manufactured goods from developing countries have played a dynamic role in international trade. Total exports of manufactured goods from developing countries increased from US$2.5 billion in 1960 to US$32 billion in 1975, and US$63 billion in 1978.¹ Out of this, exports of the newly-industrialised countries of South East Asia constituted the largest share, rising from US$1.6 billion in 1960 to US$42 billion in 1978.² Within Asia, three economies, namely the area of Hong Kong, the Republic of Korea and Singapore accounted for 35 per cent of total exports.³ In Latin America, Chile, Brazil, Mexico, Colombia, Paraguay and Argentina together accounted for the bulk of exports of manufactured goods from that region to the world. Meanwhile, the growth of exports of manufactured goods from developing countries averaged 19.6 per cent a year compared with 14.8 per cent for developed countries between 1960-78, making the former group of countries more dynamic agents of exports of manufactured goods than the latter.⁴

Research has shown that the growth of exports of manufactured goods from developing countries was associated with the rise of multinational enterprises (MNEs).⁵ In some of the most successful cases of export-led industrialisation such as Singapore, the Republic of Korea, and the area of Hong Kong "foreign direct investment is almost exclusively confined to export manufacturing".⁶ The same applies to some Latin American countries such as Colombia, Dominican Republic, Costa Rica and Haiti, among others.⁷ The share of MNEs in exports of manufactured goods has been estimated for some countries. In Singapore in 1980, over 90 per cent of exports of manufactured goods were produced by firms with foreign equity participation.⁸ In 1977, joint ventures between local firms and MNEs alone accounted for over 30 per cent of exports of manufactured goods from the Republic of Korea.⁹ In 1974, in the area of Hong Kong, MNEs are estimated to have produced about 15 per cent of that country's exports of manufactured goods.¹⁰ In the case of Malaysia, it is estimated that MNEs probably produce some 90 per cent of its exports of manufactured goods.¹¹ Estimates cited above do not take account of some of the activities of MNEs bearing on exports such as licensing arrangements, turnkey agreements, management contracts, trade marks, patents, etc. If these are taken into account, the role of MNEs in exports of manufactured goods is likely to be even higher than indicated by the above data.

The growth of exports of manufactured goods from developing countries was further activated by the use of export-oriented industrial development strategies.¹² These were often aimed at attracting international capital in the export-processing zones.

Foreign direct investment, MNEs and exports of manufactured goods from developing countries - some conceptual issues

The role of "value of the firm", and behavioural factors affecting international production, have received attention in earlier literature on MNEs. Kindleberger considers the conflict between host country and MNEs when
divergent objective functions are being maximised. Agmon and Lessard note the incremental value according to MNEs on account of their being able to arbitrate tax regimes. Hirsch cites the effects of joint production and trade in intermediate goods in the context of subsequent investment decisions. Vernon has stressed the information and prompt scanning functions of MNEs in international production. Davidson has demonstrated the importance of "experience effects" on foreign direct investment flows involving MNEs.

A growing body of theory combines location and trade theory with the international operations of MNEs. Magee argues that foreign direct investment is motivated by the difficulties of appropriating rents from the trade and licensing of proprietary knowledge. Buckley and Casson, likewise, argue that plant location is determined by locational advantages and market failure in the trade of proprietary knowledge, in particular that of research and development (R and D). In this respect, Dunning has advanced an "electric theory" of foreign direct investments combining macro economics of trade theory with transportation theory. A country's endowment and geographical position create certain locational advantages. Factors such as patented information, brand names, and technology form "ownership advantages". Investment occurs when the home firm possesses a unique asset and the host country is relatively advantaged in location.

Two models on "new theories of international trade and multinational enterprise" have been advanced by Krugman. One attempts to explain the growth of horizontal MNEs as a response to product differentiation. Thus by spending on R and D firms acquire the ability to manufacture different products. They then export this technology directly by establishing foreign subsidiaries, or indirectly by embodying technology in goods. The second model attempts to explain "vertical" MNEs, drawing on the theory of monopsony and vertical integration developed by Perry. This latter model is applicable to investment in natural resources and in related downstream processing.

Given the focus of the present study, a look at the analysis of international production within the context of exports of manufactured goods from EPZs may be made. Fröbel, Heinrichs and Kreye argue that "profitable industrial production for the world market" requires an adequate provision of industrial inputs and a sophisticated infrastructure as well as labour force... In addition, profitable industrial production for the world market requires the lifting of the national restrictions on international transfers which exist in most developing countries as a result of chronic balance of payments deficits. In fact, it is one function of free production zones to fulfill the requirements for profitable world market oriented industrial production in those places in the developing countries where unemployed labour is available and suitable for industrial utilisation.

Foreign producers for world markets, pressed by "increasing level of labour costs on the one hand and the sharpening of international and national competition on the other, are constantly seeking ways and means to cut down or minimise their production and distribution costs". Location of manufacturing activity in developing countries "could bring decisive merits in this direction". Some of these are: reduction in raw material transportation costs, reduction in finished products transportation costs, reduced labour costs and reduced initial investment costs as a result of "fiscal and physical incentives, common and general services and other preferential treatment".

The above situation is facilitated by the economics of intra-MNE division of labour allowing for geographical fragmentation of labour and
capital-intensive activities, particularly in manufacturing, garments, textiles, electronics, sport goods, toys and the like. Thus (referring to the relocation of textile and garment production in developing countries) "the subdivision of the labour process (cutting, sewing, pressing, packing etc.), has made it possible to extensively reduce the skill requirements of the labour force. Attempts at automation are therefore particularly concentrated in those areas in which relatively high levels of skills are still required (e.g. cutting, grading). In view of the relatively low skill requirements the garment industry has an almost inexhaustible supply of cheap labour at its disposal throughout the world".28

In the words of a management official "it is necessary for companies to become more mobile in their investment and production planning policies."29 From a different angle it has been argued that "capital is on a permanent migration around the world seeking new surplus profits through exploitation of new, more profitable production sites".30

In this connection, the growing importance of EPZs located in developing countries has already been noticed. In 1980, it was estimated that some 53 EPZs were in operation in 30 developing countries.31 Evidence from a number of countries suggests that EPZs have played a major role in the growth of exports of manufactured goods.32

Notes


2 ibid.

3 ibid.

4 ibid.


6 Maex: Employment ..., op cit., p. 12.

7 Presumably on account of the thrust on exports.

8 Department of Statistics, Report on the census of industrial production 1980 (Singapore).


11 See E. Lee: "Export-oriented industrialisation and employment in South East Asia" (mimeographed, 1982).


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24 ibid. The Trinidad experience does not emphasise labour costs but cheap energy costs.

25 ibid.

26 See UNIDO: Industrial free zone as incentives to promote export-oriented industries (Vienna, 1971), p. 8.

27 ibid.

28 ibid. It is estimated that the sewing and finishing stages of production, involving 95 per cent of the total work force, can be located in developing countries.


31 See J. Currie: Investment: The growing role of export-processing zones, The Economist Intelligence Unit (London, 1979). By 1981, 26 zones were in operation in eight countries in South and East Asia alone.

32 ibid.
CHAPTER 2

FOREIGN DIRECT INVESTMENT, MNEs AND THE CARIBBEAN

Traditional forms of foreign direct investment

The English-speaking Caribbean has traditionally specialised in plantation agriculture. The total population of the 13-member Caribbean Community is less than five million, denoting the existence of essentially small economies. The economies are open and consequently dependent on foreign trade. Two other features of Caribbean economies can be identified. These are: a limited natural resource base, and dependence on foreign direct investment.¹

It is necessary to review the role of foreign direct investment in order to provide a historical background for subsequent discussion.² Table 2.1 provides information on foreign direct investment in selected Caribbean economies for 1971-78. The main vehicle for foreign direct investment in the Caribbean are MNEs, the importance of which can be gauged from the fact that foreign direct investment as a percentage of net domestic capital formation has been as high as 67 per cent for some countries including Trinidad and Tobago.³

The earliest form of foreign direct investment is in sugar; here production was organised on plantations for export to metropolitan countries. The term plantation economy underlines the importance of plantations to the Caribbean.⁴ Two United Kingdom MNEs, namely Tate and Lyle (Jamaica and Trinidad and Tobago), and Booker McConnell (Guyana) were the main plantation enterprises in the Caribbean. Between 1967-68, annual sales of Booker McConnell were US$198.6 million; at the same time, total exports of Guyana were valued at US$108.2 million and exports of plantations approximately US$32 million.⁵ During the same period, the annual sales of Tate and Lyle (the larger of the two MNEs) were US$542.2 million, while total exports of Jamaica were US$219.5 million, of which plantation exports were valued at US$50 million.⁶ For Trinidad, total exports at the same time were valued at US$466.2 million and plantation exports US$24 million respectively.⁷

Table 2.1: Foreign direct investment in the Caribbean: year end stock selection years (US$ million)

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<tbody>
<tr>
<td>Barbados</td>
<td>150</td>
<td>150</td>
<td>185</td>
<td>200</td>
<td>160</td>
<td>160</td>
<td>160</td>
<td>180</td>
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<tr>
<td>Trinidad and Tobago</td>
<td>1 000</td>
<td>1 110</td>
<td>1 140</td>
<td>1 300</td>
<td>1 200</td>
<td>1 200</td>
<td>1 260</td>
<td>1 300</td>
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<tr>
<td>Jamaica</td>
<td>1 000</td>
<td>1 100</td>
<td>1 200</td>
<td>1 320</td>
<td>970</td>
<td>870</td>
<td>900</td>
<td>900</td>
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</table>

Two factors, among others, are held to account for the rise of MNEs in plantations. These are: control over raw material supplies in order to "control or influence input prices for metropolitan processing", and "because of market restrictions on further expansion of processing output". A process of cumulative causation then led to further expansion. For example, initial investment in social infrastructure (roads, ports, schools, etc.), created conditions for external economies which in turn led to benefits from inter-industry economies. These in turn led to greater capital intensity. The process also gave rise to market infrastructure economies.

Operations of plantations-based MNEs were not confined to agriculture. The vertically integrated system of international production also gave rise to trading and distribution, engineering, shipping, manufacture, etc., even though some activities such as food processing were carried out overseas.

MNEs have also played a dominant role in mining in the Caribbean, notably bauxite in Guyana and Jamaica, and petroleum in Trinidad and Tobago. For the greater part, the bauxite-alumina industry, dating back to Second World War, was totally controlled by North American based MNEs - Kaiser, Reynolds and ALCOA (Jamaica) and Alcan and Reynolds (Guyana). Towards the end of the 1960s, the bauxite-alumina industry was contributing as much as nearly 50 per cent of the value of merchandise exports in some countries. Between 1950-66, for instance in the case of Jamaica, the bauxite industry accounted for £50 million out of total capital inflow of £145.2 million. With respect to petroleum, commercial production in Trinidad and Tobago first began in 1908 and exports in 1910. By 1974, foreign direct investment from the United States was estimated at US$650 million. Out of this US$480 million were invested in the petroleum industry by MNEs from that country.

One of the main factors held to attract MNEs in the mineral resource sector of the Caribbean was the availability of relatively cheap sources of raw material. Control over raw material supplies has long been of great strategic importance to MNEs operating in mining. One common criticism of MNEs operating in mining is that they tend to generate limited value added in host countries. This is because processing of raw materials hardly takes place in host countries. This consideration, among others, played a part in attempts at state control of mining in the Caribbean in the 1970s.

Precise statistical data are not available on the role of MNEs in the services sector such as tourism, banking and trade. However, traditionally, services have clearly been a stronghold of MNEs. For example, until the 1970s, multinational banks dominated banking and finance in the region. The same applies to international hotel chains in the tourist industry, and to multinational marketing corporations in the sphere of trading.

In recent times, foreign direct investment has seen the emergence of the United States as the largest single source of foreign capital, a role traditionally held by the United Kingdom. In 1978, for example, the year end stock of foreign direct investment in three most developed countries of the Caribbean was US$2,380 million, with MNEs from the United States providing US$1,246 million.

Foreign direct investment and outflow of profits

Recent statistics on gross inflow of foreign direct investment and outflow of profits on these are available only for Trinidad and Tobago. These are summarised in table 2.2 below.

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Table 2.2: Trinidad and Tobago: Gross inflows of foreign direct investment and outflows of profits (1979-83) (in millions of US dollars)

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<tbody>
<tr>
<td>Foreign direct investment</td>
<td>94</td>
<td>185</td>
<td>258</td>
<td>342</td>
<td>250</td>
</tr>
<tr>
<td>Outflows of profits</td>
<td>350</td>
<td>479</td>
<td>421</td>
<td>339</td>
<td>198</td>
</tr>
<tr>
<td>Net outflows</td>
<td>256</td>
<td>294</td>
<td>163</td>
<td>-3</td>
<td>52</td>
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The figures suggest a net transfer of resources from Trinidad and Tobago in recent years in the form of profits on foreign direct investments, a trend which seems, however, to be in the process of reversing in the more recent years not as yet covered in the United Nations' publication.

Import substitution

The role of the state

Concern over ownership and control of natural resources followed political independence and partly led to the demise of MNEs in their traditional spheres of operation. In the 1970s, bauxite and sugar were nationalised in Guyana. Attempts at state participation in the ownership of the bauxite industry were made in Jamaica where the State also came to play an active role in the running of plantations. In the case of Trinidad, the State became involved in the petroleum industry finally bringing it under complete state control in 1985. The State also runs plantations. In the field of banking and finance, a number of countries have either nationalised foreign banks or have relegated them to a minor role as a result of state sponsored commercial banks.

On balance, the picture which emerges is that "Caribbean governments have, particularly since the 1970s, increased significantly the scope of direct participation in economic activity". For example, between 1970-74, government's share in total investment in Guyana increased from G$34.8 million to G$134.6 million; between 1972-75 it increased from TT$60 million to over TT$240 million in Trinidad; and from J$212.1 million to J$603.8 million in the case of Jamaica.

The promotion of state enterprises in industries traditionally controlled by MNEs is motivated by a combination of factors such as a shortage of domestic entrepreneurial talent, heavy investment costs in selected industries, and a belief that the "state", as a guardian of society will be more benevolent than private foreign capital. In recent times, attempts have been made, however, to re-engage MNEs in agriculture and mining.
The role of MNEs

Import-substituting industrialisation began during the post Second World War era, and saw the entry of MNEs in the domestic manufacturing activity. Import substitution was regarded as a vehicle for economic transformation since it was held to encourage industrialisation. Whereas earlier strategies of MNEs were oriented towards the export of primary products to metropolitan markets, import substitution saw the emergence of the domestic market as the main outlet for manufactured goods. Quantitative data do not generally exist on the role of MNEs in import substitution investment. In the case of Trinidad, it was estimated that 84 per cent of the capital in new industries established between 1958-59 was foreign. In another case, most of import-substituting investment was locally owned, possibly indicating that the pattern of investment behaviour was not altogether uniform.

In the 1960s the role of MNEs was given additional impetus with the widening of domestic markets following policies of economic integration. By producing in a given country, MNEs would prima facie have greater competitive capacity over foreign firms producing outside the country, given the existence of tariff walls offering protection to domestic enterprises. Even so, the attraction of the regional market is limited on account of its small size. There is some evidence to suggest that in a number of cases, local industry has been engaged in licensing arrangements and joint ventures with MNEs in import substitution activities.

Export-led industrialisation

In Chapter 1, a brief general treatment was made of EPZs in general. We now return to this subject, this time looking at the Caribbean more specifically. It was stated at the outset that the emergence of EPZs in the Caribbean was a logical consequence of inward looking policies on industrialisation. These policies saw the growth of new industries, greater industrial employment, and some measure of economic diversification, but as pointed out earlier, they soonfailed to provide an impetus for continued growth — an experience documented also in other developing countries, notably Latin America. Since local industry was initially set up under high tariff walls and granted generous investment subsidies, it was unable to produce at internationally competitive prices. This limited prospects in export markets when domestic markets became saturated.

If continued economic growth was to take place, given sluggish demand facing primary exports, and the upper limits of import substitution, new exports and access to overseas markets become necessary. In this way, continued economic growth could be assured. Within this context the Lomé Convention, providing, among other things, for trade co-operation between the Caribbean and Europe; the Caribbean Basin Initiative (CBI) providing for one way trade concessions between the Caribbean and the United States; and Provisions 806-807 of the Import Regulations of the united States allowing for market access to the United States, have helped to provide scope for looking at exports of manufactured goods as a special mechanism for economic growth and development.

The role of MNEs in the Caribbean can be assumed to take an additional dimension with the thrust on new exports. For the three Caribbean countries under study, exports of manufactured products began to assume some importance, albeit in a minor way, since the early 1960s. For example, in Jamaica exports of manufactured goods were US$20 million; Trinidad, US$13 million and Barbados US$33 million in 1962. At the same time, it can be argued that
exports of manufactured goods and the role of MNEs therein were accorded a minor role at the time given the emphasis on import substitution; the experience of the manufacturing sector was based on an overwhelming degree of production for the home market behind the protection afforded mainly by quantitative restrictions on imports.

The recent evidence, by contrast, suggests an emphasis on EPZs as a basis for export-led growth of manufactured goods. By 1980, exports of manufactured goods had reached new heights—Jamaica US$611 million; Trinidad and Tobago US$206 million; Barbados Bd$337 million. Traditional manufactured exports were made up of diverse products such as paper bags, cosmetics, tin cans, footwear, clothing, rum and the like, which for the most part were exported to other Caribbean countries. From this point of view, they can be seen as a regional component of import substitution. The present strategy, on the other hand, is one of specialisation along few product lines, namely Jamaica—textiles and garments; Barbados—electronics; Trinidad & Tobago—petro-chemicals as mentioned earlier. The market outlets, in the meantime, are Europe and North America.

Labour relations

The prevailing system of labour relations has a definite impact on the social implications of foreign direct investment of MNEs. It is also a factor influencing investment decisions. The labour relations system, inherited from the United Kingdom at the time of independence in the 1960s, has undergone many changes in the English-speaking Caribbean countries. The balance is shifting in favour of a heteronomy, through more extensive legislation and a stronger state involvement in relations between the social partners. It may be added that the need of Caribbean countries to fulfil their obligations vis-à-vis the ILO and to bring their legislation into conformity with the international labour Conventions which they have ratified has probably served to stimulate progress in labour legislation.

The Industrial Stabilisation Act, adopted in 1965 in Trinidad and Tobago, illustrates this tendency. This Act laid down provisions relating to the compulsory recognition of trade unions, gave binding force to collective labour agreements, and established an industrial court invested with extensive powers. In Jamaica, an Act on employment (termination of employment and redundancy payments) and another on minimum wages were adopted in 1974. In 1975, an Act on labour relations and industrial disputes was adopted, instituting an industrial disputes court in Jamaica. In 1983 the Government approved a tripartite commission to review existing labour legislation and make recommendations for its amendment.

The trade unions have misgivings about the systematic use of lawyers in labour relations, as well as the increasing number of cases referred to the labour courts with the delays this usually entails, and during which period they are not legally entitled to hold strikes. Strangely enough, employers also have similar misgivings because they consider that these courts systematically decide in favour of the workers and for the fact that illegal strikes are often common.

This tendency towards a more legalistic approach has coincided with the development of a strong trade union movement and with the strengthening of employers' organisations, which play an active part in labour relations. In this connection, in addition to the Chambers of Commerce or Industry in the three countries, the Barbados Employers' Confederation, the Jamaica Employers' Federation and the Employers' Consultative Association of Trinidad and Tobago may be mentioned. The employers' organisations of a number of countries have
set up the Caribbean Employers’ Confederation for the purpose of exchanging information and co-ordinating their policies at the subregional level.

Collective bargaining generally follows the Anglo-Saxon tradition of the “gentlemen’s agreement”, without binding force. The need for government intervention in determining minimum wages appears to be generally accepted. Wages are usually fixed through tripartite bodies such as wage councils, consultative committees or committees of inquiry.

Notes

1 See W. Demas: The economics of development in small countries with special reference to the Caribbean, McGill University Press (Montreal, 1965).

2 Given the focus of this study special attention will be paid to Trinidad and Tobago, Barbados and Jamaica.

3 Estimates for Trinidad during the late 1960s. See T. Turner: Multinational enterprises and employment in the Caribbean with special reference to Trinidad and Tobago, Multinational Enterprises Programme Working Paper No. 20 (Geneva, ILO, 1982). At the lower end of the scale, notably Barbados, it was estimated at 44 per cent at the same time. See B. Watson: Supplementary notes on foreign investment in the Commonwealth Caribbean, University of West Indies (Jamaica, 1974), p. 63.


6 ibid.

7 ibid.

8 ibid.

9 ibid.

10 ibid.

11 ibid.


13 See N. Girvan: Foreign capital and underdevelopment in Jamaica, University of West Indies (Mona, 1971).

14 See T. Turner: Multinational enterprises ..., op. cit.

15 This point has received widespread attention in the early literature on multinational enterprises in developing countries.

16 Calculated from UN: Transnational corporations in world development third survey, UN Centre on Transnational Corporations (New York, 1983), and Survey of current business, Vol. 64, No. 11, Nov. 1984.
This involved partial state ownership.


ibid.

These considerations are also held to account for the growth of state enterprises in many developing countries.

Data for Trinidad, see E. Carrington: "Industrialisation in Trinidad and Tobago since 1950", in N. Girvan and O. Jefferson (eds.): Readings in the political economy of the Caribbean, University of the West Indies, Mona, 1972). But part of this was also in export industries, notably textiles.

See B. Watson: Supplementary Notes ..., op. cit., p. 32.

A similar experience was recorded in Latin America. A review of the investment potential in the Caribbean, as a result of "economic integration" has been provided in C. Thomas and H. Brewster: The Dynamics of Caribbean Economic Integration, University of the West Indies (Mona, 1969).

In other words, it allowed for easy market access.

This phenomenon helps to explain the growing importance of intra-firm transfers in international trade and the related subject of "transfer pricing".

This is one of the earliest experiences of import substitution-industrialisation. The emergence of EPZs, notably in Asia, for example, follows a similar history with respect to import substitution.

In Trinidad and Tobago, MNEs have not been as strongly encouraged as in the other countries in new export industries.


For example, this saw the rise of nationalism, and more inward-looking development strategies aimed at reducing economic dependency. In this sense, import substitution, though of earlier origins, was given additional momentum.

Jefferson: Post war economic development ..., op. cit.


CHAPTER 3

MMEs AND EMPLOYMENT IN POINT LISAS - TRINIDAD AND TOBAGO

Exports, enterprises: Ownership pattern

Economic background

Trinidad and Tobago has a per capita income of US$6,900 (1982). In 1982, petroleum contributed over 30 per cent of GDP. Early in the 1980s large reserves of natural gas were discovered. The recent drop in oil prices has slowed down economic activity considerably. In 1982, total population was estimated at 1,092,710, the total labour force at 443,000 and unemployment at over 10 per cent. Concerted attempts at industrialisation date back to the late 1950s with the establishment of the Industrial Development Corporation (IDC). Between 1959-80, the IDC assisted in the establishment of over 700 enterprises. These provided employment for approximately 20,000 people, catering mainly for the domestic market. In the words of the IDC, "emphasis came to be placed on the establishment of import substitution or import replacement industries with preference being given to labour-intensive operations that seemed likely to relieve prevailing levels of unemployment."

Point Lisas industrial development estate

The Point Lisas industrial estate has been called the centrepiece of government's efforts to encourage manufacturing. The rationale behind the establishment of Point Lisas is as follows:

(1) diversification of the economy;

(2) employment generation;

(3) optimum utilisation of energy resources;

(4) the establishment of a solid industrial base;

(5) an impetus to export.

The establishment of export-oriented industries began during the latter part of the 1970s. By 1980, these industries were regarded as a main source of "economy buoyancy". The industrial estate, located in the south of Trinidad and Tobago is equipped with modern port facilities to serve export industries, a developed road transport network, advanced irrigation, power and telecommunications systems. The industries also benefit from the Fiscal Incentives Act of 1973 for the establishment of enclave industries. This Act makes provision, among other things, for:

(1) import duty exemption on raw materials, machinery and equipment;

(2) exemption from corporation tax on profits and from tax on dividends;

(3) generous loss write-off provisions;

(4) generous initial and investment allowances;

(5) training subsidy for new skills, where applicable;
(6) provision of developed industrial sites and/or factory accommodation;
(7) special depreciation allowances;
(8) repatriation of Profits under the Exchange Control Act;
(9) double taxation relief;
(10) export allowances - (special fiscal and financial incentives, market
development grants, tax deductible promotional expenses, enhanced initial
allowances, investment allowances for plant and/or machinery). 9

Export-led growth and Point Lisas

Point Lisas does not readily fit into recent theorising on a new
international division of labour. Such theorising as mentioned before is
mainly applicable to labour-intensive assembly operations where cost savings
are seen largely in terms of labour. In the case of Point Lisas, resource
cost considerations are one of the key incentives for investments by MNEs. In
this sense, part of the hypothesis advanced by Krugman, cited earlier, which
draws on the theory of monopsony and vertical integration, would seem to have
some validity for the international investment in question.

Trade data do not provide for disaggregation in terms of spatial origin
of exports. However, the available evidence shows that the export volume of
products by firms operating in Point Lisas grew from 623,000 tons in 1980 to
1.6 million tons in 1984, 10 as indicated by table 3.1. The value of exports
is shown in table 3.2. This grew by over 100 per cent between 1980-84. At
the same time, the value of total exports from the country dropped by nearly
50 per cent, i.e. from TT$9,784.8 million (1980) to TT$5,202.4 million (1984)
(table 3.3).

Table 3.1: Exports of Point Lisas by volume ('000 tons)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fertilizers</td>
<td>613</td>
<td>850.6</td>
<td>1213.9</td>
<td>1 281.6</td>
</tr>
<tr>
<td>Methanol</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>171</td>
</tr>
<tr>
<td>Steel</td>
<td>10</td>
<td>155.6</td>
<td>190.5</td>
<td>208.8</td>
</tr>
<tr>
<td>Total</td>
<td>623</td>
<td>1 006.2</td>
<td>1 404.4</td>
<td>1 661.4</td>
</tr>
</tbody>
</table>

Source: Central Bank Statistics.
Table 3.2: Value of exports (TT$ million)*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemicals</td>
<td>263.4</td>
<td>353.3</td>
<td>456</td>
<td>565.1</td>
</tr>
<tr>
<td>Steel</td>
<td>2.4</td>
<td>84</td>
<td>88.8</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>265.8</td>
<td>439.3</td>
<td>504.8</td>
<td>565.1**</td>
</tr>
</tbody>
</table>

* US$1 = TT62.40
** Excluding steel


Table 3.3: Value of main exports (TT$ million)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total exports*</td>
<td>9 784.8</td>
<td>7 372.4</td>
<td>5 646.3</td>
<td>5 202.4</td>
</tr>
<tr>
<td>Mineral fuel lubricants</td>
<td>9 170.1</td>
<td>6 507.8</td>
<td>4 714.5</td>
<td>4 233.2</td>
</tr>
<tr>
<td>Sugar</td>
<td>66.9</td>
<td>52.4</td>
<td>56.1</td>
<td>60.3</td>
</tr>
</tbody>
</table>

*Unadjusted for balance of payments purposes.


The data show that exports originating from Point Lisas have overtaken sugar as the second largest foreign exchange earner of Trinidad and Tobago, after mineral fuel lubricants. For example, in 1984, as table 3.3 shows, mineral fuel lubricants accounted for TT$4,233 million out of TT$5,202 million in total exports. In 1980, this amounted to TT$9,170 million when total exports were TT$9,784.8 million. The data show that over the years mineral fuel lubricants have been on the decline with respect to exports. Meanwhile, between 1980-84, the value of sugar exports dropped from TT$66.9 million to TT$60.2 million. Exports from Point Lisas, although far below in all importance to mineral fuel lubricants, showed dynamic growth over the years, while national exports declined substantially.

In interpreting the data on growth of exports, it must be remembered that production in Point Lisas started only recently. For example, steel products were first exported in 1980; methanol and urea production came on stream in 1984. A medium-sized steel firm first began exports only in 1983. Furthermore, one product in particular, namely steel, has been facing protectionist barriers in the North American market.
The main markets for products are Europe and North America. Recently, efforts have been made to obtain fertiliser markets in Asia. Data show that while the large firms produce exclusively for exports, one enterprise (ISCOTT) sells on average about 20 per cent of its output to the local market (mainly to CENTRIN) which in turn uses this for downstream processing.

Government's current philosophy on foreign direct investment in Point Lisas stresses the importance of skill development of nationals, and of exports.

Background data on enterprises

Table 3.4 shows that over 30 enterprises were in operation in Point Lisas in 1985. Small firms predominate but, despite their labour-intensive character, provide less than 10 per cent of employment. Small enterprises are located in the small enterprise zone of the Industrial Estate. Many of these are spin-off industries from the petrochemical and iron and steel industries, i.e. the large enterprises. Together they account for a very small percentage of the labour force, and involve small investments.

Table 3.4: Enterprises in Point Lisas

<table>
<thead>
<tr>
<th>Nos.</th>
<th>Size</th>
<th>Market Outlet</th>
<th>Products</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Large</td>
<td>Exports</td>
<td>Petrochemicals, iron and steel</td>
</tr>
<tr>
<td>1</td>
<td>Medium</td>
<td>Export/domestic</td>
<td>Steel</td>
</tr>
<tr>
<td>26</td>
<td>Small</td>
<td>Domestic</td>
<td>Fertilizers, plastics, sports equipment, etc.</td>
</tr>
</tbody>
</table>

Source: Data provided by Point Lisas Industrial Port Development Corporation, 1985.

On the other hand, the large firms are multi-million dollar industrial complexes made up of capital-intensive industries using modern technology (see table 3.5). The net sales of the large firms were over US$40 million in 1982.
Table 3.5: Net sales for select energy and energy-based enterprises

<table>
<thead>
<tr>
<th>Company</th>
<th>Net sales (TT$ million)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISCOTT</td>
<td>115</td>
</tr>
<tr>
<td>TRINGEN</td>
<td>91.5</td>
</tr>
<tr>
<td>FERTRIN</td>
<td>138.6</td>
</tr>
<tr>
<td>UREA PLANT) came on stream METHANOL) in late 1984</td>
<td></td>
</tr>
<tr>
<td>FEDCHEM</td>
<td>96</td>
</tr>
</tbody>
</table>

* US$1 = TT$2.40

Source: Audited statements of company accounts. Data provided by Ministry of State Enterprises 1985.

Large firms dominate employment. Table 3.4 shows, furthermore, that large firms are predominantly export oriented. In terms of technology-mix, they are much more capital-intensive than both small industries on the estate and the import substituting industries operating outside the zone (see table 3.6).

Table 3.6: Technology-mix - enterprises in Point Lisas

<table>
<thead>
<tr>
<th>Nos.</th>
<th>Size</th>
<th>Technology mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Large</td>
<td>Capital intensive</td>
</tr>
<tr>
<td>1</td>
<td>Medium</td>
<td>Mainly labour intensive</td>
</tr>
<tr>
<td>26</td>
<td>Small</td>
<td>Labour intensive</td>
</tr>
</tbody>
</table>

Source: Data provided by Point lisas Industrial Port Development Corporations, 1985.

However, in terms of high investment costs they are roughly akin to two major oil refineries in Trinidad and Tobago.

A distinguishing feature of Point Lisas is the relatively high concentration of "large high technology industries". Specifically, the large companies are Fertilizers of Trinidad and Tobago (FERTRIN), Trinidad Nitrogen Ltd. (TRINGEN) and Federation Chemicals Ltd. (FEDCHEM) producing ammonia; National Energy Corporation (NEC) producing methanol; National Energy Corporation (NEC) producing urea; and Iron and Steel Company of Trinidad and Tobago (ISCOTT), which is an integrated steel-making complex.
In 1984 the medium-sized firm had a total sales volume of over TT$20 million. As already indicated, it produces steel products using inputs from ISCOTT and sells its output mainly in foreign markets.

Ownership aspects of enterprises

Private local ownership is the main characteristic of small- and medium-sized firms. Large firms are generally owned by the state or foreign MNEs (see table 3.7). Percentagewise, 90 per cent of the firms are under local ownership, 6 per cent are jointly owned by state and MNEs and some 3 per cent are wholly-owned subsidiaries of foreign multinationals.

State participation in export-oriented large firms is clearly the dominant rule. Some 50 per cent of the large firms are totally owned by the State, 33 per cent are joint ventures between the state and MNEs, and 16 per cent are owned totally by MNEs. Thus, the State participates in some 83 per cent of large enterprises, but MNEs have capital participation in nearly 50 per cent. The main MNEs are W. Grace and AMOCO. In cases of joint ventures, the state has 51 per cent of equity holding. If joint management is brought into the picture, MNEs can be said to participate in about 66 per cent of the large export-oriented firms.

Table 3.7: Ownership pattern of main enterprises

<table>
<thead>
<tr>
<th>Enterprise</th>
<th>Ownership pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>FERTRIN</td>
<td>Joint MNE/Government (AMOCO)</td>
</tr>
<tr>
<td>TRINGEN</td>
<td>Joint Venture MNE/Government (W. Grace)</td>
</tr>
<tr>
<td>FEDCHEM</td>
<td>MNE (W. Grace)</td>
</tr>
<tr>
<td>NEC UREA</td>
<td>Government but managed by MNE</td>
</tr>
<tr>
<td>NEC METHANOL</td>
<td>Government</td>
</tr>
<tr>
<td>ISCOTT</td>
<td>Government</td>
</tr>
</tbody>
</table>


Furthermore, MNEs are involved in marketing for state enterprises, notably ISCOTT; NEC (Methanol), and NEC (Urea). With respect to the medium size steel firm, MNEs are marketing agents for overseas sales. Thus the role of MNEs tends to be definitely greater than ownership statistics would denote.

Moreover, with respect to smaller firms, MNEs are involved in licensing arrangements and turn-key contracts; the medium-sized firm began as a turn-key operation involving an MNE.

Enterprises from newly industrialising countries, MNEs from Japan, The United Kingdom, Federal Republic of Germany, and other CARICOM countries are absent. There is no evidence suggesting that large enterprises operating in
Point Lisas have relocated from industrialised countries or small local enterprises have relocated from other parts of Trinidad and Tobago. Most of the Point Lisa firms were set up there for the first time. Many small firms tend to choose Point Lisas for industrial location because of market and transport considerations. In other words, there is a flourishing market for import-substituting products given high wages associated with the oil industry located in close proximity.

**Sectoral distribution of EPZ enterprises and production capacity**

Unlike EPZs in Asia and other developing countries, textile and electronic firms\textsuperscript{11} hardly exist in Point Lisas as our earlier discussion shows. They are mainly energy based industries. Small firms are essentially "spin-offs" from the larger enterprises, namely iron and steel and petrochemicals.\textsuperscript{12} In-plant R and D facilities hardly exists in large firms. It may therefore be assumed R and D is often performed at MNEs headquarters.\textsuperscript{13}

The unavailability of data does not permit the evaluation of productivity levels at the firm level. It can be argued that labour productivity differences perhaps exist between large and smaller firms, due to differing levels of technology and competitive pressures. If this is so, large export-oriented firms will tend to have higher levels of labour productivity than small import substituting firms. A comparison with the oil refinery may however prove different since firms in this sector tend to embody high technology and are subjected to international competitive pressures.

There is need also to quantify the extent of productivity differentials with respect to firms with MNEs participation and other enterprises. Levels of productivity of MNEs, according to plant managers, are practically as high as firms operating in the United States.\textsuperscript{14} Table 3.8 shows the production capacity of large firms in Point Lisas.

<table>
<thead>
<tr>
<th>Table 3.8 Production capacity of select large enterprises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise</td>
</tr>
<tr>
<td>FERTRIN</td>
</tr>
<tr>
<td>NEC UREA</td>
</tr>
<tr>
<td>NEC METHANOL</td>
</tr>
<tr>
<td>TRINGEN</td>
</tr>
<tr>
<td>ISCOFF</td>
</tr>
<tr>
<td>FEDCHEM</td>
</tr>
</tbody>
</table>

*Source: National Energy Corporation, Point Lisas (1985).*
Employment dimensions of Point Lisas

Direct employment effects

This section examines aspects of direct and indirect employment of MNEs. We look first at direct employment. This is provided in table 3.9 which shows the overriding importance of large firms, with MNEs accounting for 36 per cent of employment (including joint ventures). Table 3.10(a) shows that most of the jobs created are in exports. With respect to the share in employment generated by export-oriented firms, two industries predominate – namely iron and steel, and petrochemicals. This is shown in table 3.10(b). Table 3.10(c) gives the employment share of MNEs with respect to petrochemicals, overall exports, and all enterprises export and import substituting firms operating in the zone. The employment share of MNEs in petrochemicals is by far the largest (more than 70 per cent).

Table 3.9: Direct employment breakdown

<table>
<thead>
<tr>
<th>Company</th>
<th>Year - 1984</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISCOTT</td>
<td>1039</td>
</tr>
<tr>
<td>FERTRIN</td>
<td>407</td>
</tr>
<tr>
<td>TRINGEN</td>
<td>47</td>
</tr>
<tr>
<td>FEDCHEM</td>
<td>599</td>
</tr>
<tr>
<td>NEC METHANOL</td>
<td>270</td>
</tr>
<tr>
<td>NEC UREA</td>
<td>100</td>
</tr>
<tr>
<td>CENTRIN</td>
<td>300</td>
</tr>
<tr>
<td>Small firms</td>
<td>200</td>
</tr>
<tr>
<td>(of which MNEs including joint ventures)</td>
<td>(1053)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2962</strong></td>
</tr>
</tbody>
</table>

Sources: Ministry of State Enterprises, National Energy Authority, Point Lisas Industrial Port Development Corporation (1985).
Table 3.10: Direct employment in Point Lisas

(a) Export/Import substitution

<table>
<thead>
<tr>
<th>Market orientation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export oriented</td>
<td>93</td>
</tr>
<tr>
<td>Import substituting</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

(b) Sectoral breakdown

<table>
<thead>
<tr>
<th>Sector</th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron and steel</td>
<td>1339</td>
<td>48</td>
</tr>
<tr>
<td>Petrochemicals</td>
<td>1423</td>
<td>52</td>
</tr>
<tr>
<td>Total</td>
<td>2762</td>
<td>100</td>
</tr>
</tbody>
</table>

(c) MNEs employment share (1984)

<table>
<thead>
<tr>
<th>MNEs/Sector</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>MNEs/Petrochemicals</td>
<td>74</td>
</tr>
<tr>
<td>MNEs/Export sector</td>
<td>38</td>
</tr>
<tr>
<td>MNEs/Overall total</td>
<td>36</td>
</tr>
</tbody>
</table>

Sources: Ministry of State Enterprises, National Energy Authority, Point Lisas Industrial Port Development Corporation (1985).

Table 3.1 shows that Point Lisas and the MNEs operating there furnish a very small share (less than 1 per cent) in terms of MNE national employment. National employment in Trinidad and Tobago dropped from 401,000 in 1982 to 393,000 in 1983. Between 1981-83 unemployment rose from 45,000 to 49,000. We do not have data on aggregate employment for 1981 and are therefore unable to measure the pattern of employment between 1981-83. However, evidence suggests that employment was on the rise due to business expansion as is reflected in the growth of exports.14
Table 3.11: Point Lisas and national employment (1984)

<table>
<thead>
<tr>
<th>Segment</th>
<th>Number (000)</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point Lisas</td>
<td>2.9</td>
<td>Less than 1</td>
</tr>
<tr>
<td>MNEs/Point Lisas</td>
<td>1.1</td>
<td>Less than 0.5</td>
</tr>
<tr>
<td>National*</td>
<td>393.2</td>
<td></td>
</tr>
</tbody>
</table>

*1983.

Sources: Central Bank Statistics, Ministry of State Enterprises, National Energy Authority; Point Lisas Industrial Port Development Corporation (1985).

With respect to individual MNEs, it should be noted that employment at FERTIN grew by 57 between 1983-84; whereas it was stagnant at TRINGEN during this period. Employment at FEDCHEM has stabilised since 1982. Meanwhile, if government plans bear fruit, employment by MNEs is likely to grow since foreign partnership with MNEs is being sought for expanding the iron and steel complex.

Top management in MNEs is mainly expatriate. With respect to FERTIN, top management (President and Managing Director) is made up of expatriates. At FEDCHEM top management (President, Executive, Vice-President, Plant Manager and Chief Engineer) is foreign. Top management is also mainly foreign at TRINGEN (Managing Director, Project Manager and Plant Manager).

In NEC Methanol, top management is held by the NEC and is largely local. However, the plant manager and construction manager are both expatriates. NEC also manages the Urea enterprise but this is operated by FERTIN which has joint MNE ownership. Part of top management of NEC Urea is made up of expatriates. The medium-sized company, CENTRIN is completely managed by local personnel. So too are smaller enterprises.

Most of the workers in MNE plants are male skilled workers. Few women are employed; most women hold clerical and administrative positions. The average age of workers is 25. Many workers have vocational training or several years on the job experience. The same applies to ISCOtt, NEC Methanol and NEC Urea, where semi-skilled and skilled male workers predominate and where preference is given to on-the-job experience. In these companies top management is largely in local hands, except for NEC Urea where operations are managed jointly with the MNEs. By contrast, in the case of small firms, younger employees are the norm. Experience is not as keenly stressed in the case of MNEs or state enterprises operating in the export sector.

It is sometimes argued that one of the problems of export-oriented industries is that employment fluctuates with the level of export activity dropping when a recession occurs in exports and rising when an export boom takes place. This seems to be indeed the case for the employment trend in
Port Lisas. On balance export activity has been rising over the years and this has brought about a rise in employment. At the same time, employment in iron and steel industry contracted from 1,086 in 1983 to 1,039 in 1984 due to a slack in exports.

**Indirect employment effects**

Data on indirect employment effects of MNEs hardly exist. However, some rough estimates can be made. Measurable indirect employment effects are greatest for large export-oriented firms. Most of this is attributable to a non-permanent phenomenon in plant construction during the late 1970s and early 1980s. At peak periods, this was as high as 9,360. About half of that number was regularly employed between 1977-82. Employment in housing construction was under 1,000. Other infrastructure generated a relatively small part of employment (see table 3.12). It is further estimated that most employment in the "spin-off" industries is attributable to large firms. Table 3.13 gives an idea of this measurable permanent indirect employment.

**Table 3.12: Indirect temporary employment 1977-82**

<table>
<thead>
<tr>
<th>Construction</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ISCOTT</td>
<td>3 000</td>
</tr>
<tr>
<td>FEDCHEM</td>
<td>600</td>
</tr>
<tr>
<td>TRINCEN*</td>
<td>760</td>
</tr>
<tr>
<td>FERTRIN</td>
<td>2 500</td>
</tr>
<tr>
<td>NEC Methanol-Urea</td>
<td>2 500</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>9 500</td>
</tr>
<tr>
<td><strong>Housing</strong></td>
<td>800</td>
</tr>
<tr>
<td><strong>Infrastructure</strong></td>
<td>190</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>10 350</td>
</tr>
</tbody>
</table>

*1974-76.

**Source:** Company Statistics: Point Lisas Industrial Port Development Corporation.

6226d
Table 3.13: Indirect permanent employment 1978-82

<table>
<thead>
<tr>
<th>Category</th>
<th>Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>134</td>
</tr>
<tr>
<td>Power</td>
<td>200</td>
</tr>
<tr>
<td>Spin-off industries (small)</td>
<td>200</td>
</tr>
<tr>
<td>Spin-off industries (medium)</td>
<td>300</td>
</tr>
<tr>
<td>Total</td>
<td>834</td>
</tr>
</tbody>
</table>

Source: Point Lisas Industrial Port Development Corporation.

With respect to MNEs per se, indirect employment in plant construction is estimated to have provided peak employment for about 6,000 during select periods, and an average of about 3,000 people yearly during the latter part of the 1970s and 1980s. If these estimates are correct, MNEs have contributed over 70 per cent of temporary indirect employment in construction. On top of this, we must include the indirect employment share of MNEs with respect to infrastructure including housing. However, this is difficult to measure.

Furthermore, there is permanent indirect employment to consider. This includes administration of the industrial estate, power and spin-off industries. The share of MNEs in this form of employment cannot, however, be estimated with the existing data base.

Data do likewise not exist on the multiplier effects of MNEs derived from wages, profits and taxes, and the indirect employment generated therefrom. It is possible that skills generated from construction work have helped to provide entrepreneurial and other talent leading to employment creation in the construction industry. Employment due to this "technological spin-off" remains, at the moment, unquantifiable.

Summarising, MNEs appear to have tended to play an important role in creating indirect employment. It is impossible, however, for reasons stated earlier, to give any precise statistical meaning to this. MNEs' indirect employment effects generated via linkages with other enterprises in the economy, could appear to be of little importance because of the capital intensity of the technology employed and the export-oriented nature of major enterprises.

Working conditions and industrial relations

Training provided to lower management and operators of MNEs is mainly "in house." MNEs attach much importance to training where there is a need for specific skills not readily acquired within the petrochemicals sector. There are apprentice and technical schools in the south of Trinidad which provide technically skilled people to the petrochemical and iron and steel industries.
Middle management and supervisors tend to participate in overseas training with parent companies and elsewhere. At the same time, there is a local management institute which provides training to lower and middle management. This is not specifically tailored to operational aspects of MNEs.

Skills and training provided by MNEs are not readily transferable to out-of-zone enterprises except for clerical and administrative cadres. Skills of operators are found to be relevant to the oil refining industry. Indeed, petrochemical firms helped to circumvent some of their initial training requirements by attracting technical staff from the oil industry. In the case of TRINGEN, FERTRIN and UREA, a number of workers were obtained from FEDCHEM where a pool of trained workers had built up over the years.

Career prospects at MNEs are limited at the top due to the small number of posts available, the strategic importance of expatriate employment, and the nature of skills required for such posts. Career prospects are reported greatest for clerical workers and young operators. Initial investment in training and the difficulty of replacing "lost" talent, means that MNEs attach much importance to keeping workers once investment in training has taken place. High wages are therefore offered to keep "brain-drain" small.

Wages are generally higher than the industrial average outside the Zone. At the same time, they are roughly similar to the oil refining industry, located outside the Zone. Fringe benefits are more or less uniform, given the existence of social security legislation applicable throughout the country. However, these are said to be in need of upward adjustment. Fringe benefits were among the issues which prompted a strike involving MNEs a few years ago. Prior to 1980, wages and fringe benefits at one MNE (FEDCHEM) were below those of the oil industry. The union representing workers at this enterprise attributes this uniformity to militant bargaining.

Wages and conditions of work affecting the wholly foreign-owned MNE, are negotiated through collective bargaining involving unions. For MNEs operating joint ventures with state enterprises, as well as totally state-owned enterprises, these are fixed through recruitment agencies for state enterprises. These agencies are responsible for setting wages and conditions of work. They do so in consultation with the Ministry of Labour in "in house" unions. Due to the competitive wage structure, wages and conditions of work affecting MNEs tend to be uniform with those prevailing in the larger enterprises at Point Lisas.

For top management, wages and fringe benefits are generally determined on an individual basis and, do not as a rule, involve unions. Thus, conditions of work for expatriates and local personnel in senior management positions tend to lie outside the collective bargaining framework. While wages of technicians, operators, administrative and clerical workers tend to be below those prevailing in the United States, wages for top management are internationally competitive and are comparable with those in America. Most of top managers have several years of management experience in the petrochemical industry.

Wages and fringe benefits of top managers of MNEs tend to be generally higher than those of senior management outside the industrial estate. Local senior management usually acquire their positions with MNE after a period of understudy.
Physical conditions of work are conditioned by the chemical and other processes involved in the petrochemical and iron and steel industries. In 1980-81, there was a general strike at FEDCHEM. The demands of workers included better safety and health conditions in the plant. The union representing the workers also claimed that there was damage to the environment caused by the discharge of chemical effluents. There was also the claim that atmospheric pollution - a point also applicable to other MNEs engaged in the production of fertilisers - was taking place. Furthermore, the union stressed that operations of MNEs relating to loading and unloading of cargo were hazardous for workers. A tripartite committee involving union, employer, and government is currently investigating these complaints.

Another common complaint is that due to the existence of older plants at FEDCHEM, its safety standards are lower than in firms with newer plants, notably TRINGEN, FERTRIN.

No study has been done on the effects of pollution on conditions of health. In general, the industrial estate tends to be affected by the problem of pollution.

Most MNEs do not keep medical records of employees. This also applies to most firms at Point Lisas. With respect to working hours, MNEs tend to operate a shift system.

Only FEDCHEM has an organised union. In-house unions exist at TRINGEN, FERTRIN and NEC Urea, but these are not members of the Trade Union Congress and have limited bargaining power.

Housing facilities hardly exist nearby except for a recently established housing estate providing limited accommodation. Most workers are long distance commuters; transportation is a problem for workers without their own means of transport. Canteen facilities exist in all enterprises offering meals at subsidised prices.

Information supplied suggests that matters discussed between MNEs and unions included working hours, wages, leave, safety and health, medical plan, insurance and the like. The main concerns are wages, safety and health and insurances.

Labour standards are supervised in the estate through labour inspection provided by the Ministry of Labour. Joint Employers' Association do not generally get involved in industrial relations matters at Point Lisas. Joint action in industrial relations matters is conducted largely by unions.

Restrictions on special conditions for freedom of association or collective bargaining are prohibited since these violate the existing Industrial Relations Law (1973) which allows collective bargaining and provides for union recognition.

Our research shows that there is a fair degree of stability of employment. For example, when there was a cutback in the production of fertilisers last year, this did not result in the retrenchment of workers.

The author's impression gained from his contacts is that the ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy is practically unknown to MNEs in Point Lisas. Unions as a rule do not appear to be familiar with the provisions of the Tripartite Declaration. The Declaration is, however, known to the Ministry of Labour.
Notes


2 Statistics supplied by the Central Bank of Trinidad and Tobago.

3 ibid.

4 Data provided by the Industrial Development Corporation (IDC).

5 IDC.


7 Point Lisas Industrial Port Development Corporation Pamphlet on Point Lisas.

8 Central Bank of Trinidad and Tobago, Annual Report 1982.

9 Industrial Development Corporation: Investing in Trinidad and Tobago.

10 Central Bank Data.

11 See ILO: Social and labour practices of multinational enterprises in the textiles, clothing and footwear industries (Geneva, 1984).

12 Point Lisas Industrial Port Development Corporation Pamphlet on Point Lisas.

13 R and D capability has not yet been built up locally in the case of joint ventures since these are of fairly recent origin.

14 Interviews with plant managers.

15 Information supplied by FEDCHEM.

16 Information supplied by Point Lisas Industrial Port Development Corporation.

17 Information supplied by MNE.

18 Information supplied by FEDCHEM.

19 Information supplied by TRINGEN.

20 Information supplied by National Energy Corporation.
21 ibid.
22 ibid.
23 ibid.
24 Information supplied by CENTRIN.
25 Information supplied by Point Lisas Industrial Port Development Corporation.
26 ibid.
27 ibid.
28 ibid.
29 ibid.
30 ibid.
31 Ministry of Labour.
32 Estimate provided by Point Lisas Industrial Port Development Corporation.
33 ibid.
34 Information supplied by MNEs.
35 Information supplied by MNEs.
36 Ministry of Labour.
37 Information provided by MNEs.
38 Ministry of Labour.
39 Information supplied by MNEs.
40 Ministry of Labour.
41 Ministry of Labour.
42 Ministry of Labour.
43 Ministry of Labour.
44 Argument by Oil Field Workers' Union.
45 Information supplied by Oil Field Workers' Union.
46 ibid.
47 ibid.
48 Namely FEDCHEM.
49 Information supplied by Ministry of Labour.
50 ibid.
51 ibid.
52 Information supplied by MNEs.
53 ibid.
54 ibid.
55 ibid.
56 Information supplied by Oil Field Workers' Union.
57 ibid and Ministry of Labour.
58 Oil Field Workers' Union.
59 ibid.
60 ibid.
61 ibid.
62 Based on author's investigation and visits.
63 Information supplied by Ministry of Labour.
64 ibid.
65 Information supplied by Ministry of Labour.
66 Oil Field Workers' Union.
67 Information supplied by Point Lisas Industrial Port Development Corporation.
68 Information supplied by Ministry of Labour.
69 Information supplied by Oil Field Workers' Union.
70 Information supplied by Ministry of Labour.
71 Based on discussions with management of MNEs.
CHAPTER 4

MNEs, EMPLOYMENT AND ENCLAVE INDUSTRIES IN BARBADOS

Exports, enterprises: Ownership pattern

Economic background

Per capita income in Barbados was US$3,830 in 1982. The main contributors to GDP were: services - wholesale and retail trade, banking and finance (36 per cent), government (13 per cent), manufacturing (12.2 per cent) and tourism (10 per cent). In 1984 the main exports were manufactures generating over Bd$500 million in foreign earnings, and sugar with Bd$67.1 million. In 1985 the total population was 248,000. The total labour force was 111,800 in 1982, and employment 96,000; the unemployment rate was 13.6 per cent.

Manufacturing was one of the fastest growing sectors in Barbados between 1971-80, averaging 6.1 per cent growth a year. During 1946-66, when import substitution industrialisation was encouraged, output averaged 2.2 per cent growth a year. Main import substitution activities were the manufacturing of margarine and lard, cooking oil, bread, biscuits, aerated beverages, rum and tobacco among others. Between 1966-70, there was a sharp fall in the index of industrial production, marking the failure of import substitution to provide a continued basis for economic growth.

Enclave industries

The thrust in export-oriented industrialisation began in 1969 with the passing of the Industrial Development (Export Industries) Act. This provided for a 10 year tax-holiday for firms exporting outside the CARICOM region. It also provided for a favoured 12.05 per cent profits' tax on "enclave enterprises" (defined under the law as firms producing exclusively for export markets outside CARICOM), at the expiration of the tax-holiday rather than the normal rate of corporate tax.

In 1974, the regime of incentives was replaced by the Fiscal Incentives Act meant to harmonise fiscal incentives in the CARICOM. This Act preserved the basic incentives of the Industrial Development (Export Industries Act of 1969). Apart from tax-holiday on profits, these include tax holidays on dividends, training grants, depreciation allowances, carry-over of losses, duty free concession on raw materials, machinery and equipment. Also, factory grants and industrial estates are provided as part of the package to attract enclave enterprises. A special provision is also made in the Fiscal Incentives Act for the encouragement of labour-intensive production activities. In 1974, an Export Development Corporation was set up in order to give further impetus to exports.

The rationale for enclave industries is best summarised in a recent publication: "Import substitution is becoming increasingly suspect as the primary strategy for promoting economic development. As a general rule, countries which have adhered too closely to the policy have not achieved any significant economic progress. The success stories are associated with countries which have followed outward-looking policies stressing export-led growth". Thus, "Fiscal incentives should be utilised as a tool for
ensuring long-term development. In this context they must be strategically applied to induce an extra-regional export orientation.\textsuperscript{15} Export-led growth can therefore be regarded as the main task of enclave industries.

Export-led growth and enclave industries

In the previous section the role of enclave industries in exports was discussed. They specialise mainly in assembly-type manufacturing and fit into the orthodox framework of low labour costs and attractive incentives as a basis for international production.

Since the early 1970s, the growth of exports of manufactured goods has been an outstanding feature of the Barbadian economy. Whereas in 1971, manufactures contributed merely Bd$25 million to exports, by 1981 export value of manufactures rose to over Bd$200 million. By then, manufactures were by far the most significant part of domestic exports, a place traditionally held by sugar (see figure 4.1). In 1967, exports of manufactured goods were 13.6 per cent of domestic exports; by 1984 these rose to 80 per cent of domestic exports.\textsuperscript{16} Between 1968-78, exports of manufactured goods grew by 28.4 per cent a year.\textsuperscript{17} Average annual growth in the export of manufactured goods between 1946-80 was 9.8 per cent suggesting that during the earlier periods, growth was not as fast as during the latter period.\textsuperscript{18}

One of the fastest growing export industries between 1968-78 was clothing and textiles which averaged a 38 per cent annual growth. Electronic components which were first assembled in Barbados in 1968, grew at 35.8 per cent a year during this period.\textsuperscript{19} Since 1979, electronics have overtaken textiles and clothing as the most dynamic export industry. In 1982, output of electronic components grew by 57 per cent; it however dropped to 25 per cent in 1983 and rose by Bd$133 million or 74 per cent in 1984 (see table 4.1). At the same time, aggregate manufacturing output grew by a mere 2 per cent (1983) and declined by 3 per cent in 1984.\textsuperscript{20} By 1980, triggered by exceptionally high growth, electronics emerged as the most dominant "new export" industry when viewed in terms of its percentage share in aggregate exports. By 1983, (as table 4.2 shows) electronics came to occupy the place as the most dominant industry in overall exports. Sugar, which held a fair percentage (24 per cent) share of aggregate exports in 1980, was down to a trickle in 1984 (10 per cent) while electronic components rose from 18 per cent to 53 per cent by 1984 (see table 4.1).

The main market outlets for exports generated by "enclave" enterprises are the United States and the United Kingdom.

Background data on enterprises

In 1985 there were 23 enclave enterprises operating in industrial estates administered by the Industrial Development Corporation (IDC). As table 4.1 shows, most of these are electronic and electrical and precision instrument enterprises. Within this group of enterprises, electronics predominate. Wearing apparel companies are engaged mainly in stitching operations. Workers in electronic companies are mainly assembly-oriented. It was reported that few companies are engaged in relatively high technology operations\textsuperscript{21} such as electronics and data processing. Export-oriented manufacturing enterprises are, as a rule, labour-intensive. However, the present industrial strategy, as laid down in the 1983-88 Development Plan, is to promote skill-intensive operations for export, namely high technology activities, which could assist in upgrading existing skills of the labour force.\textsuperscript{22}
Figure 4.1: Total domestic and manufacturing exports, 1971-81
<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$</td>
<td>%</td>
<td>$</td>
<td>%</td>
</tr>
<tr>
<td>Sugar</td>
<td>76 583</td>
<td>24.4</td>
<td>60 190</td>
<td>16.2</td>
</tr>
<tr>
<td>Molasses and syrup</td>
<td>8 282</td>
<td>2.6</td>
<td>6 932</td>
<td>1.9</td>
</tr>
<tr>
<td>Rum</td>
<td>4 253</td>
<td>1.4</td>
<td>5 365</td>
<td>1.4</td>
</tr>
<tr>
<td>Lard and margarine</td>
<td>5 042</td>
<td>1.6</td>
<td>5 545</td>
<td>1.5</td>
</tr>
<tr>
<td>Electronic components</td>
<td>56 168</td>
<td>17.9</td>
<td>119 462</td>
<td>32.1</td>
</tr>
<tr>
<td>Clothing</td>
<td>51 963</td>
<td>16.6</td>
<td>65 660</td>
<td>17.6</td>
</tr>
<tr>
<td>Furniture</td>
<td>11 196</td>
<td>3.0</td>
<td>12 598</td>
<td>2.2</td>
</tr>
<tr>
<td>Insecticides</td>
<td>10 258</td>
<td>2.8</td>
<td>11 249</td>
<td>1.9</td>
</tr>
<tr>
<td><strong>Total selected</strong></td>
<td>202 291</td>
<td>64.4</td>
<td>284 608</td>
<td>76.4</td>
</tr>
<tr>
<td><strong>domestic exports</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other domestic</td>
<td>111 582</td>
<td>35.6</td>
<td>88 019</td>
<td>23.6</td>
</tr>
<tr>
<td>exports</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total domestic</strong></td>
<td>313 873</td>
<td>100</td>
<td>372 627</td>
<td>100</td>
</tr>
<tr>
<td>exports</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Barbados Statistical Service.
Figure 4.2: Share of selected commodities in domestic exports

There is no set pattern of industrial location in Barbados as is the case of Trinidad and Jamaica; most of the electronic firms are located at the Newton Industrial Park near the airport. Recently, a number of closures have taken place in the apparel industry. Reasons attributed for this in official pronouncements are diminishing international competitiveness on the one hand, and trade restrictions in the United States on the other.\textsuperscript{23} There was also a reduction in export of textiles to CARICOM.\textsuperscript{24} A recent survey of potential United States overseas investors has singled out Barbados as the most preferred choice for plant location in the Caribbean,\textsuperscript{25} at least for electronics.

Table 4.2: Enclave enterprises operating in Barbados on 31 March 1985

<table>
<thead>
<tr>
<th>Product category</th>
<th>Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Local</td>
</tr>
<tr>
<td>Wearing apparel and leather industries</td>
<td>-</td>
</tr>
<tr>
<td>Electronic, electrical and precision industries</td>
<td>1</td>
</tr>
<tr>
<td>Data processing</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
</tr>
</tbody>
</table>


Among the main factors determining this choice (in order of importance) have been found to be: good labour relations (65.3 per cent); skilled labour force (63.6 per cent); good transport and communications (57.6 per cent); low wage levels (53 per cent); good financial aid and incentives (49.2 per cent); suitable real estate (46.6 per cent); good access to foreign markets (34.3 per cent). The findings were summed up as follows: "Manpower-related factors remain the most crucial criteria in a company's choice of location for a new plant".\textsuperscript{26}

Most of the enclave enterprises are relatively small in size (12 employing under 100 persons; 7 employing between 101 and 300 persons). Only four enterprises employ over 300 persons (see table 4.1). One electronics firm (INTEL), employs over 1,000 of the 2,313 workers in this subsector.\textsuperscript{27}

There is no substantial difference between the average size of enclave enterprises and other manufacturing (import-substituting) enterprises. While enclave enterprises are largely labour-intensive, at the same time many of these also carry out much research as shown by the growing importance of scientific and technological research in electronics, data processing, textiles and garments. Most research and development activity takes place at the headquarters of the MNE of enclave enterprises when these are involved. This is particularly true of MNEs engaged in electronics and data processing.
Levels of productivity of enclave enterprises are said to be higher than in other enterprises. In some cases (notably in electronics and data processing) this is as high as in the United States.\textsuperscript{28} Competitiveness is important for survival of such enterprises; and productivity has an important influence on competitiveness. So too has technological application which underlines the importance of R and D.

The Government in its Development Plan has earmarked electronics, medical supplies, high quality apparel and data processing as the main focus for export-led industrialisation in the future.

Some leading United States MNEs operate in the enclaves in Barbados. These include INTEL, JRW and CORCOM whose operations involve the manufacturing of integrated circuits, revisitors and other high technology components for electronic products such as personal computers and pacemakers; American Airlines is engaged in data processing operations.

Productivity varies markedly within the enclave sector. For example, between 1975-79, the productivity index per employee in export industries rose from 83 to 110.1 for textiles and apparel.\textsuperscript{29} At the same time, it rose from 190 to 312.9 in electronics and related industries.\textsuperscript{30} It is probable that this increase has been even higher in more recent times. The overall productivity index per employee in manufacturing as a whole rose only by 17 per cent between 1975-78.\textsuperscript{31}

Ownership aspects of enclave enterprises

As table 4.2 shows, most enterprises are foreign owned. Since there are only two joint ventures, complete foreign ownership is the rule. The main foreign direct investor in export-oriented enterprises is the United States. European foreign direct investment is exclusively in electronics and electrical and precision enterprises. The highest concentration ratio of United States enterprises, with respect to given export product lines, is to be found in data processing where all enclave enterprises are from that country. This is followed by wearing apparel and leather industries where the United States accounts for 90 per cent of enclave enterprises. Data are not available on the role of MNEs in export activity. Available evidence, however, suggests that the export-oriented enterprises are mainly subsidiaries of MNEs.\textsuperscript{32} From this point of view, it can be assumed that with the exception of one local enterprise, enclave enterprises are branches of MNEs.

There is an absence of state enterprises in the export sector. Local firms participating therein, either entirely or in partnership with foreign firms, are drawn from the private sector (table 4.2).

Employment dimensions

Direct employment

Total employment in the enclave enterprises was 4,217 in 1985.\textsuperscript{33} Of these 1,465 jobs were provided in the wearing apparel and leather industries, 2,313 in electronics and 339 in data processing.\textsuperscript{34}

The main skills required in these enterprises are cutting, stitching, handling and assembling skills, requiring mainly manual and easily acquired know-how. The workforce is predominantly female. It is estimated by the Industrial Development Corporation that female workers account for as much as 94 per cent of employment and that production workers or operators represent
up to 94 per cent of the total workforce. These are mainly local workers. The average female workers are in their early 20s.

On the other hand, top management of overseas enterprises, including joint ventures, is foreign, usually from Europe or North America. Middle and lower management is mainly local.

While we cannot quantify the exact role of MNEs in direct employment in enclave enterprises, the preponderance of overseas firms and the fact that these are probably MNEs, suggest that multinationals are likely to generate over 90 per cent of employment.

Between 1978-82, some 5,400 new jobs were created in the manufacturing sector with the assistance of the IDC. It is estimated that in 1984 about 80 per cent of manufacturing jobs created were in electronics and data processing alone. In 1983, of the 1,425 jobs created in IDC-assisted manufacturing firms, roughly 50 per cent of this total was in electronics. Since MNEs dominate electronics, it could be said that some 50 per cent of the total increase in employment was due to MNEs.

Between 1979-85, employment in enclave enterprises rose from 3,060 to 4,217 at a time when national unemployment was rising. Data suggest that employment share of enclave enterprises with respect to overall employment in manufacturing was under 33 per cent in 1984, accounting for some 4 per cent of national employment.

Most of the workers are non-seasonal workers. However, employment prospects are determined by the world trade in exports. For example, a number of plant closures took place recently in the textile and garment industry, resulting in reduced levels of employment in this sector. However, on account of the growth of electronics and data processing, higher net employment resulted.

Labour turnover in enclave industries on the whole tends to be lower than in the rest of the economy. For example, between 1979 and 1984, national employment dropped from 97,700 to 95,400; net employment in the enclave sector rose by 1,157. Since over 90 per cent of workers in the enclave sector are women, compared with 51 per cent in the manufacturing sector as a whole, in times of falling demand an above average number of women (2.1) are likely to suffer from job losses than in the manufacturing sector as a whole.

Table 4.3: Employment category of enterprises

<table>
<thead>
<tr>
<th>Product category</th>
<th>Under '25</th>
<th>25-100</th>
<th>100-300</th>
<th>100-300</th>
<th>Over 300</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wearing apparel and leather industries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Electronics, electrical</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>and precision industries</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data processing</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>-</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4</td>
<td>8</td>
<td>7</td>
<td>4</td>
<td>23</td>
<td></td>
</tr>
</tbody>
</table>

Indirect employment

As is the general rule, quantitative data are not available on indirect employment of MNEs.

Forward and backward linkages within and outside industrial estates are almost non-existent as inputs for MNEs tend to be obtained mainly from overseas, i.e. raw materials, goods in process, capital, technology, etc. After final assembly or processing, goods are then exported to the United States or Europe. In the process of production, movement of goods, i.e. inputs and outputs, takes place. It is evident that some indirect employment is generated in the transport, loading and unloading of goods for freight (mainly by air), and warehousing for quick overseas shipment. However, this is not likely to be large.\(^{46}\)

In the management and operation of industrial estates, some indirect employment is created for the IDC with a staff of 300. In this it is difficult to identify the share of industrial employment attributable to MNEs. At the same time, construction of factory buildings, roads and communication networks, so necessary for enclave firms, have also generated some indirect temporary employment by MNEs. Housing estates are absent.

There is evidence that the increase in enclave enterprises has resulted in employment displacement among traditional enterprises, particularly of women, especially in footwear, and textile and garment industries.\(^ {47}\) At the same time, it can be argued that less employment was displaced than was created due to the above average growth in employment in enclave enterprises.

Indirect employment from multiplier effects of wages and the income generated is likely to be limited due to high propensity to consume imported products.

Given the fact that some non-enclave enterprises tend to utilise indigenous resources, notably agriculture and food processing, such firms also tend to generate greater indirect employment through linkages than enclave firms depending practically exclusively on imported inputs. In this respect, some evidence suggests that local firms in the enclave sector tend to use more local inputs than overseas firms. But locally owned firms, as the data show, are virtually non-existent in the Barbados situation.

Working conditions and industrial relations

Since most of the work in enclave industries tends to involve easily acquired skills, normally obtained on the job (such as manual dexterity) limited formal training is provided. There is also a limited amount of vocational training done overseas at parent plants of MNEs.\(^ {48}\) Expatriate staff tend to undergo training abroad.\(^ {49}\) At the same time, a survey has shown that 90 per cent of enclave enterprises sponsor local training in management, including supervisory duties.\(^ {50}\) This is done at the Barbados Institute of Management and Productivity. On the other hand, INTEL has been instrumental in running a vocational course for unskilled workers at the Barbados Community College.\(^ {51}\)

Career prospects are limited for operators and production workers,\(^ {52}\) i.e. for the bulk of the workforce. They occur mainly in the conversion of unskilled to semi-skilled workers. However, promotions from assembly line to clerical positions are not uncommon.\(^ {53}\) There are also few cases where employees have moved from clerical to management and from assembly to management positions.\(^ {54}\) For example, in one electronics company, the
personnel manager was promoted to that post from a secretarial position. In two cases, personnel managers were recruited from the assembly line after completing management training at the Barbados Institute of Management and Productivity.

Some of the skills acquired in enclave operation, especially in the textile and garment industries, are useful for employment in existing import-substituting enterprises. Employment in other areas often call for the acquisition of new skills. In secretarial positions, skills in enclave enterprises are readily transferable.

With respect to wages, it is sometimes held that overseas MNEs offer better pay packages than local enterprises. We have found it difficult to uphold this proposition in the case of the enclave industries in Barbados. For example, in one electronics enterprise, unskilled workers are paid between Bd$92 to Bd$118 per week; semi-skilled workers Bd$205 per week; and skilled workers Bd$147 to Bd$287 per week. The weekly pay for unskilled, semi-skilled and skilled workers thus tends to be lower in a large number of non-enclave enterprises. However, managers in MNEs are paid higher than elsewhere in the manufacturing sector. At the same time, garment and textile workers were paid Bd$101.40 per week for unskilled work, Bd$116.61 per week for semi-skilled work, and between Bd$96.54 and Bd$136.30 per week for skilled work, which was below that of a large number of non-enclave enterprises. This suggests that wage levels within the enclave sector are far from uniform.

The established overtime rates payable in a particular industry are normally applicable to workers in the enclave enterprises, although there are no legally prescribed overtime rates in Barbados. The Barbados Workers' Union, which is recognised as the bargaining agent for workers in 15 of these enterprises, has been able to negotiate rates for overtime work at one-and-a-half or two times the normal rates of pay.

With respect to conditions of work, some enclave enterprises perform well compared with other manufacturing enterprises. For example, some provide medical facilities, vocational training, canteens, and recreation facilities.

Barbados has no national minimum wage law setting the lower limit for payment of wages and fringe benefits. Since a great number of enclave enterprises are not unionised, wages and conditions of work are sometimes unilaterally fixed by the companies, but also sometimes in consultation with the employees or their representatives. At the same time, it must be observed that Barbados labour legislation allows for collective bargaining and union recognition.

Safety and health is regulated by the Factory Act of 1984. The Ministry of Labour has factory inspectors charged with day-to-day responsibility of ensuring that conditions laid down by law are respected. The Factory Act makes provision for the keeping of factory documents and medical records but a large number of enterprises are said to keep only accident records. The Factory Act requires each factory to keep a general register, showing particulars concerning each accident and cases of occupational diseases in the factory. Since cases of occupational diseases in the garment and electronic factories of the enclave enterprises are not easily detectable, it is possible that registers may not record such entries.
One of the problems with the work content at enclave industries is that there is often a high level of boredom, given the highly repetitive nature of assembly work. There are also cases of poor lighting arrangements and the claim that the use of equipment has resulted in personal injury to workers was not uncommon. Furthermore, chemical fumes and the use of acids in some activities are said to be a great hazard in electronics by union sources.

Medical facilities are reported in surveys to be curative rather than aimed at eliminating health hazards generated by the existing process of production. But most accidents are generally regarded as minor. Furthermore, the position held by some firms is reported to be that treatment of workers for minor accidents can hold up production runs and increase output costs. However, medical facilities are common among enterprises employing over 300 people. For example, one company had a plant nurse, a family planning unit, and carried medical tests prior to employment. Another above-average sized company had a registered nurse and a doctor. Another company employing under 100 workers had first-aid kit services for workers. Child-care facilities do not usually exist for working mothers. As in Trinidad and Tobago, transportation is sometimes a problem for commuting workers.

Most enterprises operate a shift system. Multi-shift operations are a prerequisite and a reality in efficient mass production. The markets which Barbados must penetrate need to be serviced by high volume and cost competitive production. This can only be achieved by more intensive use of plant and equipment. A 40-hour work week is the rule.

In a large number of companies, there are no recognised unions. The Barbados Workers' Union, the main union representing private sector workers in Barbados, often provides a basis for wage and other negotiations. It is the most effective union in Barbados. During the process of joint consultation it advises workers in enclave enterprises on matters pertaining to collective bargaining, and in this way has an influence on wages and other agreements covering conditions of employment.

Industrial conflicts are not infrequent, but strikes are few. Union recognition and overall conditions of work, including wages and fringe benefits, are the main reasons for industrial conflicts. In 1982, several strikes took place as a result of failure to grant union recognition. The strikes affected mainly garments and electronics firms. Non-union enclave enterprises tend to offer pay and conditions of work which make union membership unattractive to their employees as a means of keeping the unions out. Barbados laws do not provide for compulsory recognition of trade unions.

Enclave enterprises tend to use consultants or lawyers in industrial relations matters, rather than the advice from local employers' associations. The role of workers' organisations is generally confined to a single union. Restrictions relating to freedom of association are prohibited by law.

The author thus found that the ILO Tripartite Declaration of Principles concerning Multinational Enterprises and Social Policy is not generally known in the Barbados enclave industries.
Notes


2 Data provided by Ministry of Finance and Planning. US$1 = Bd$1.98.

3 ibid.

4 ibid.


6 ibid.

7 ibid.

8 Information supplied by the Industrial Development Corporation (IDC).

9 ibid.

10 See Cox: "The Manufacturing Sector ...".

11 ibid.

12 ibid.

13 Fiscal Incentives Act.


15 ibid.

16 See Cox: "The Manufacturing Sector ...", op. cit. See also table 4.1 in this chapter.

17 ibid.

18 ibid.

19 ibid.


21 Information supplied by Industrial Development Corporation.


23 Speech by T. Adams, then Prime Minister of Barbados, to the American Bar Association in Chicago (1984).

24 Largely, due to trade restrictions imposed by some countries, and market slack due to recessionary conditions.

25 See: Recent Electronics Location File, 1984/1, Survey results reported in Impact, Second and Third Quarter 1984, IDC.
Conclusions of Survey as quoted from *Impact*, op. cit.

It has been reported that INTEL's assembly plants in Malaysia and the Philippines employ more than 2,000 workers as compared to the 1,000 in Barbados. One reason for this apparently was the lack of technical personnel which obliged the company to establish a separate test plant in Puerto Rico.


Information supplied by IDC.

Results of IDC Survey.

Information supplied by IDC.

ibid.

ibid.

This needs statistical confirmation.


ibid.

Data supplied by IDC.

Calculations based on government data.

ibid.

Information supplied by IDC.

Based on data supplied by Ministry of Finance and Planning.

Admittedly, it is likely to be somewhat unsteady. Data supplied by Ministry of Finance and Planning.


Based on information supplied by Ministry of Labour.

ibid.

ibid.

See: Export Processing Jobs and Female Labour, paper prepared for Caribbean Technology Policy Studies, Phase II by Victoria Durant-Gonzalez, p. 43.

ibid.
Based on survey carried out by Barbados Employers' Confederation. See: Pay Range by Level of Skill: Specified Industries and Trade Groups, 1984.

Based on the survey mentioned under 56.

Information collected by the ILO.

A number of these are present in export processing enterprises, but not in some local enterprises of the same size outside the enclave industries.

Information supplied by Ministry of Labour.

Information obtained by the ILO.

ibid and Barbados Workers' Union.

"Export Processing Jobs ...", op. cit.

"Export Processing Jobs ...", op. cit.

ibid.

ibid.

ibid.

ibid.

ibid.

Ministry of Labour.


Ministry of Labour.

ibid.
78 Barbados Workers' Union.

79 Ministry of Labour.

80 ibid.

81 Notably the Barbados Workers' Union.
CHAPTER 5

MNEs, EMPLOYMENT AND EPZs IN JAMAICA

Exports, enterprises: Ownership pattern

Economic background

With per capita income of US$1,330 in 1982, the main exports of Jamaica, in order of importance, were: bauxite and alumina, food including sugar, and manufactures. In 1983, the labour force was 735,700 and unemployment 26 per cent.

During the late 1970s and early 1980s, the economy suffered a setback in economic growth, which dropped by 1.5 per cent in 1979 and 5.8 per cent in 1980. Output of manufactures declined by 4.9 per cent in 1979 and 11.6 per cent in 1980. The country has recently recognised the economic importance of the Caribbean Basin Initiative in terms of exports since this means that "a vastly larger export market exists for Jamaican products than is now being served". During the 1970s, foreign capital was hardly encouraged as part of the then government's socialist policy. This remained so even though an Industrial Incentives Act (1956) and the Export Industry Encouragement Act (1956) were enacted to stimulate industrial growth. The latter Act in particular was aimed at encouraging exports outside the Caribbean. At the end of the first 12 years of the Act, exports in manufactured goods stood at J$16.6 million while the main emphasis continued to be on import substitution. In the 1980s, export-led industrialisation became a cornerstone of the economic development strategy of the Seaga government. Towards this end, private enterprise is strongly encouraged in the economy.

Kingston Free Zone

The Kingston Export Free Zone was first inaugurated in 1976 as a warehousing and trans-shipment facility. In the 1980s, its role increasingly became a centre for the production of manufactured goods for export to the international market (mainly of the United States). In 1982, the Jamaican Export Free Zone Act brought the Kingston Free Zone under its regulation. The Act offered a set of incentives including tax exemption, 100 per cent tax-holiday, the elimination of import licensing and normal customs provisions, duty free import of raw materials, capital goods, etc., and easy repatriation of profits, among other things.

There is a Free Zone administration at Kingston. It manages the Free Zone and assists in the recruitment of labour, the provision of utilities and the like. Recently another free zone was set up in Montego Bay to give further impetus to the free zone concept as a basis for exports. Only one company, or less than 10 per cent of the distribution of enterprises in free zones in Jamaica, is located in Montego Bay, the rest being based in Kingston Free Zone.

The main vehicle for government support to industry is the National Development Bank (NDB), a government-owned institution which provides medium-
and long-term loans through commercial banks as well as access to foreign exchange resources available from the World Bank. Resources were thus made available for the NDB financed Kingston Free Zone, which financed the construction of factory space and facilities in the port free zone area. Demand for this space has been very high, creating over 3,000 jobs by the end of 1984 and justified the launching of the Montego Bay Free Zone as well as the expansion of the Kingston Free Zone in the next four years (1986-90). The Industrial Development Corporation has been provided with an allocation of about US$10 million a year for other factory buildings which are aimed at providing space for local or foreign manufacturers who do not wish to be restricted to selling products solely for the export markets.10

A recent survey of labour costs shows that Jamaica compares favourably with the two other countries covered by this survey.11 For example, weekly wages for machine operators in export-oriented industries between 1982-83 were as follows: Jamaica US$15 to US$25; Barbados US$50 to US$60; Trinidad and Tobago US$75 to US$93. Recent devaluations have now made Jamaican labour costs the lowest in the Caribbean.

While foreign direct investment in manufacturing activity is encouraged throughout Jamaica, the Kingston Free Zone is an attempt to emulate especially newly industrialised countries in export-led industrialisation.12 Nearly 150 acres of land has been allocated at the Kingston Free Port for export activity - only 18 acres are currently being used. From this standpoint, considerable surplus land capacity exists at the free zone.

The zone is meant to give impetus to exports, create employment, and develop technological skills. The Government has established offices in capitals of North America, Europe and Asia to make Jamaica known as a low-cost base for manufactured exports, with close proximity to the United States, attractive incentives, a stable free market system, and considerable scope for market access to industrialised countries through the CBI, Lomé Convention and United States Trade Regulations 806-807.

**Export-led growth and Kingston Free Zone**

Exports of manufactured goods in the Kingston Free Zone grew more than ten-fold between 1980-84 (see figure 5:1). At the same time, exports of traditional manufactured goods virtually stagnated between 1980-83 (US$14.1 million as compared to US$14.8 million), and real growth of manufactured output declined by 1.8 per cent.13 Bauxite and alumina exports dropped from US$681.7 million in 1980 to US$423.8 million and sugar from US$59.1 million to US$57.3 million.

**Figure 5.1: Exports from Kingston Free Zone**

<table>
<thead>
<tr>
<th>Year</th>
<th>US$000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980</td>
<td>1700</td>
</tr>
<tr>
<td>1981</td>
<td>6300</td>
</tr>
<tr>
<td>1982</td>
<td>14300</td>
</tr>
<tr>
<td>1983</td>
<td>14350</td>
</tr>
<tr>
<td>1984</td>
<td>18.0 mil.</td>
</tr>
</tbody>
</table>

**Source:** Kingston Export Free Zone.
Investment is predominantly foreign (see table 5.1). It is exclusively export-oriented and involves essentially assembly-type operations. The enterprises are comparatively small-sized, with only one firm employing over 1,000 workers. In this respect, they are different from the two traditional export industries – bauxite and sugar – where large firms predominate. Of the 17 enterprises, only one is completely local. Over 90 per cent are either completely foreign-owned or partly foreign-owned.

Table 5.1: Breakdown of enterprises

<table>
<thead>
<tr>
<th>Type</th>
<th>No.</th>
<th>Country or area of origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apparel</td>
<td>8</td>
<td>Area of Hong Kong and USA</td>
</tr>
<tr>
<td>Food processing</td>
<td>4</td>
<td>Canada, USA, Jamaica/Norway joint venture</td>
</tr>
<tr>
<td>Warehousing</td>
<td>3</td>
<td>Jamaica/USA, Hungary and India</td>
</tr>
<tr>
<td>Container</td>
<td>1</td>
<td>Jamaica</td>
</tr>
<tr>
<td>Ethanol</td>
<td>1</td>
<td>USA</td>
</tr>
<tr>
<td>Total</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>


The following picture denotes ownership of existing enterprises. In the field of textiles and garments four of the eight enterprises are from the area of Hong Kong. Most of these have relocated from Asia to take advantage, among other things, of proximity to the United States market. Jamaica is also a suitable location in view of the uncertainties about the future of the area of Hong Kong after 1990. Efforts are actively being made by the Industrial Development Corporation to lure Hong Kong investors to Jamaica. Enterprises from the area of Hong Kong are wholly-owned subsidiaries of MNEs. The remaining four enterprises are American-based MNEs. With respect to food processing, three North American multinationals predominate; in the case of ethanol, a United States MNE is the sole enterprise (see table 5.2).

Available data on capital invested shows that the bulk of foreign investment is in joint venture projects, namely Norway/Jamaica and United States/Jamaica, accounting for J$16.5 million. Most of this investment is in a fish processing plant involving capital from Norway and Jamaica. The United States follows with J$8.3 million, Canada with J$5.9 million and Hong Kong with J$5 million. Investments from India and Hungary are less than J$1 million each. The ownership pattern of MNEs in the Kingston Free Zone is the most diversified of the three countries studied in this working paper.
Sectoral distribution of enterprises

The apparel industry produces jeans, shirts, blouses, sweaters and pullovers, involving mainly assembly-type operations. Processed food includes canned fish products and by-products such as fish oil and fish meal. It also includes fruit juice concentrates and animal feed. It involves traditional manufacture. Ethanol production is a high technology industry requiring a skilled labour force. Data supplied by the Industrial Development Corporation shows that 85 per cent of total production of the zone is composed of textiles. Electronics enterprises are absent.

The average size of enterprises in terms of employment is about 310 workers. As pointed out in the previous section, this makes enterprises, on average, smaller than those in traditional export firms. On balance, however, they tend to be larger than manufacturing enterprises producing for the domestic market. With the exception of ethanol production, the enterprises are mainly labour intensive. Research and development is usually performed at the headquarters of MNEs.

Data are not available on labour productivity in textiles and food processing; however, since the zone enterprises are of recent origin, labour productivity is likely to be higher than in enterprises located outside the zone.16

Employment dimensions

Figure 5.2 shows employment generated in the Kingston Free Zone in the years 1981-84. By 1985, total local employment was 3,587.17 Table 5.2 provides a breakdown of employment in the main subsectors. By far, the greatest employment creating activity is garment manufacturing, with food processing next in importance. The largest employer is East Ocean Textiles, a multinational, from the area of Hong Kong, with 1,703 workers.

Statistical data do not exist on the precise role of MNEs in employment generation in the free zone. However, given the preponderance of garment and food processing in employment, and the importance of MNEs in these subsectors, it is safe to assume that over 90 per cent of employment is created by MNEs including joint ventures.

Against the spectacular increase in employment in the Kingston Free Zone, we must now look at national employment. This was 707,500 in 1981, and 724,700 in 1984.18 Between 1983-84 national employment fell by 1,000.19 It is reasonable to assume a fall in manufacturing employment during this period given a contraction in this sector. The ratio of zone employment to national employment is quite small - less than 1 per cent.

In addition to 3,587 local workers, there are 144 expatriate workers in the Kingston Free Zone.20 Expatriates are mainly from the parent companies of MNEs. The specific skills required at the free zone are for machine operators, cutters, stitchers, trimmers, pressers, packers, machine technicians, machine operators, engineers, good technologists and petroleum engineers.21 In addition, typing and secretariat skills and computer operators are required. Most of the local workers are semi-skilled. Management and supervisory jobs are held mainly by expatriates.
Figure 5.2: Employment in Kingston Free Zone

Source: Kingston Export Free Zone.

Table 5.2: Sectoral breakdown of employment 1985

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>240</td>
<td>870</td>
<td>960</td>
<td>2,752</td>
</tr>
<tr>
<td>Garment</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3,180</td>
</tr>
<tr>
<td>Food processing</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>362</td>
</tr>
<tr>
<td>Animal feed</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Petroleum products</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>13</td>
</tr>
<tr>
<td>Services</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>22</td>
</tr>
<tr>
<td>Other</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3,587</td>
</tr>
</tbody>
</table>


It can be estimated that 95 per cent of workers in the free zone are women, making it the employment centre with the highest concentration of women to work population in Jamaica. Most enterprises outside the zone employ a predominantly male workforce. Seasonal labour is not usual in the free zone.

Given that the free zone mainly attracts unskilled female labour and has been providing an increasing number of jobs over the years, it follows that the zone plays an important role in the unskilled female labour market, even though it accounts for a small share of national employment. What is noticeable is the fact that this labour market segment is not highly unionised. On average, workers in the free zone are in their early twenties.

As mentioned already, zone employment has been increasing over the past years. This is so in spite of the fact that the textile market in the United States has been experiencing protectionist barriers. However, protectionism
does not appear to adversely affect Jamaican exports to the American market, as it has done for some newly independent Asian countries. United States enterprises operating in Jamaica can send back textile goods to the United States market under Regulation 807, by paying nominal duties on re-exports. At the same time MNEs from the area of Hong Kong which do not benefit from this Regulation, claim they have no difficulty penetrating the United States market. It is possible that American transnational marketing groups serve as a conduit for the marketing and distribution of textile products of MNEs manufactured in the area of Hong Kong for the United States market. This point needs further investigation.

Indirect employment

Forward and backward linkages hardly exist between firms within the free zone, or between firms of the free zone and the rest of the economy. As in the case of Barbados, the linkages are essentially intra-corporate. Most of the inputs are processed for re-export to the United States. The inputs are obtained largely from parent plants of MNEs. An exception to this rule is the case of fish processing which involves a joint venture between Jamaica and Norway. The basic raw material in this instance is obtained locally generating some indirect employment via backward linkages.

Table 5.3 gives an estimate of measurable indirect employment generated by free zone enterprises. This is, of course, only a partial assessment.

The displacement effect with respect to local firms is likely to be minor since the textile industry is exclusively export-oriented and does not compete with local industry on the domestic market. The same would apply to food processing which is sold mainly to the CARICOM market.

<table>
<thead>
<tr>
<th>Table 5.3: Selected indirect employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zone Authority</td>
</tr>
<tr>
<td>Stevedores* etc.</td>
</tr>
<tr>
<td>Factory construction and infrastructure</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

*Mainly seasonal.


The degree of linkages between zone and non-zone enterprises is difficult to evaluate. For example, in some industries such as bauxite and sugar, it has long been held that linkages are hardly promoted. Furthermore, in some import substitution enterprises (those involving foreign direct investment) linkages can be assumed to be quite small since parent companies tend to
supply inputs from overseas for local production. In some raw material based industries (food processing), the degree of linkages is higher than average. It should be noted, however, that the incidence of indirect employment whatever its magnitude is mainly permanent. Factory construction and infrastructure providing for temporary employment over a two-year period have now ended. Stevedores and other port staff are employed by the Shipping Association. In off-peak periods, employment can run as low as 80. The main source of permanent employment (about 250) is provided by the free zone authority.

Working conditions and industrial relations

Training provided to workers in the zone is mainly on the job. Minimum training is required given the nature of most jobs, notably in the garment industry. Career prospects for unskilled and semi-skilled workers are limited. So far there have been few promotions from unskilled to skilled categories and likewise few promotions from skilled to supervisory levels have taken place. Most upper management positions, as already indicated, are held by expatriates.

Food processing skills, for example, are useful for the agri-business sector outside the zone. The same applies to garments. But out-of-zone employment opportunities are limited in these industries due to depressed economic conditions.

Wages and conditions of work in some sectors, such as garment manufacturing, would appear to be relatively low. For example, a sewing operator (skilled worker) was earning US$35 weekly (1983). At the same time, in the footwear industry outside the zone, unskilled workers were earning as much as US$40 weekly, and skilled workers up to US$63. Some categories of machine operators were earning US$45 weekly in the garment industry compared with US$90 weekly in the footwear industry; production managers were earning US$180 weekly in the former compared with US$223 in electronics industries outside the zone.

For unskilled and semi-skilled workers in the garment industry, wages and general working conditions have been the source of recent labour unrest. Low wage rates and low rates of overtime pay were apparently among the main issues for worker dissatisfaction in 1985. Trained workers are reported to be paid less than US$12 weekly (gross) with take-home pay of less than US$10. Less than US$1 was reported paid for each two hours of overtime work.

Five major unions have written to government alleging that workers were being treated like indentured labourers. The unions argue that low wage rates in the zone, although roughly comparable with the minimum wage in Jamaica, are among the lowest in the CARICOM. Towards the end of 1985 the minimum wage was J$1.50 per hour or J$160 per week.

One of the main problems affecting the working hours of garment workers is the need to satisfy the high level of demand in the American market. As a result, much overtime is required in order to meet outstanding orders. According to an official report "employees are expected to work a minimum of 12 hours a day in a six-day week, and in some cases, seven days". Unions claim that refusal to work overtime in such circumstances led to dismissal.
A national advisory commission has been set up to examine a new minimum wage as well as working conditions for the garment industry.

The national minimum wage is determined by law. However, companies have a relatively free hand in determining wages unilaterally to some extent and by offering individual contracts to management staff. Collective bargaining plays an indirect role in the sense that wages in out-of-zone areas (in many instances determined by collective bargaining) has an influence on level of wages in the zone. However, under slack labour market conditions, this influence can be remote as there is much unemployed labour to choose from. Moreover, female unskilled workers tend not to be well represented in unions operating in out-of-zone areas. Most enterprises in the zone operate a shift system. The normal work-week is 40 hours.

The working environment in the zone is also a source of dissatisfaction. A recent report notes the prevalence of high intensity.

It also referred to the general absence of air conditioning facilities which meant that many aluminium buildings are excessively hot and stuffy. It was reported that many of the buildings in the zone were hurriedly established in order to commence operations early. This had the effect that many enterprises currently do not strictly comply with the Factory Act. Many of the enterprises are therefore said by union sources to lack proper health and safety facilities; and amenities are felt to be far from adequate.

Medical records are not kept as a rule but on-the-job injuries in both garment and food processing industries are reported. Canteen facilities are limited. Transport allowances are not generally paid. Child care facilities do not exist for working mothers. It is not usual for EPZ enterprises in Jamaica to provide housing and transport facilities for workers, most of whom are long distance commuters.

Employers' associations do not play an active role in the zone as most zone enterprises are not generally members of local associations. Recently, workers' organisations including the Trades Union Congress (TUC) have been vocal about conditions of work in the zone. Their main concerns are: wages, fringe benefits, health, safety and insurance.

The Jamaican labour law provides for collective bargaining and guarantees freedom of association. However, as in the case of Barbados, unions claim that zone enterprises are unwilling to grant them recognition.

According to the unions' investigations, the ILO Tripartite Declaration of Principles concerning MNEs and Social Policy is hardly known in the Kingston Free Zone.
Notes


3 ibid., p. 16

4 ibid.

5 ibid.

6 The emphasis was on self-reliance development.


8 See: Fact Sheet (Kingston Export Free Zone, Kingston, N.D.), p. 3.

9 ibid.


11 Findings of CARICOM Commission of Inquiry into the Garment Industry, see, Labour View-point, Vol. 2 No. 4, 1984, p. 1. Between December 1983 and June 1985, the exchange rate of the Jamaican dollar dropped by over 70 per cent, making wages even more favourable as compared to Trinidad and Barbados.

12 In this sense, they are roughly similar to Trinidad and Barbados.

13 Economic and Social Survey ..., op. cit.

14 Based on interviews with enterprises from the area of Hong Kong.

15 Based on data supplied by Kingston Export Free Zone.

16 Observations by IDC.

17 Based on data supplied by Kingston Export Free Zone and IDC.

18 Economic and Social Survey ..., p. 17.2.

19 For example, a change from 735,700 to 724,700, ibid.

20 Data supplied by Kingston Export Free Zone.

21 Information supplied by IDC.

22 Estimates provided by IDC.

23 Information supplied by Ministry of Labour.

24 This does not necessarily mean that this trend will continue indefinitely.
Evidence suggests that such groups have played a large part in the exports of manufactured goods of some Asian countries, to the United States and Europe.

Information supplied by Ministry of Labour.

Observation by unions.

Government data aimed at ascertaining competitiveness of local wage structure internationally.

ibid.


ibid.

ibid.


Information supplied by the Ministry of Labour, Jamaica (Nov. 1985).

See: "Free Zone jobs to double soon, but low wages and production constraints persist", in Jamaica Gleaner, 15 Apr. 1985.

ibid.

ibid.

Due to an over supply of labour.

Ministry of Labour.

"Free Zone jobs to double soon ...", op. cit. Workers are kept busy throughout the day, as they struggle to reach their targets. They produce under the watchful eyes of supervisors who anxiously pace the passages along the production lines to detect and correct any inaccuracy in the production process.

ibid.

Ministry of Labour.

Based on interviews with unions.

Ministry of Labour.

ibid.

ibid.

Ibid.

Based on information supplied by unions and Ministry of Labour.

Ministry of Labour.
CHAPTER 6

SUMMARY AND CONCLUSIONS

This study has attempted to examine the employment effects of multinational enterprises in the export processing zones (EPZs) in three Caribbean countries. Its findings are preliminary given the absence of comprehensive data. The main findings are:

(i) In one case, EPZs do not readily fit into recent theorising on a new international division of labour. Such theorising is applicable to labour-intensive operations where cost savings are seen largely in terms of labour. In the case examined, capital intensity and the use of skilled workers is general. Locational advantages are seen largely in terms of cheap energy inputs both for power and as "goods for processing".

(ii) EPZs account for less than 1 per cent of national employment in two countries, and 4 per cent of national employment in one country. In spite of the small number of jobs generated so far, the rate at which EPZs create employment is, however, so high that they rank as the most dynamic agents for job creation compared with other sources of national employment. Some EPZs have experienced as much as fifteen-fold increases in direct employment over the past five years. During this time, national employment levels have either fallen or have virtually stagnated.

(iii) MNEs play a prominent role in EPZs with respect to job creation and exports. MNEs generate as much as 90 per cent of jobs in some EPZs. MNEs from newly industrialising countries are non-existent in the EPZs studied except in Jamaica where they alone account for over 30 per cent of EPZ jobs.

(iv) MNEs in EPZs employ mainly semi-skilled and unskilled female workers who comprise over 90 per cent of the workforce, excepting Trinidad and Tobago where male skilled workers predominate. These differences can be attributed mainly to industry characteristics.

(v) In two countries, namely Barbados and Jamaica, employment in EPZs is mainly in electronics and textiles; in Trinidad and Tobago employment in energy-based export industries is the rule.

(vi) Indirect employment effects of MNEs in the EPZs covered are small although measurable indirect employment is mainly associated with construction work and the EPZ administration vary from 800 to over 4,000 jobs in the EPZs studied (between 20 and 40 per cent of direct employment).

(vii) Most MNEs in the EPZs under review are non-unionised. However, in the case of Trinidad and Tobago, where unions function in EPZs, 60 per cent of total workers employed by MNEs are represented by registered unions.

(viii) Wages in some EPZs, although usually not lower than outside the zones, have given rise to concern. These were felt to be substandard by the
unions particularly in one of the zones whereby the fact that the
large foreign enterprises' levels of productivity is definitely higher
than those of the average outside local enterprises may also play a
role! Extensive working hours were a frequently mentioned negative
feature of working conditions together with repetitive work in some of
the industries for the bulk of the workforce. Child-care facilities
practically do not exist for working mothers and housing facilities
are not common.

(ix) Limited career prospects have been found to exist for the average
national worker in the MNE operations in EPZs. Usually only
on-the-job training is provided for the bulk of the manual workforce,
i.e. the majority of the nationals employed.

(x) Another area of concern for workers were job injuries and health
hazards found in some of the industries together with the fact that
medical records are usually not kept.

The principles established in the Tripartite Declaration of Principles
concerning Multinational Enterprises and Social Policy, adopted by the ILO
Governing Body in November 1977, are practically unknown in the zones
studied. Their application through concentrated efforts by governments,
unions and MNEs in the EPZ would go a long way to remedy a good number of the
problems identified. The principles of the Declaration would also provide
guidance for the increase of MNEs indirect employment effects, especially
through the promotion of inter-industry linkages with the national economy,
wherever possible. Perhaps more than through their direct dynamic job
creation in EPZs this could help to reduce the high level of unemployment in
the Caribbean. As in other regions of the world, the harmonising of the
modus operandi of EPZs in the Caribbean would offer long-term advantages to
all the countries concerned.
ANNEX I

SOME ECONOMIC ASPECTS OF MNEs IN EPZs -
AN ILLUSTRATIVE CASE OF BARBADOS

Forms of MNEs participation in enclaves

The main form of MNEs participation in enclave industries is through majority-owned affiliates. Over 90 per cent of MNEs operate as majority-owned affiliates. Joint ventures are only 8 per cent of the total number of cases. Subcontracting and licensing arrangements common to EPZs operating in newly industrialised countries are non-existent. At the same time, subcontracting and licensing involving MNEs do exist in manufacturing in Barbados. As a rule, this excludes predominantly export-oriented firms.

Composition of capital by MNEs in EPZs related activity

Data on capital composition of MNEs are rare and are not up-to-date where these exist. Also, these are aggregated and do not deal with enclaves per se. Tables 1.1 and 1.2 deal with foreign direct investment in aggregate and provide a broad historical guide of such investment.

Table 6.1 shows the picture with respect to the year-end flow of foreign direct investment. There has been a substantial decrease between 1971-80. It further shows the historical relationship between the flow of foreign direct investment and re-invested earnings. This varies from 6 per cent in 1971 to 100 per cent in 1980. No clear trend emerges except between 1971-74 when there was a progressive increase in the ratio of re-invested earnings to the flow of foreign direct investment. The data do not strictly relate to MNEs in enclaves. However, mainly export-oriented enterprises are covered.

With respect to equity capital in foreign exchange, precise data are not available. However, available evidence suggests that of the capital requirements of subsidiaries a substantial part of equity capital is provided by the parent enterprise. Limited data exists on borrowing on the domestic money market. In 1985, for example, MNEs in EPZs had a total outstanding local credit of Bds11.1 million. Three MNEs, including the giant INTEL, were the main borrowers in the local market, suggesting that only about 12 per cent of MNEs in EPZs engage in local borrowing. It is impossible to estimate the ratio of local borrowing to net transfer of foreign resources of these three firms, and the domestic loan ratio with respect to inflow of foreign direct investment of the three enterprises.

In terms of net transfer of resources in the form of foreign direct investment to Barbados, this would seem to be of limited importance on account of the high rates of dividends and profits repatriated. It is quite unusual (as table I.2 shows) for the overall ratio of profits and dividends repatriated to foreign direct investment flows to be under 30 per cent in any year between 1972-80. In one year, the net transfer of resources to the country was negative due to the three-fold repatriation of dividends and profits over the flow of foreign direct investment. Absolute amounts of net transfer of resources are also shown in table I.2; the highest value being in 1975 and the lowest was in 1980.

Table I.3 shows Barbados balance of trade position.
### Table I.1: Flow of foreign direct investment and reinvestment of earnings in 1970-80 (US dollars millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>(1) Amount</th>
<th>(2) Reinvested earnings</th>
<th>Percentage 2/1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>9</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1971</td>
<td>16</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>1972</td>
<td>17.4</td>
<td>2.2</td>
<td>13</td>
</tr>
<tr>
<td>1973</td>
<td>6</td>
<td>1.2</td>
<td>20</td>
</tr>
<tr>
<td>1974</td>
<td>9.6</td>
<td>3.6</td>
<td>38</td>
</tr>
<tr>
<td>1975</td>
<td>23.1</td>
<td>4.9</td>
<td>21</td>
</tr>
<tr>
<td>1976</td>
<td>6.9</td>
<td>1.2</td>
<td>17</td>
</tr>
<tr>
<td>1977</td>
<td>4.7</td>
<td>1.2</td>
<td>28</td>
</tr>
<tr>
<td>1978</td>
<td>8.8</td>
<td>2.5</td>
<td>28</td>
</tr>
<tr>
<td>1979</td>
<td>5.2</td>
<td>1.3</td>
<td>25</td>
</tr>
<tr>
<td>1980</td>
<td>1.3</td>
<td>1.3</td>
<td>100</td>
</tr>
<tr>
<td>1981</td>
<td>6.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1982</td>
<td>3.7</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1983</td>
<td>1.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1984</td>
<td>-1.8</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>


### Table I.2: Flow of foreign direct investment and outflow on dividends and profits (Barbados $ millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>(1) Flow of FDI</th>
<th>(2) Outflow of Dividends and branch profits</th>
<th>Net transfer</th>
<th>Percentage 2/1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1973</td>
<td>12</td>
<td>10.4</td>
<td>2.4</td>
<td>83</td>
</tr>
<tr>
<td>1974</td>
<td>19.2</td>
<td>4.5</td>
<td>14.7</td>
<td>23</td>
</tr>
<tr>
<td>1975</td>
<td>46.2</td>
<td>8.4</td>
<td>37.8</td>
<td>18</td>
</tr>
<tr>
<td>1976</td>
<td>13.8</td>
<td>6.2</td>
<td>7.6</td>
<td>45</td>
</tr>
<tr>
<td>1977</td>
<td>9.4</td>
<td>6.6</td>
<td>2.8</td>
<td>70</td>
</tr>
<tr>
<td>1978</td>
<td>17.6</td>
<td>7.3</td>
<td>10.3</td>
<td>41</td>
</tr>
<tr>
<td>1979</td>
<td>10.4</td>
<td>9.9</td>
<td>0.5</td>
<td>95</td>
</tr>
<tr>
<td>1980</td>
<td>2.6</td>
<td>9.2</td>
<td>-</td>
<td>354</td>
</tr>
</tbody>
</table>

Extent to which enclaves attract new investment

In 1984, it is estimated that about 80 per cent of new enclave enterprises were in electronics and data processing. Between 1981–84, 10 enclave enterprises were established in Barbados. Data on capital requirements of these is not available.

It is not sure if this new investment would have taken place without existing incentives enjoyed by enclave enterprises. However, electronics firms have identified the quality of the infrastructure (superior communications, reliable power supply, developed services) and the quality of the Barbados labour force as the main factors influencing new investment decisions.11

Table I.3: Imports/Exports and visible trade balance 1978-84 (Bd$000)

<table>
<thead>
<tr>
<th>Year</th>
<th>Imports</th>
<th>Exports</th>
<th>Re-exports</th>
<th>Total</th>
<th>Balance on visible trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1978</td>
<td>628 221</td>
<td>187 815</td>
<td>73 272</td>
<td>261 087</td>
<td>-367 531</td>
</tr>
<tr>
<td>1979</td>
<td>852 446</td>
<td>234 794</td>
<td>71 250</td>
<td>306 044</td>
<td>-546 402</td>
</tr>
<tr>
<td>1980</td>
<td>1 064 107</td>
<td>337 592</td>
<td>118 093</td>
<td>455 685</td>
<td>-608 422</td>
</tr>
<tr>
<td>1981</td>
<td>1 151 067</td>
<td>297 003</td>
<td>94 036</td>
<td>391 039</td>
<td>-760 280</td>
</tr>
<tr>
<td>1982</td>
<td>1 106 085</td>
<td>383 737</td>
<td>144 875</td>
<td>528 613</td>
<td>-577 472</td>
</tr>
<tr>
<td>1983</td>
<td>1 257 961</td>
<td>581 579</td>
<td>135 850</td>
<td>717 429</td>
<td>-540 532</td>
</tr>
<tr>
<td>1984</td>
<td>1 326 029</td>
<td>583 668</td>
<td>203 703</td>
<td>787 371</td>
<td>-538 658</td>
</tr>
</tbody>
</table>

Source: Barbados Statistical Service.

With respect to data processing, the main factors influencing new investments are: the quality of the labour force, a favourable business environment for foreign investment, and the active role of support services.12

Meantime, a study has found a strong correlation between "industries ranked by incentive status and export sales". Textiles and wearing apparel have been highly ranked in terms of incentive status.13 From this point of view, it can be postulated that incentives have played an important part in inducing investment in selected export industries. This observation goes against the view that incentives hardly contribute much to industrial activity.14

Most firms in enclave do not usually relocate from one area to another in Barbados. The important consideration in terms of benefiting from prevailing incentives is not location per se but market orientation. In many industrial estates, for example, enclave enterprises operate alongside import substituting ones. Special incentives accruing to enclave enterprises are essentially a function of their sales orientation, namely exports outside the Caribbean.

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Preliminary evidence suggests the relocation of business activity in electronics and data processing from the United States to Barbados. A case in point is the Caribbean Data Services (CDS), a subsidiary of American Airlines which began operations in Barbados in 1984. As a result of its operations, all of American Airlines' data entry work has shifted from Tulsa (Oklahoma) to Barbados. Labour efficiency is reported to reduce production costs, although wage rates in Barbados are comparatively high. Another MNE, whose operations were previously located in Denver, USA, now does over 85 per cent of its parents' consumer data processing work in Barbados.

The main reasons for shifting operations from the United States to Barbados are relatively high labour costs in the United States compared with Barbados, highly disciplined Barbados labour force, and an up-to-date business infrastructure. Moreover, electronics and data processing firms wish to capitalise on the CBI. This allows for easy market access to the United States. Much new investment in Barbados is influenced by the CBI.

Incentives offered by host government to enclave enterprises

The main trade related incentives emphasised by the Industrial Development Corporation are:

1. Duty-free imports of raw material and machinery.
2. Export incentive grants.
3. Technical assistance to export production.

Financial incentives include:

1. Tax rebate on export earnings.
2. Ten-year tax-holiday on corporate profits.
3. Reduced taxes on profits at the expiry of the holiday.
4. Double taxation agreement.
5. Exemption of taxes on dividends.

Other incentives are:

1. Manpower training and retraining assistance.
2. Provision of factory buildings at substantially reduced rentals.
3. Freedom to repatriate profits.
4. Losses arising during the period of the tax-holiday can be carried forward against profits generated after the end of the tax-holiday. We do not have data which quantify the importance of the above. Nor is one able to rank specific incentives in order of importance due to lack of relevant surveys.
Factors accounting for the attraction of foreign direct investment

In the previous section we examined new investment in EPZs. This section attempts to look at the overall situation.

Table I.4 ranks factors influencing investment decisions in two main sectors of enclaves - electronics and data processing - and is based on a survey of United States investors. Barbados is a prime Caribbean location for United States investment in electronics and related fields. The results pertain to United States investment and exclude European investment.

<table>
<thead>
<tr>
<th>Rank factors</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Good labour relations</td>
<td>65.3</td>
</tr>
<tr>
<td>2. Disciplined workforce</td>
<td>63.6</td>
</tr>
<tr>
<td>3. Good transport and communications</td>
<td>57.6</td>
</tr>
<tr>
<td>4. Low wage levels</td>
<td>53.0</td>
</tr>
<tr>
<td>5. Good financial aid and incentives</td>
<td>49.2</td>
</tr>
<tr>
<td>6. Suitable real estate</td>
<td>46.6</td>
</tr>
<tr>
<td>7. Good access to foreign markets</td>
<td>34.3</td>
</tr>
<tr>
<td>8. Large domestic market</td>
<td>33.9</td>
</tr>
<tr>
<td>9. Research and Development facilities</td>
<td>17.0</td>
</tr>
<tr>
<td>10. Clean environment</td>
<td>16.1</td>
</tr>
<tr>
<td>11. Good training facilities</td>
<td>12.8</td>
</tr>
<tr>
<td>12. Good leisure facilities</td>
<td>4.2</td>
</tr>
</tbody>
</table>


According to the above survey of investment decisions, United States enterprises listed financial aid and incentives as fifth in importance. The main determinants of investment decisions, according to the survey, are labour-related factors and infrastructure considerations. These findings are broadly consistent with factors determining recent relocation decisions of electronics and related MNEs in Barbados as already mentioned.
For textile and garment enterprises, it is difficult to say how these considerations influence decisions, even though incentives have been noted to be important.

Net foreign exchange contribution from current operations

Some partial data are reviewed. Table I.5 examines net exports of textile and assembly-type goods (made up of electronics) for 1980. In recent years, total exports of these products amounted to Bd$112.4 million. However, with intermediate imports at Bd$148.9 million, net exports were negative. At the same time, as table I.5 shows, a similar pattern of negative net exports is revealed for the entire manufacturing sector engaged in exports. Negative exports of the entire manufacturing sector as a percentage of exports are higher than in enclave industries.

Table I.5: Net exports of main EPZ products in millions of Bd$ (1980)

<table>
<thead>
<tr>
<th></th>
<th>Intermediate Imports</th>
<th>Exports</th>
<th>Net exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles</td>
<td>39.4</td>
<td>49.1</td>
<td>9.7</td>
</tr>
<tr>
<td>Assembly-type</td>
<td>109.5</td>
<td>63.3</td>
<td>(46.2)</td>
</tr>
<tr>
<td>(mainly electronics)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>148.9</td>
<td>112.4</td>
<td>(36.5)</td>
</tr>
</tbody>
</table>

Sources: Barbados Statistical Services, Overseas Trade Report, National Income Accounts.

Table I.5 includes all textile/electronic-type export firms and in fact accounts for all the island’s exports of these products. Intermediate inputs are components net of foreign direct investment. Normally, one would expect net exports of EPZ enterprises to be positive. What accounts for net exports of EPZ enterprises being negative? The main explanation seems to reside in the following:

(a) build-up of inventory stock to accompany new investment activity in the 1980s, particularly by electronic firms. Table 4.1 (in Chapter 4) confirms the rapid take-off of electronics’ exports from 1982 onwards thereby substantiating the suspicion that machinery or components were being stockpiled in 1980 for production and assembly leading to exports in years to come.

(b) Indirect evidence also suggests that domestic sales of EPZs can play a role. For example, in 1979, it was estimated that 40 per cent of textiles, and 55 per cent of electronics and related products were sold locally. We cannot say how much of this was strictly EPZs. However, given the role of EPZs in these product groups, it is unlikely to be unimportant.
(c) Transfer pricing can apply to firms not totally exempt from profits tax, namely, those operating beyond ten years. In this way, intermediate inputs can be over-valued.

Hard data are needed to provide orders of magnitude for each of the above. Be that as it may, data shown in tables I.5 and I.6 do not reveal any trend since they are confined to a single year. Conclusions based on them are therefore highly tentative and might indeed be misleading.

Table I.6: Main enclave products and aggregate exports of manufactured products, 1980 (in millions of Bd$)

<table>
<thead>
<tr>
<th>(1) Product group</th>
<th>(2) Intermediate imports</th>
<th>(3) Exports</th>
<th>(4) Net exports</th>
<th>4/3 per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textiles and electronics</td>
<td>148.9</td>
<td>112.4</td>
<td>(36.5)</td>
<td>32</td>
</tr>
<tr>
<td>All manufactures</td>
<td>333.7</td>
<td>211.7</td>
<td>(122.0)</td>
<td>57</td>
</tr>
</tbody>
</table>

Sources: Barbados Statistical Service, Overseas Trade Reports, National Income Accounts.

If we add transfer of dividends and profits (see table 6.2) negative net foreign exchange contribution is likely to be over the Bd$36.5 million shown above. However, since data are aggregated the proportion of repatriated profits and dividends attributable to enclave industries is not certain.

Overall management fees amounted to Bd$5.8 million in 1980 and royalties Bd$4.1 million. However, it can be assumed that these are of limited concern to enclave enterprises. As indicated earlier, most enclave enterprises are affiliates of MNEs. As a consequence, it can be said that management fees are of limited significance. Data on interest payments is not available.

Total wages for enclave enterprises were over 60 per cent of operating costs in 1978 and 1979. At the same time, wages amounted to 26.9 per cent (1978) and 23.1 per cent (1979) of sales. This was considerably lower than the manufacturing sector as a whole where wages as a percentage of value added amounted to 56.9 per cent (1978) and 57 per cent (1979) respectively. A survey of enclave enterprises shows that wages were Bd$12.6 million in 1978 and Bd$15.3 million in 1979.

We do not have data on taxation. It can be assumed that this is of limited importance due to fiscal incentives enjoyed by enclave enterprises. Data do not exist for the purchase of domestic goods but as tables I.5 and I.6 show, there is generally a high import co-efficient for manufacturing inputs, particularly for assembly-type operations. In this light, it must also be remembered that incentives are offered for the imports of raw materials and intermediate inputs as well as capital. In other words, imports of these inputs are subsidised. Transfer pricing is sometimes said to be a reason for the high value of intermediate inputs. Furthermore, tax reasons are an important motive for transfer pricing by MNEs. However, this
motive hardly applies to Barbados since most export firms enjoy tax-holidays. At the same time, since tax exemptions are not complete after ten years (namely 12.5 per cent of profits), the role of transfer pricing cannot be altogether ruled out for about half of the EPZ enterprises.

For domestic services, such as transport, electricity, insurance and rental, complete data are not available. Data on fuel and electricity exist for 1978 and 1979 in which years enclave enterprises paid Bd$5.8 million and Bd$8.2 million respectively.\(^{32}\)

It can be argued that backward linkages can serve to reduce the import content of inputs in manufacturing, since these facilitate domestic consumption of some inputs, notably raw material and intermediate inputs. As was mentioned, the system of incentives does not encourage linkages in the domestic economy.\(^{33}\) This problem is reinforced by the fact that a vertically integrated production structure tends to characterise MNEs engaged in international production. In effect, linkages tend to be intra-corporate.

If we assume a similar annual rate of growth of expenditure with respect to wages, fuel and electricity (notably between 1978–79) and take cognisance of possible repatriated profits, partial evidence for 1980 shows that the net foreign exchange contribution of current operations of enclave industries to Barbados was negative. With wages, fuel and electricity charges estimated at Bd$29 million, and net exports at minus Bd$36.5 million, such a conclusion seems justified. It is possible that this is a common trend; but this statement can only be confirmed by time series data.

**Technology transfer issues**

The evidence suggests that enclave enterprises are involved in limited transfer of technology. This is so mainly on account of the fact that such enterprises use mainly unskilled and semi-skilled local labour. Most key management positions are held by expatriates. Furthermore, as already mentioned, Research and Development is hardly encouraged locally; and technological linkages such as support services with local scientific and technological institutions do not exist.\(^{34}\)

It is true that training is at times provided by enclave enterprises. This hardly involves transfer of know-how with respect to crucial production skills.\(^{35}\) Management training, when provided to local staff, deals mainly with general administrative skills.\(^{36}\)

Some evidence suggests that electronics and data processing enterprises provide higher levels of skills than enterprises in textile and garments, given the high technological nature of the former operations. But these relate largely to assembly.

Technologies used in enclave enterprises are not generally diffused to the rest of the economy.\(^{37}\) It is conceivable that with the use of local scientific and technological institutions, greater diffusion of know-how can take place.

**Cost benefit issues**

This section examines some cost benefit issues associated with export-led industrialisation.

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A. Costs

(1) Important but unquantifiable costs involve infrastructure. However, infrastructure applies to industrial estates as a whole, and is not confined to enclave enterprises. In other words, it involves import substituting manufacture and firms engaged in exports to CARICOM. Two problems arise. One is the estimation of infrastructure costs. The second is apportionment of these costs with enclaves.

(2) Modern manufacture has induced a decline in traditional manufacturing, notably in clothing and garments.38 Some employment has been generated in the process. The extent to which these find alternative employment in modern manufacturing is not known. At any rate, the demise of local manufacturing can mean the loss of indigenous technological know-how. It is sometimes argued that traditional technologies can provide a spring board for technical development since these can assist in adapting imported technology to local conditions.

(3) Tax revenue has been foregone as a result of concessions enjoyed by enclaves. To date no study exists which attempts to quantify the magnitude of this "loss". Tax receipts are of special importance to developing countries since conditions of low incomes mean that one has a limited tax base to start with. Tax receipts meantime serve to provide necessary social services and infrastructure which many poor countries lack. Since tax benefits are not always the main considerations for investment in enclaves, it means that owners of foreign capital are probably subsidised above the optimal level for investment. The burden of this is borne by society.

(4) Enclave enterprises pay below average wages. In 1975 average annual wages of manufacturing were Bd$5,800.39 At the same time, wages in textiles and apparel industries were Bd$3,300, and Bd$4,800 in electronics related enterprises.40 From this point of view, enclave enterprises accentuate income inequality.

(5) On account of limited inter-industry linkages generated, the national economy tends to suffer from a lack of structural depth in the process of economic development. At the same time, this argument lacks full force due to the existence of a limited resource base in Barbados.

(6) Given the branch plant nature of enclave enterprises, and international mobility of capital associated therewith, enclaves can be said to be of a "high risk" nature in terms of national development. High social costs including employment losses are borne when enterprises opt for new geographical locations.

(7) Judging from 1980 data alone, the enclaves generated negative net foreign exchange earnings that year. This means that enclaves, in real terms, are not necessarily maximisers of scarce foreign exchange. An exception to this rule appears to be the textiles and garment industries, but we have already expressed reservations based on the use of incomplete data which do not show a pattern over time.

B. Benefits

Among benefits are:
(1) Employment created in enclaves is over 4,000. A recent study has noted that employment generated by manufacturing activity is below expectations. The rate of growth of employment in enclaves for the 1980s has been lower than in Trinidad and Tobago and Jamaica.

(2) The development of new industrial skills can be regarded as a benefit of enclave enterprises. At the same time, it was earlier noted that these skills are of a rudimentary nature. Still, it can be argued that such skills enable an economy to have a comparative advantage in labour-intensive industrial processes geared for the world market.

(3) Diversification of the trade structure is another benefit of enclave activity. Traditionally, sugar dominated export trade. Enclaves have added a new dimension to the trade structure - manufacturing. In this respect, it has provided a basis for trade-induced economic growth and has reduced the risk associated with a mono-culture economy, even if it is at the cost of risks already mentioned.

(4) Enclaves have contributed to GNP through local production of goods. This contribution to national income is however of reduced importance because of the lack of inter-industry linkages and repatriating profits and dividends.

On balance, while enclaves have brought noticeable benefits to Barbados, these have been associated with what appears to be high social costs. The optimal investment strategy should be one in which such costs are minimised so that benefits are in excess of costs. Data do not permit an evaluation of net benefits of enclave activity in Barbados. However, some crucial costs are: income inequality, the absence of inter-industry linkages, and negative net foreign exchange earnings.

**Summary and conclusions**

Based on the above analysis, the following preliminary findings emerge:

(i) Majority-owned affiliates of MNEs predominate enclave enterprises in about 90 per cent of cases.

(ii) Net transfer of resources abroad is high as well as greater export/output ratios (generally over 40 per cent) if a comparison is made between inflow of equity capital in foreign exchange and outflow of profits and dividends.

(iii) Net foreign exchange contribution from current operations of MNEs was found to be negative (for 1980).

(iv) Benefits of EPZs are associated with high costs including low wages, failure to generate inter-industry linkages, negative net foreign earnings.

The main conclusions which may be drawn are:

- Appropriate review of incentives package should be made in order to ensure that enclaves are not oversubsidised.

- Efforts should be made to ensure that net foreign exchange contribution of MNEs to the national economy is at least positive, for example, through the use of local inputs and reinvestment of profits locally.
MNEs should be encouraged to play a more active role in skill generation and in the transfer of technology by encouraging Research and Development locally.

Notes

1 Based on information supplied by the Industrial Development Corporation.

2 ibid.

3 ibid.


5 ibid.

6 Information supplied by the Central Bank of Barbados 1985.

7 Based on recent data from Central Bank of Barbados.

8 Such information is not made public by the firms concerned.

9 Data provided by IDC.

10 ibid.


12 ibid.


15 See: Business Week ..., op. cit.

16 ibid.

17 ibid.

18 ibid.

19 ibid.

20 ibid.

21 ibid.

22 ibid.
Namely, in electronics and data processing.


ibid.

See: *Balance of Payments of Barbados*, op. cit.

IDC Survey.

IDO.

It is true that sales value is not an adequate comparison for value added.

See W. Cox: "The Manufacturing Sector ...", op. cit.

Solid data, are, however, needed to quantify this.

IDC Survey.

This a common characteristic of enclave enterprises.

Based on information supplied by IDC.

Due to the rudimentary nature of local skills concerned.

Information provided by Barbados Workers' Union.

Due partly to the absence of national mechanisms and policies for technology transfer.

See W. Cox: "The Manufacturing Sector ...", op. cit., p. 78

ibid., p. 66.

ibid., p. 66.

ibid., p. 57.
ANNEX II

Main institutions contacted for the study

Trinidad and Tobago

Ministry of Labour
Central Bank
Ministry of State Enterprises
Ministry of Trade and Industry
Point Lisas Industrial Port Development Authority
National Energy Corporation
Ministry of Finance
Federation Chemicals
FEKTRIN
Oil Field Workers' Union
Trinidad and Tobago Manufacturers' Association
Trinidad and Tobago Chamber of Commerce
Industrial Development Corporation
University of the West Indies, Trinidad

Barbados

Ministry of Labour
Central Bank
Ministry of Finance and Planning
Industrial Development Corporation
Caribbean Association of Industry and Commerce
Barbados Workers' Union
Barbados Employers' Confederation
University of the West Indies, Barbados

Jamaica

Ministry of Labour
Ministry of Trade and Industry
National Planning Institute
Central Bank
Jamaica Industrial Development Corporation
Kingston Free Port Administration
Trades Union Congress
University of the West Indies, Jamaica