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INDUSTRIAL DEVELOPMENT STRATEGIES  
IN CARIBBEAN COUNTRIES

BARBADOS

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This monograph on the Industrial Development Strategy of Barbados has been prepared for the CEPAL Office for the Caribbean by Mr. Winston A. Cox in his personal capacity. The views expressed are those of the author and do not necessarily reflect the views of CEPAL.



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## INTRODUCTION

Most developing countries have attempted to realize their growth and development potential through expansion of the manufacturing sector and have built up the sector within a framework of protective tariffs and Government assistance. The theoretical basis of the need and strategy for industrialization which was formulated in the 1950's<sup>1/</sup> asserts in outline that industrialization offers benefits essential to changes in the structure of production and is particularly compelling for primary exporting countries facing problems of lagging export demand while having to provide employment for a rapidly growing population. Encouraged by the Puerto Rican example, many developing countries since the Second World War have implemented policies to increase the importance of the Industrial sector.

Barbados accepted the model of industrialization by invitation which was the basis of the Puerto Rican "Operation Boot-strap" and in 1958 passed the first major law, the Pioneer Industries Act, to provide various fiscal incentives to the manufacturing sector. This was later superseded by the Industrial Incentives Act (1963). Additional legislation in 1965 and 1969 increased the attractiveness of establishing industrial enterprises in Barbados. As a result, Barbados had by 1970 made the transition from a "non-industrial" to an "industrializing society".<sup>2/</sup>

This monograph on Barbados traces the development of the industrial sector during the period 1970-1979 and examines the strategies of industrialization adopted during the period. It will be divided into three sections dealing with the general characteristics of the economy, the general characteristics of the industrial sector and the industrial promotion policies.

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<sup>1/</sup> Patterns of Industrial Growth, American Economic Review, September 1960 by K. Chenery; The Strategy of Economic Development, New Haven 1958, by A. O. Hirschman; and the Industrialization of the Caribbean, Caribbean Commission, 1950 by W. A. Lewis.

<sup>2/</sup> Industrial Development Surveys, (E 74 11.B.14), UNIDO, United Nations, New York, p.12.

## I. GENERAL CHARACTERISTICS OF THE ECONOMY

Sugar dominated the economy of Barbados until the middle of the 1960's; however, by the end of the next decade manufacturing and tourism were the principal producing sectors of the economy. Real gross domestic product increased at an average of 2 per cent per annum from 1970 to 1979 and per capita gross domestic product grew at a lower rate. Inflation was a most severe problem after the 1973-1974 oil crisis but by the end of the decade it had abated. The oil crisis also induced balance of payments problems in 1973 and to a lesser extent in 1974 but high sugar prices, especially in 1975, and steady growth in tourism and manufacturing, especially from 1977 onwards helped to stave off a prolonged balance of payments crisis.

The population of Barbados, estimated at 240.6 thousand at the end of 1970, increased at an annual average rate of less than 1 per cent (0.6 per cent) to reach 254.3 thousand by the end of the decade (Table 1). The rate of natural increase declined as a result of a fall in the birth rate from 20.3 to 16.8 per thousand during the decade; the death rate remained virtually unchanged. The infant mortality rate was almost reduced by half from 45 per 1,000 in 1970 to 24 per 1,000 in 1979. Projections to 1985 show the population is expected to reach 268.8 thousand (Table 2), increasing at an average annual rate of 0.9 per cent per annum from 1980.

Real output increased at a 2.1 per cent per annum from 1970 to 1979. There was hardly any growth in output in the early part of the decade, especially in 1974 and 1975, in the wake of the oil crisis (Table 3); however, after 1975 real output grew at an average rate of 4.9 per cent a year. The impetus for growth came mainly from tourism and the manufacturing sector; the construction sector also contributed to the increase in real output much later in the period while sugar production continued to fluctuate but did not regain the level of the beginning of the decade. Real growth in the distribution and public sector, which in current prices are two principal areas of economic activity (Table 4), was below the average for total output. Mining and quarrying output expanded mainly as a result of the discovery of

oil and natural gas in commercial quantities after 1974 but also as a result of the construction boom late in the 1970's; the contribution of mining and quarrying to gross domestic product, however remained negligible. The only other sector which grew above the average for the decade was electricity, gas and water as a result of rising demand for electricity in the manufacturing and tourism sectors and by residential customers.

Inflation in Barbados, which was aggravated by the oil crisis, rose at a rate of 14.2 per cent a year from 1970 to 1979, and reached a peak of 38.9 per cent in 1974 (Table 5). But even before the sharp increase in oil prices inflationary pressures were building up in the economy; in the period from 1970 to 1973 prices rose at an average annual rate of 12.1 per cent which was almost twice the rate from 1966 to 1970. After 1974 however, inflation was much less severe rising at only 11.1 per cent per annum. The 38.9 per cent rise in prices in 1974 was followed by an increase of 20.3 per cent in 1975; thereafter the average annual rate of inflation only reached double digits (13.2 per cent) in 1979. Government attempted to reduce the impact of inflation by maintaining price controls on essential items; however, since an estimated 55 per cent of inflation in Barbados is imported this system was not very effective. Inflation only abated after the revaluation of the Barbados dollar in 1975.

The Barbados dollar, which was issued for the first time in 1973 was linked to the pound sterling at a rate of BDS\$4.80 = £1, the same as the EC dollar, which it replaced. However, the weak performance of sterling on the foreign exchange markets in 1974, the termination of the Sterling Guarantee Agreement also in 1974 and the rising importance of the USA as a source of imports and a market for tourists and exports of manufactured goods caused the authorities to link the Barbados dollar to the US dollar at a rate of BDS\$2 to US\$1. This involved a revaluation of 9.1 per cent in the Barbados dollar and the measure became effective on 5 July 1975.

External trade expanded quite rapidly in the period under review. Total imports increased at an annual rate of 15.4 per cent in current prices to reach \$850.8 million at the end of 1979 while exports

increased from \$79.1 million in 1970 to \$303.9 million at the end of the decade (Table 6). Imports retained for domestic use (Table 7) grew at almost the same rate (15.2 per cent) as total imports which reflects the import-using nature of economic growth in Barbados. The principal growth sectors depend to a great extent on imported intermediate goods; and higher nominal incomes increased the demand for imported consumer goods; and the equipment and building materials required for capital formation also have to be imported.

The changes in the structure of exports which were beginning to occur from as early as 1963 became more noticeable after 1970. Exports were still largely dominated by sugar and molasses in 1970 but after 1976 exports of manufactured goods <sup>3/</sup> exceed sugar in importance (Table 8). The growth in exports of manufactured goods came mainly from clothing, electrical components and chemicals even though a number of new items such as paper and paper products, domestic utensils and travel goods and accessories were added to the range of manufactured exports. Traditional exports of sugar, rum and molasses grew very slowly as sugar production and prices suffered adverse turns; however, there was steady growth in exports of other processed foods and beverages such as lard and margarine and bakery products (biscuits especially).

Substantial changes in the distribution of trade also occurred during the period. These changes resulted from institutional factors as well as from changes in the commodity structure of exports. As sugar became a relatively less important export item the United Kingdom became a relatively less important export market (Table 9). The United States and the CARICOM were main markets for the new commodities being exported from Barbados. In 1973 the CARIFTA Agreement gave way to the CARICOM Treaty signed by Barbados, Guyana, Jamaica and Trinidad and Tobago (and by the Leeward and Windward Islands one year later). This Agreement paved the way for a further liberalization of trade within the region and for the establishment of

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<sup>3/</sup> Manufactured goods are defined as follows: Commodities under SITC 512 to 899 excluding non-ferrous metals (SITC 68) and precious stones (SITC 677).



a common external tariff against third country imports. In 1975 Barbados also signed the Convention of Lomé which allowed Barbadian goods duty free access to the EEC market. At the same time it eliminated the most favoured nation status which the UK and other Commonwealth countries (except those in CARICOM enjoyed with respect to imports by Barbados. This helped to reduce the importance of the UK as a source of imports at a time when the flow of foreign investment was leading to an increase in the importance of imports from the USA (Table 9).

The rapid growth in exports and expenditure by tourists partly off-set the growth in imports and therefore helped to contain the deficit on the current account of the balance of payments. Capital inflows were sufficient to result in a net accumulation of foreign assets in six of the years in the decade while of the deficits recorded in the other years, the largest was \$35.9 million in 1976. In 1977 a series of measures including the control of credit to the distribution and personal sectors, as well as the regulation of down-payments and maturities on hire-purchase contracts were introduced to prevent a recurrence of the balance of payments deficit as large as in the previous year. These measures helped to reduce the deficit to \$5.9 million (Table 10) but the foreign exchange reserves were only built up by a drawing on the Compensatory Financing Facility (CFF) of the IMF (\$15.1 million) and by a balance of payments support loan from the Central Bank of Trinidad and Tobago (\$20million).

In the public sector current expenditure and revenue rose at almost the same rate from 1969/70 to 1979/80 while capital outlays increased almost eight fold and the national debt moved from \$71.0 million to \$426.4 million. Taxes on income contributed some 43 per cent of Government's revenue throughout the period (Table 11) while the proportion contributed by customs duties fell from 30.9 per cent in 1969/70 to 23.4 per cent in 1979/80 as a result of the removal of duties on imports from CARICOM countries. The share of other taxes on goods and services in Government revenue increased from 21.3 per cent at the beginning of the period to 23.4 per cent at the end. Current expenditure was devoted mainly to health, education and

welfare and community services throughout the period; these services absorbed half of current outlays in 1969/70 and this proportion rose further to 58.5 per cent by 1979/80. Charges of debt rose from 6.5 per cent to 9.0 per cent of Government current expenditure as both the public debt and interest rates increased (Table 12). The distribution of capital expenditure under the various heads reflects Government's bid to increase the productive capacity of the economy and to improve the quality of health and education. Economic services absorbed some 45.6 per cent of capital spending in 1979/80 as opposed to 40.6 per cent in 1969/70; at the same time the share of capital outlays on health and education rose from 2.1 per cent and 8.1 per cent respectively, to 18.0 per cent and 12.4 per cent (Table 13). The domestic component of the national debt grew twice as fast as the foreign component; while domestic debt increased from \$40.8 million in 1970 to \$314.2 million in 1979 foreign debt rose from \$30.2 million to \$112.1 million.

Crude oil was discovered in Barbados in commercial quantities in 1973 and since then production has increased steadily except in 1977 when there was a 13.3 per cent fall in output from the level of the previous year (Table 13). Local crude oil output has been almost sufficient to meet the increase in energy consumption in the Barbadian economy. The 283,472 barrels produced in 1979 satisfied approximately 20 per cent of domestic consumption. Significant quantities of natural gas have also been found in association with crude oil and as a result the Natural Gas Corporation has been extending its grid to reach more residential consumers and now supplies some gas as an energy source for petroleum refining and electricity production.

## II. GENERAL CHARACTERISTICS OF THE INDUSTRIAL SECTOR

This section of the monograph examines the general characteristics of the industrial sector in Barbados. The analysis is limited to four broad heads: the fiscal incentives to the manufacturing sector and examination of industries by incentives status, the growth of output, incomes and employment in the manufacturing sector and performance of exports of the sector.

### A. Fiscal Incentives to the Manufacturing Sector

Barbados, like other developing countries, has set up a regime of the more commonly used fiscal incentives such as income tax holidays, accelerated depreciation allowances and exemptions from import duties, to attract new manufacturing activities. These incentives are granted either to reduce the cost of investment and thereby its risk, or to increase the rate of return on investment made, both of which amount to the same thing. Two aims are expected to be realised thereby: added investment and/or the expansion of existing capacity and the direction of investment toward production priority industries.

Since 1958 fiscal incentives to the manufacturing sector have been available under the Pioneer Industries Act 1958-54, the Industrial Incentives Act 1963-31, and the Industrial Development (Export Industries) Act 1969-43 which were mainly extensions of the 1958 legislation. In 1974 this system of incentives was replaced by the Fiscal Incentives Act 1974 which is based on a new approach to fiscal incentives in the Caribbean Community and Common Market (CARICOM). The principle provisions of the first three laws are summarised in Appendix I while the 1974 act is considered separately (Appendix II).

The principle difference in the incentive laws passed between 1958 and 1969 is in the length of tax holiday. Under the Industrial Development (Export Industries) Act, 1963-43, the length of the tax holiday is 10 years and on its expiry the enterprise is liable to tax on profits at the favoured rate of 12 1/2 per cent instead of the normal 40 per cent. Under the Pioneer Industries Act 1958-54 and the Industrial Incentives Act 1963-31, the entrepreneur may opt for a seven year or ten year tax holiday as specified in the appropriate act for a shorter tax

holiday followed by gradual transition to full liability for income tax (See Appendix I).

The Fiscal Incentives Act 1974-12 was passed to "implement the Agreement to which Barbados is a party, between certain countries in the Caribbean region for the harmonization of fiscal incentives to industry. Its general provisions (Appendix II) relate incentives to: -

- i) local value added
- ii) the export performance of the enterprise <sup>4/</sup>
- iii) capital intensity; and
- iv) whether the enterprise is of the enclave type or not.

Before an enterprise is eligible for incentives it must satisfy the following criteria of viability, <sup>5/</sup>

- i) it must be a company appropriately incorporated
- ii) it must have access to the necessary technical information
- iii) it must have adequate trained personnel or be able to obtain their services; and
- iv) it must or will possess a factory.

In addition to satisfying the above conditions all the output of an enterprise must be exported outside CARICOM in order to qualify for the incentives granted under the 1969 legislation or for enclave status under the 1974 Act.

Duty free concessions are either granted through in-bond treatment or through the refund of duty already paid. <sup>6/</sup> Under section 24 of the Industrial Incentives Act, 1963-31, an approved enterprise is allowed to import, free of duty, all building materials, tools, parts, machinery,

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<sup>4/</sup> This aspect is treated in the Income Tax (Amendment) Act 1974 - 11 §3 and Schedule.

<sup>5/</sup> Industrial Incentives Act, 1963 - 31 § 4 (1)

<sup>6/</sup> Ardie F.M. and S. "The Role of the Public Sector in the Development of the Greater Caribbean: A Survey and Commentary" Latin American Research Review, Spring 1973, pp. 97-134.

pipes, conveyor belts, or other appliances of like nature for constructing, equipping, extending or repairing a factory provided that such work is carried out within ten years of the date on which the order approving the enterprise comes into operation. Similar concessions are available under the 1974 legislation (Section 21) if the requirements of the enterprise cannot be met from within CARICOM.

In addition to the fiscal incentives assistance to the manufacturing sector is also available under the Industrial Incentives (Factory Construction) Act 1965-29 which empowers the Barbados Industrial Development Corporation to construct factories which are then leased or sold to new enterprises.

Research on fiscal incentives, whether involving general considerations of their form and effectiveness, or providing a detailed analysis of a single country's experience, or a comparative evaluation of the programme of a group of countries have led to the conclusion that such incentives are generally ineffective, and incorporate elements which conflict with the objectives of development and may not stand the test of cost-benefit analysis<sup>7/</sup>. The main argument against the effectiveness of fiscal incentives is that enterprises which expect to earn high profits in the absence of fiscal incentives do not need an additional stimulus for investment. On the other hand, if they are no profit prospects, incentives cannot create them. Considerations of the elements in conflict with the requirements of development relate to the effect of the incentive programme on employment creation, government revenue and the balance of payments.

#### B. Manufacturing Activities by Incentive Status

In April 1975, Barbados Industrial Development Corporation (IDC), the governmental agency responsible for the growth of manufacturing in the economy, prepared a list of manufacturing enterprises by International Standard Industrial Classification (ISIC) which showed that roughly 82 were established with fiscal incentive assistance as were many established without. (See Table 4). It should be noted that between March 1974 and April 1975 either the incentive status of an additional fifteen

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<sup>7/</sup> See <sup>6/</sup>

companies had expired, or the enterprises had ceased to operate. Enterprises not receiving assistance under the 1963 or 1969 incentive legislation are still eligible under the Industrial Incentive (Factory Construction) Act 1965-29 if located in an industrial estate, and most enterprises, if not all, claim rebates of duties paid on imported machinery and equipment, building supplies, raw materials and the like, as specified in the Customs Act, 1962-18 and the regulations made under it. The most simple criterion used to determine the importance of fiscal incentives to the sub-sectors of manufacturing is the number of enterprises in a given sub-sector that have been established under the incentive laws. The results are set out in Table 15.

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Food and Beverage <sup>8/</sup>

There are twenty-eight firms in this group and twenty-one were established without assistance; five were aided under the 1963 legislation and two under the 1958 Act. Of the twenty-one established without assistance, nineteen are located outside the industrial estates and it can therefore be assumed that they receive no assistance other than that available under the Customs Act. The large proportion (75 per cent) of predominantly locally owned companies operating in this sub-sector without direct incentives or any type of assistance other than rebates of customs duties may be used as evidence to support the hypothesis that where profit expectations are satisfactory, incentives are not needed as an additional stimulus for investment.

A more reasonable explanation of this situation is that the products of a large number of companies are not "approved products" under the industrial incentive legislation and that since the output of the food and beverage industry is principally for domestic consumption <sup>9/</sup> entrepreneurs are more likely to prefer the imposition of protective tariffs and quantitative restrictions on imports rather than receive fiscal incentives. Neither under the Pioneer Industries Act nor under

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<sup>8/</sup> Includes tobacco processing.

<sup>9/</sup> See Section on Exports of Manufactured Goods

the Industrial Incentives Act are any of the following items produced or packaged by fifteen enterprises declared approved products: aerated beverages, bread, cakes and pastries, rum and falernum, ice and ice-cream or packaged spices.

Apart from those food and beverage products which are sugar-based, e.g. soft drinks and confectionery, or use the by-products of the sugar industry, e.g. rum refining, the industry does not appear to rely very heavily on domestic agriculture as a source of raw materials. An examination of the range of food products corroborates the inadequate statistical data on which this conclusion is based. Out of twenty-seven companies surveyed in April 1974, the thirteen responding purchased approximately \$6.9 million in basic inputs during the first quarter of that year, and of this amount only \$1 million or 14.5 per cent was obtained locally.

#### Textiles and Wearing Apparel

In terms of the number of enterprises this is the largest area of manufacturing activity. There are 37 companies in this sub-sector, 12 were established without fiscal incentive while of the 25 established with fiscal incentive assistance 18 were aided under the Industrial Incentives Act, 1963, four under the Industrial Development (Export Industries) Act, 1969 and three under the Pioneer Industries Act, 1958. Approximately one-third of all companies established under the 1963 and 1969 legislation are engaged in the manufacture of textiles and wearing apparel, which is an indication of the importance of fiscal incentives to this industry.

The manufacture of textiles and wearing apparel, like the food and beverage industry depends on foreign sources for the supply of raw materials, but partially off-setting this a significant proportion of the output is exported. There are four companies in the sub-sector manufacturing for export only and the other enterprises which were initially import-substituting now export to the CARICOM market (see Table 9A).

### Wood and Wood Products

There are 12 companies operating in this sub-sector: two specialise in the treatment of lumber while ten are engaged in the manufacture of furniture and fixtures. Seven were established without assistance while two were approved under the Pioneer Industries Act, 1958-54 and three under the Industrial Incentives Act, 1963-31. Traditionally, the wooden furniture industry has been characterised by small-scale operators - Joiners' Shops - producing an order for domestic use or the occasional commercial buyer. This is an important factor in explaining why half the enterprises in the industry are located outside the industrial estates, or were established without incentives.

### Paper and Paper Products

There are 13 companies in this group and six of them established with incentives, five under the 1963 Act and one - a data processing company which is engaged in a business service rather than a manufacturing activity - under the Industrial Development (Export Industries) Act, 1969-43. Six of the other seven companies are commercial printers or publishers and their output is not on the list of products approved under the 1963 or any other incentive legislation.

### Chemicals

There are 20 companies in this sub-sector. Eleven of them were established under the Industrial Incentives Act, 1963 and three under the Pioneer Industries Act, 1958. Those enterprises approved under the Pioneer Industries Act were engaged in the manufacture of pharmaceuticals and industrial gases. Since then the industry has expanded to include the production of cosmetics, paints, pest-killers and insecticides, bleaches, detergents, novelties and bags or other containers of plastic.

### Non-Metallic Mineral Products

No enterprise in this group was established under the fiscal incentive scheme, and only two are located in industrial estates. All but one of the enterprises manufacture building materials principally of clay or concrete.



### Basic Metal Industries

All seven enterprises in the basic metal industry manufacture wrought iron furniture and fixtures. Only one company receives fiscal incentives under the Industrial Incentives Act, 1963-31 and that same company is located in an industrial estate.

### Metal Products, Machinery and Equipment

There are 25 companies in this sub-sector making it the third largest in the manufacturing sector. Eighteen (72 per cent) of the 25 companies have been assisted under the Incentive Legislation and apart from section 39 of the ISIC, this sub-sector is proportionally most depended on incentives. Nine enterprises were approved under the 1963 Act and one under the Pioneer Industries Act. Eight of the fifteen companies approved under the Industrial Development (Export Industries) Act 1969-43 are in this sub-sector, which includes the manufacture (assembly) of electronic and optical equipment.

### Other Manufacturing

All seven enterprises in this miscellaneous category of manufacturing have been assisted, one under the Pioneer Industries Act 1958-54, four under the Industrial Incentives Act 1963-31 and two under the Industrial Development (Export Industries) Act 1969-43. The main products of the companies grouped in this section are costume jewellery and novelties, umbrellas, processed stone, sporting goods, candles, floor-wax, crayons, stuffed toys and synthetic marble goods.

### C. Output in the Manufacturing Sector

In a survey of industrial development in the United Nations Industrial Development Organisation (UNIDO) has defined four stages of industrialization based on the share of the manufacturing sector in GDP: thus a country is industrialized when the share of manufacturing GDP is more than 30 per cent; it is 'semi-industrialized' when this share is between 20 and 30 per cent; it is 'industrializing' when this share is between 10 and 20 per cent; and 'non-industrial' when this share is less than 10 per cent.<sup>10/</sup>

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<sup>10/</sup> Industrial Development Survey (No.E 74 II, B. 14) United Nations, N.Y. (p.12).

On these criteria Barbados was a 'non-industrial' country in 1960 but by 1970 it was on the threshold of 'industrializing'.

In real terms the output of the manufacturing sector, measured by the Index of Industrial Production, rose by 4.7 per cent annually between 1971 and 1979 (see Table 16). The leading sub-sectors in manufacturing are wearing apparel (5.8 per cent), other manufacturing industries which include fabricated metal products, printing (5.5 per cent), food (6.7 per cent) and chemicals (2.1 per cent). The output of beverages and tobacco and petroleum products increased by 1.6 per cent and 3.1 per cent respectively, and the output of non-metallic mineral products declined by 0.2 per cent annually. Export-led growth provides the most satisfactory explanation of the performance of the manufacturing sector in GDP. The main manufactured goods exported were the products of these sectors which achieved the higher rates of growth of real output between 1970 and 1979.

The breakdown of the value added of manufacturing reveals that food and beverages followed by textiles and wearing apparel contributed most to the value added of the sector between 1970 and 1972. In 1972 these two sub-sectors were followed by chemicals (11.1 per cent), machinery and equipment (6.5 per cent). These groups together with non-metallic mineral products and other manufacturing, all contributed five per cent or more to the value added of manufacturing. Although the data on the incentive status of the sub-sectors (Table 14) are not strictly comparable with that on value added (Table 16) because of differences in classification and timing, it seems that food and beverages, the industry with the lower dependence of fiscal incentives, makes the highest contribution to value added.

### Employment

The development plans for Barbados, though expressing an awareness of the need to create additional employment through the expansion of the manufacturing sector, have generally refrained from setting of specific employment targets for the sector during the plan period. A notable exception is the Development Plan, 1973-77, which states that manufacturing "... appears to be one of the major areas in which new jobs could be created over the plan period, and that the Industrial

Corporation expects its promotional efforts will result in 4,300 new jobs "<sup>11/</sup>

It is expected that the manufacturing sector will provide 26.0 per cent of the estimated minimum requirement of 16,500 new jobs between 1970 and 1977. By contrast, Agriculture is expected to provide 1,000 new jobs (6.1 per cent), Construction 4,000 (24.2 per cent) and Tourism (12.1 per cent). Assuming that by 1977 unemployment remains the same as in 1970 (7.3 per cent), employment in the manufacturing sector would be 17.3 per cent of the working population compared with 13.7 per cent in 1970. On the other hand, assuming that the labour force increases to 109,500, and that unemployment falls to 5.6 per cent by 1977 then the manufacturing sector would be providing employment for 15.2 per cent of the working population, that is, roughly 2.0 per cent more than in 1970.

The performance of the Industrial Development Corporation between 1969/70 and 1973/74 suggests that the target of 600 new jobs (net) a year is a feasible one (see Table 17). Between 1969/70 and 1973/74, about 3,269 new jobs, an average of 653 a year, were created by the establishment of new assisted enterprises or the expansion of existing ones. From 1970/71 to 1973/74 the average number of new jobs created rose to 674 per annum.

According to the 1974 Survey of Employment and Earnings the manufacturing sector provided employment for 7,616 persons, or 15.9 per cent of the working population <sup>12/</sup> On the other hand, data derived from the Industrial Surveys show that employment in manufacturing at year

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<sup>11/</sup> Development Plan 1973-77, Chapter 4-9.

<sup>12/</sup> When this is adjusted to include sugar processing, the proportion rises to 18.0 per cent in comparison with 15.3 per cent, in 1960 and 13.4 per cent in 1970.

end was estimated to be 7,067 in 1970, 8,032 in 1971, rising to 8,416 in 1972. (Note that the data from the 1970 population census cannot be compared with that from the Industrial Survey which does not record employment in sugar processing nor cover establishments employing less than five persons). The above data indicate that between 1972 and 1974 there was a net loss of 800 jobs in the manufacturing sector but this figure is overstated. Undoubtedly, there was some contraction in the sector during the period, especially between 1973 and 1974 (see Table 16). The decline was also the result of under-representation of some industry groups in the 1974 Survey. The response rate in the 1972 Industrial Survey was 99 per cent while the rate of non-response in the 1974 Survey of Employment and Earnings was as high as 22 per cent.

The principal sources of employment in manufacturing are food and beverages, textiles and wearing apparel and ISIC section 38, fabricated metal products, which includes machinery and equipment, both electrical and non-electrical. By 1974 employment in food and beverages and textiles had declined to their 1970 level and the manufacture of fabricated metal products had taken over as the main source of employment in manufacturing (Table 19).

The ratio of wages to gross output is used to give an indication of the labour-use in the sub-sectors of manufacturing. These ratios, though not in themselves measures of factor-intensity, are in agreement with the conventional wisdom that textiles and wearing apparel is more labour-intensive and the chemical industry less so (see Table 20). What is surprising is the high labour-use in the manufacture of fabricated metal products and machinery and equipment contrasted with the apparently low labour-using assembly of electrical equipment. This could be taken to imply that in the electrical equipment industry working capital in the form of semi-finished components is the major input, i.e. that domestic value added is lower than in the other manufacturing sectors.

#### Income

In 1974 approximately \$25.1 million or 12.8 per cent of the estimated wages and salaries for all sectors of the economy originated in manufacturing and was therefore paid to 15.9 per cent of the working population. This share was exceeded by Services (\$40.7 million or 20.9 per cent), Wholesale and Retail Trade (\$34.7 million or 17.7 per cent) and Public Administration (\$28.2 million or 14.5 per cent). Of the remaining sectors, Agriculture contributed 10.5 per cent, Transport and Communication 11.1 per cent, Tourism 6.4 per cent and Construction 4.5 per cent (see Table 21).

Annual income per employee in the manufacturing sector in 1974 was estimated at \$3,295 which is 8.1 per cent lower than the average for all sectors, and only higher than that for Agriculture. Annual income in Public Utilities and Transport and Communication is almost twice that in the manufacturing sector; in each of the other sectors the average income is not less than 15 per cent above that in Manufacturing. This income differential between Manufacturing and the other sectors can be explained by the ratio of salaried employees to wage earners which is in turn related to the level of skills. In those sectors with the higher proportion of salaried employees to wage earners the average annual income is also higher. In 1974 there were approximately two salaried workers to every ten wage earners in the manufacturing sector whereas in the Wholesale and Retail Trade the ratio was six salaried employees to ten wage earners and in Public Utilities 5:10.<sup>13/</sup> The lower average income in manufacturing, combined with the large number of enterprises enjoying the benefits of tax-holidays and duty concessions tend to reduce the importance of the sector as a source of Government revenue.

In the sector itself there are large income differentials among the various sub-sectors. (Table 22). The average wage in the manufacture of food and beverages is among the highest while in textiles and wearing apparel it is among the lowest. In addition to the relation between income, the level of skills and the ratio of salaried employees to wage earners, the differences in income between the sub-sectors of manufacturing also suggest that there is a relation between income and the ratio of females to total employees. Where the number of females in total employees is over 50 per cent, the average annual income per worker is lower than \$3,295 except in the wood and wood products sub-sector.

Average income in the manufacturing sector rose by 49.5 per cent from \$2,204 in 1970 to \$3,295 in 1974. But real income (1970=100) declined by 23.5 per cent because retail prices increased by 95.5 per cent during the period. The average wage in 1974 measured in 1970 values was \$1,685; but

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<sup>13/</sup> The ratios for the other sectors are as follows: Agriculture - 7:100; Quarrying - 1:4; Construction - 16:100; Services - 23:10; Tourism - 2:10; Public Administration - 6:10. Calculated from the Survey of Employment and Earnings.

an annual income of \$4,308 was required in 1974 for the average employee in the manufacturing sector to maintain the 1970 purchasing power.

D. Exports of Manufactured Goods

One of the objectives of economic policy implied in the Development Plan, 1968-72, is the reduction in the dependence on sugar, simultaneous with a compensatory rise in the exports of manufactured goods. Between 1966 and 1974, the exports of manufactured goods <sup>14/</sup> increased at an annual rate of 48.4 per cent from \$1.9 million to \$44.7 million and from 3.8 per cent to 36.3 per cent of domestic exports. The steady upward trend which is in contrast to fluctuations in the exports of sugar and molasses, was primarily responsible for the 10.8 per cent annual growth of domestic exports in the same period.

Export Markets

The expansion of the exports of manufactured goods is related to two institutional factors; the forming of the Caribbean Free Trade Association (CARIFTA) in 1968 and the passing of the Industrial Development (Export Industries) Act in 1969. With the formation of CARIFTA, (now CARICOM) regionally produced goods obtained a competitive advantage over goods from third countries in the regional market. In 1968 domestically manufactured goods sold in the CARIFTA market were valued at \$3.2 million, which was 50.7 per cent of the exports of manufactures; by 1973 the value had increased more than four times to \$14.0 million but the proportion had decreased to 41.3 per cent.

Under the Industrial Development (Export Industries) Act, 1969-43, enterprises were encouraged through a more generous tax holiday and duty free concessions to manufacture goods for export to non-regional markets only. A number of United States corporations have under this act established wholly-owned subsidiaries for the assembly of electrical equipment and the manufacture of clothing, two of the leading export commodities. Primarily because of this legislation therefore, exports to the United States (including Puerto Rico and the U.S. Virgin Islands) expanded by more than five times between 1968.

The export of manufactured goods to all other markets including Canada and the United Kingdom, rose from 6.3 per cent of the exports of manufactures in 1968 (\$0.4 million) to 17.1 per cent (\$5.8 million) in 1973. Exports of Canada and other developed countries also seem to have benefited from the Industrial Development (Export Industries) Act 1969-43. Apart from Canada, the main other

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<sup>14/</sup> See Footnote 3/.

destinations of the exports of manufactures have been the Dutch and French territories in the area.

In the absence of data on the factor intensities of produce in the sub-sectors of manufacturing it is not possible to test the traditional trade theory which states, country with a given factor endowment tends to export those commodities that use intensively its more abundant factor or production. However, on the assumption that Barbados, like other developing countries, is more abundantly endowed with labour, the distribution of the exports of manufactures seems to confirm the validity theory of comparative advantage. A higher proportion of the output of the more labour-using industries (e.g. textiles and machinery and equipment) is exported to the United States; on the other hand a higher proportion of lower labour-using products (e.g. chemicals) is exported to less developed members of CARICOM.

#### Wearing Apparel

Exports of wearing apparel rose from a value of \$0.4 million in 1966 to \$18.3 million in 1974, and the volume increased from 641,533 to 2.2 million pieces. <sup>15/</sup> This increase from less than 1 per cent to almost 15 per cent of domestic exports is one of the principal factors explaining the export performance of the manufacturing sector as a whole. Export earnings of wearing apparel are estimated at 35.6 per cent and 39.7 per cent of the gross receipts of the industry in 1970 and 1971 respectively, and the estimate for textiles and wearing apparel in 1972 is 50.7 per cent. These estimates are higher than those for the manufacturing sector. The high proportion of export revenue in the gross receipts of this sub-sector can be largely attributed to four enterprises approved under the Industrial Development (Export Industries) Act, 1969-43.

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<sup>15/</sup> Export performance of the Clothing (Garment Industry in Barbados 1962-1972), BIMP, 1973.

The principal external markets for the clothing industry have been identified as CARICOM and U.S.A. which together received 92.6 per cent of clothing exported in 1972 (see Table 15). The value of exports to CARICOM increased from \$140,000 in 1962 to \$2.5 million in 1972 although the market share fell from 90.4 per cent to 45.4 per cent. During the same period the proportion of exports to U.S.A. rose from \$2.6 million. After a period of uncertainty, exports of clothing to U.S.A. showed a steady upward trend beginning in 1967.

### Chemicals

Export earnings of chemical products are estimated to account for an average of 52.0 per cent of the gross receipts of the industry in 1970 and 1971. In 1972 this proportion fell to 16.5 per cent because of the re-definition of chemical products to include among other things petroleum refining, which is primarily for domestic consumption. The exports of chemical products rose from \$0.3 million or 0.6 per cent of domestic exports in 1966 to \$4.9 million or 4.0 per cent in 1974. As is the case with food and beverages, CARICOM is the main export market of the industry. In 1971 an estimated 92.0 per cent of chemical products exported were sold in this market; in 1972 and 1973 the proportions were 90.9 per cent and 86.0 per cent respectively.

### Electrical Components

Electrical components were not a significant item in domestic exports prior to 1968 when the first enterprise assembling this type of equipment was established. In 1969 exports of electrical components were valued at \$5.6 million, and after increasing still further in 1970 they fell to \$3.8 million in 1971. A recovery followed in 1972 and was maintained up to 1974 (see Table 8). The assembly of electrical components is done by wholly-owned subsidiaries of U.S.A. corporations and the total output is sold to the parent company or other foreign companies under contract. The exports and hence the output of this industry is therefore sensitive to demand in the metropolitan economies. It should also be noted that half of the enterprises approved under the 1969 legislation are operating in this sub-sector of manufacturing.

### Other Manufactures

Other manufactured goods exported include sports equipment, leather products (see Table 8) manufactured goods classified chiefly by material (SITC, Section 6) other than leather products, machinery and transport equipment (SITC, Section 7)



other than electrical components, and miscellaneous manufactured commodities (SITC, Section 8) except clothing and sports equipment. Exports of other manufacture rose from \$0.8 million in 1966 to \$11.6 million in 1974, and its share in domestic exports rose from 1.6 per cent to 9.4 per cent. As a proportion of the exports of the manufacturing sector these commodities rose from 11.1 per cent in 1966 to 26.0 per cent in 1974.

The principal commodities in this sub-sector compose SITC, Section 6 (excluding leather goods), which accounted for 31.2 per cent of the total exports of other manufactures in 1966 and 48.8 per cent in 1973. Commodities comprising SITC, Section 8 (excluding clothing and sports equipment) are also relatively important, contributing 62.5 per cent in 1966 although this fell to 46.3 per cent by 1973. In SITC, Section 6 the main items exported are paper products, building materials and metal products, including household utensils; while in SITC, Section 8 the main items are furniture of wood and metal. The remaining significant export items in other manufactures, machinery and transport equipment excluding electrical components, fell from 10.0 per cent of the exports of the sub-sector in 1968 to 4.5 per cent in 1973.

#### Food and Beverages

Although exports of processed foods and beverages are generally not treated as exports manufactured goods, they are considered in this study because of the importance of food and beverages processing as a source of employment; output and income in the manufacturing sector in Barbados. When exports of manufactured goods are re-defined to include food and beverages the average annual growth rate declined from 48.4 per cent to 24.6 per cent as exports rose from \$8.0 million in 1966 to \$58.2 million in 1974.

Exports of food and beverages, including rum, rose from \$5.7 million to \$13.5 million or from 11.4 per cent to 10.9 per cent of domestic exports between 1966 and 1974. Although food and beverages are produced primarily for domestic consumption, the exports of the industry accounted for 71.2 per cent of the exports of manufactured

goods in 1966 but by 1974 this had fallen to 23 per cent due to the expansion in exports of other manufactured goods. In 1970, exports of food and beverages were 14.2 per cent of the gross receipts of the sector, and 18.3 per cent and 17.6 per cent in 1971 and 1972 respectively.

Exports of food and beverages are dominated by rum, margarine and lard which together accounted for 75.4 per cent of these exports in 1966; by 1974 this had fallen to 54.1 per cent. During the period exports of lard and margarine rose from \$1.0 million to \$2.3 million, an increase of over 100 per cent; between 1968 and 1973 the volume rose from 2.4 million pounds to 3.4 million pounds. All the lard and margarine exported is sold in the CARICOM market which absorbed approximately 57.2 per cent of the total output between 1970 and 1973.

A study of the exports of rum revealed that between 1966 and 1974 exports of this commodity had fallen from 1,030,405 to 946,122 proof gallons (by 8.2 per cent), but that revenue rose from \$3.3 million to \$5.0 million (51.5 per cent) due to increasing prices. <sup>16/</sup> Between 1970 and 1973 approximately 55.0 per cent of all rum produced was exported, 23.2 per cent going to the CARIFTA market and 32.0 per cent to other markets.

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<sup>16/</sup> Exports of Rum from Barbados 1963-1973, BIMAP 1974.

### III. INDUSTRIAL "PROMOTION POLICIES"

The Barbados Industrial Development Corporation (IDC) is the Government agency which is responsible for promoting Barbados as an industrial centre. The Corporation, which began operations in 1969, was established by Act of Parliament in 1965 to "... facilitate and undertake the development of industry and hotels in the island" (Laws of Barbados CAP 341). In the first ten years of its operation the IDC concentrated most of its efforts on attracting foreign capital; recently a more balanced approach has been adopted, the IDC has increased the emphasis placed on domestic investment while at the same time continuing to seek foreign investment.<sup>17/</sup> The IDC's principal activities were the construction of factories in industrial estates and overseas promotion efforts; to these have been added a more positive project identification and implementation role.

The IDC replaced the Barbados Development Board set up in 1955 and which was responsible for the first industrial estates. In 1970 there were eight industrial estates providing factory space for manufacturing enterprises. Estates were located at Seawall, and Newton in Christ Church, the Pine, Wildey, Pelican, Gazettes and the Harbour in St. Michael and Fairfield in St. Lucy. The Corporation has developed another estate at Six Roads in St. Phillip and has continued, where possible, to expand the facilities at existing estates. In addition to providing factory space which is then rented to manufacturers the IDC, where necessary, also assists enterprises in identifying suitable sites and constructing factories for themselves... By 1976/1977 the IDC had provided about 1.1 million square feet of factory space for both local and overseas entrepreneurs.

From very early the IDC established offices in Toronto and New York to act as the centres for overseas promotion of the features which make it attractive to set up manufacturing operations in Barbados. More recently (1979) an office was set up in Brussels to promote Barbados in the EEC and other European countries as an industrial centre. These offices serve as information centres for foreign businessmen and are the bases from which promotion tours across the United States, Canada and Europe are launched.

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<sup>17/</sup> Development Plan 1978-1982, Barbados IDC and the Annual Report 1976-1977, Barbados IDC.

These promotion efforts usually include Barbadian businessmen who may be seeking partners in joint ventures as well as officials from the Barbados Headquarters of the IDC.

The development of the industrial sector in Barbados began with emphasis on import substitution but it was soon recognized that the size of the domestic market would impose a constraint on the growth of the sector and that greater reliance should be placed on industries manufacturing for export.<sup>18/</sup> In 1969 Government passed the Industrial Development Export Industries Act which made special concessions to industries manufacturing for export outside of CARICOM. (The provisions of this Act are summarized in Appendix I). The IDC was then able to promote the establishment of an enclave sector which produces electronic components and clothing mainly for export to the USA. The other pieces of incentive legislation (The Pioneer Industries Act and the Industrial Development Act) are also included in Appendix I and the Fiscal Incentives Law (1974) is summarized in Appendix II.

During its existence the IDC has been involved in the establishment of some 109 enterprises which employ approximately 7,000 persons in the manufacture of such basic goods as garments, processed foods and animal feeds, chemical products and plastics, as well as the more export oriented items such as electronic components and sporting goods.<sup>19/</sup> Of the 109 enterprises 70 are fully locally owned or have some local participation and they employ some 3,000 persons; employment in the indigenous enterprises has grown moderately from 1970 to 1978 when only 1,100 jobs were created. The enclave or export enterprise firm is typically foreign-owned and purchases only labour and middle management services, utilities and factory space from the domestic economy. The top management, financing raw materials technology and markets are usually provided by the parent company. Enterprises in the enclave sector are extremely sensitive to costs and are highly mobile; as a result there is a much higher risk in attracting such enterprises. However, the IDC recognizes that the enclave sector has a contribution to make in reducing unemployment, in foreign exchange earnings, in skills development, in organization and in the development of managers.<sup>19/</sup>

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<sup>18/</sup> Barbados Development Programme 1962-1965, Government Printing Office

<sup>19/</sup> Development Plan, Barbados IDC.

The BIDC has identified two broad social and economic objectives:

- i) erasing unemployment, increasing national income, and stabilizing and improving foreign exchange earnings; and
- ii) providing opportunities for people to lead a full and happy life and improve their lot.

To achieve these objectives the IDC has the following targets;

- i) to create at least 5,000 jobs in the manufacturing sector between 1978 and 1982;
- ii) increase exports of manufactured goods by 20 percent per annum; and
- iii) increase output of manufactured goods by 19 percent per annum.

The strategy of the IDC is designed to act on three broad areas: the local private sector, the local public sector and the foreign private sector. Emphasis on the local private sector represents a departure from the earlier strategy of the Corporation and requires the co-ordination of the efforts of a number of local institutions such as the Barbados Institute of Management and Productivity (BIMAP), the Export Promotion Agency (EPA) and the Barbados National Standards Institute (BNSI). The IDC itself will undertake to foster local entrepreneurial activity by joining in equity investment and to this end has asked Government to provide it with funds for equity investment. The IDC will also attempt to make local businessmen aware of viable projects through its economic research in the following areas: existing industries, import substitution and further processing of imported semi-finished products, industries based on the economies of bulk transport, meeting raw material needs of existing industries and the use of local raw materials. Two other areas in which the IDC has identified an active role for itself are in project implementation and in research and development. Assistance in project implementation is a natural corollary of equity participation.

The other institutions crucial to the IDC's emphasis on the role of the local private sector in industrial development are BIMAP, the EPA and the BNSI. The shortage of skilled managers has been recognised as an inhibiting factor in the success of industrial enterprises in Barbados and BIMAP's role is to rectify this shortage through its training programme.

The domestic and CARICOM markets are often too small for the economic use of even the smallest manufacturing plants but inability to compete abroad has limited the penetration of foreign markets by all except a very few entrepreneurs. The Export Promotion Agency has been assigned the vital role of marketing Barbados made goods abroad and of identifying, through market research the products which Barbados should manufacture for overseas markets. With the increasing insistence on international standards of quality for products entering international trade it is essential that Barbadian manufacturers meet standards of quality design and packaging. The BNSI is the national organisation best suited to set and ensure that local manufacturers observe the standards for their products.

The function of the public sector in the present promotion strategy of the IDC does not differ substantially from Government's traditional role which is to provide infrastructure for industrial development. In addition to the industrial estates and internal transport the IDC has identified shortage of technical skills, external transportation and development financing factors likely to hamper the future industrial development of Barbados. The Corporation is currently involved in exercises which are designed to alleviate the shortage of technicians and to improve the services for transporting goods to the U.S.A. and other markets. With respect to financing the IDC has made four initiatives to the Barbados Development Bank (BDB). The BDB should consider providing working capital especially since the move to multishift operations will increase the importance of the financial structure of the companies. Secondly, the BDB should consider the hire purchase of machinery which can operate in one of two ways: the BDB owns the machinery and lets it to the borrower on hire purchase or accepts the machinery as full collateral for the loan. The IDC has also recommended that the BDB, within the limits imposed by international lending agencies, should use its discretion in respect of collateral and place greater emphasis on the cash flow of the project rather than on the fixed assets of the borrower. Finally, it is recommended that BDB should provide greater assistance to the promoters of enterprises in project evaluation.

To further facilitate the entry of local entrepreneurs into the industrial sector the IDC recommended that certain areas be designated for local ownership or for majority local ownership especially where the product or service is not wholly exported beyond CARICOM. The following are suggested for sole Barbadian ownership:

Garments	Confectionery	Sundry leather goods	Toy manufacturing
Exercise books	Foundry		Brewing
Dairy Products	Nails, tacks, staples, nuts, screws, barbed wire, chain link fencing	Commercial printing and binding	Phonograph records
Ice making		Hand bags, purses and satchels	Alcoholic and non-alcoholic beverages
Building supplies of clay or cement	Animal feeds	Wrought iron	
Lime production	Quarrying	Paint enamels and varnishes	Food processing
Furniture			

Industries suggested for majority Barbadian ownership are:

Ceramics manufacturing	Detergents	Tyre manufacturing	Fish and other food processing
	Shipbuilding	Plastic products	
Assembly of electrical appliances	Textile milling	Cosmetics	Pharmaceutical products
Costume jewellery	Sporting goods	Rebuilding of automotive parts	Shoe manufacture

Promotion efforts aimed at the foreign private sector cannot be neglected "in view of the urgency and magnitude of the problems of employment creation and foreign exchange earnings, and in recognition of the inability of the indigenous sector to solve these problems ..."<sup>20/</sup> The foreign sector is also expected to play a major role in the transfer of technology and development of managerial and technical skills. Of the 5,000 jobs to be created during the plan period however, only 750 are expected to come from private foreign investment. The IDC overseas

promotion has concentrated mainly on the labour intensive garments and electronics industries; the corporation now intends to expand that base to include:

Costume jewellery	Eye glass frames	Footwear and parts
Medical supplies	Office equipment	Rebuilt items e.g. Carburettors, sewing machines
Umbrellas and parts	Data entry (key punch)	
Wigs and hair pieces	Electrical appliances	Electrical and telephone equipment
Scientific instruments and devices	Games and toys	Gloves, dress work, sporting speciality
Photo equipment and various optical devices	Sporting goods: rods, reels, racquets, etc.	Bicycles and parts.

The IDC also intends to pay special attention to the needs of small industrial enterprises which are defined as:

- i) having less than 25 employees; or
- ii) having invested capital of less than \$50,000; or
- iii) having gross sales below \$250,000 annually.

The programme will attempt to lessen the disadvantage of small businesses in such a manner as not to provide an incentive to remain. Assistance to small business will take the form of an integrated programme combining the following factors:

- i) development capital
- ii) credit facilities
- iii) managerial training
- iv) technical advice
- v) market information
- vi) product design
- vii) supply of raw materials; and
- viii) factory accommodation.

These services will be provided by a number of organizations including the Central Bank of Barbados, the BDB, BIMAP, the EPA and the IDC. Since most,



if not all small businesses are locally owned the assistance to these types of enterprises will also be part of the programme to develop greater local participation in the industrial sector.

The Central Bank began to provide credit to the manufacturing sector in 1974 when a \$6.0 million credit facility was provided for export manufacturing. This facility was renewed each year (for different amounts) until 1977 the Bank had developed an Export Credit Insurance and Guarantee Scheme.<sup>21/</sup> The main functions of the scheme were to:

- i) provide export credit insurance facilities to local exporters against non-payment by overseas buyers; and
- ii) to provide guarantees to commercial banks and other institutions which extend credit for domestic and export markets.

At the end of 1978 the maximum liability of the Scheme was \$4.0 million; a year later an additional cover of \$2.1 million was provided and some 13 export insurance policy holders obtained \$4.5 million worth of post-shipment finance from commercial banks.

The Bank also introduced a Credit Guarantee Scheme for Small Businesses in 1979. The objective of this Scheme is to assist small businesses to obtain short-term working capital while at the same time protecting commercial banks and other credit institutions against the high risk of loss associated with small business operations. Under this Scheme the Bank will guarantee loans for up to one year or longer, if necessary. The Central Bank will indemnify the credit institution to the extent of 80 per cent of the loss for credit facilities granted for one year or less. For credit facilities in excess of one year the Bank will indemnify the credit institution against 70 per cent of the loss.

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<sup>21/</sup> Annual Report 1977, Central Bank of Barbados.

STATISTICAL ANNEX

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TABLE 1

POPULATION, RATES OF BIRTH, DEATH AND INFANT MORTALITY

1970-79

Year	Resident Population at 31 December	Birth Rate (per 1,000)	Death Rate (per 1,000)	Rate of Natural Increase	Infant Mortality (per 1,000)	Rate of Population Growth %
1970	240.6	20.3	8.7	11.6	45	-5.1
1971	242.0	21.5	8.7	12.8	29	0.6
1972	243.9	21.7	8.2	13.5	35	0.8
1973	245.1	20.8	9.4	11.4	33	0.5
1974	246.3	19.5	8.5	11.0	31	0.5
1975	248.8	18.9	8.4	10.5	33	1.0
1976	251.1	18.3	9.1	9.2	28	0.9
1977	253.3	17.1	8.6	8.5	25	0.9
1978	253.1	17.0	9.1	7.9	27	-.07
1979	254.3	16.8	8.5	8.3	24	0.46

Source: Barbados Statistical Service

TABLE 2  
POPULATION OF BARBADOS: PROJECTIONS TO 1980 AND 1985

Age Group (Years)	Estimate 1975		1980		1985	
	Male	Female	Male	Female	Male	Female
0 - 4	12.2	12.0	11.1	11.1	12.2	12.1
5 - 9	13.4	13.0	12.2	11.9	11.1	11.0
10 - 14	16.1	15.8	13.2	12.9	12.1	11.8
15 - 19	14.8	14.9	15.7	15.1	13.0	12.6
20 - 24	12.7	12.5	14.5	14.3	15.4	14.8
25 - 29	9.6	9.1	12.3	12.0	14.3	14.0
30 - 34	5.5	5.9	9.3	8.7	12.1	11.7
35 - 39	4.6	5.6	5.3	5.5	9.2	8.5
40 - 44	4.1	5.6	4.4	5.2	5.1	5.3
45 - 49	4.4	6.1	4.0	5.3	4.2	5.0
50 - 54	4.1	5.4	4.1	5.7	3.7	5.1
55 - 59	4.6	6.0	3.8	5.2	3.8	5.5
60 - 64	4.2	5.4	4.2	5.6	3.4	4.9
65 - 69	3.7	4.6	3.6	4.9	3.6	5.1
70+	4.8	9.3	5.9	10.0	7.0	11.1
Total	118.9	131.1	123.7	133.4	130.2	138.5
	250 <sup>1/</sup>		257.1		268.8	

Source: Barbados Statistical Service

1/ Error due to rounding

TABLE 3

## ESTIMATED REAL GROSS DOMESTIC PRODUCT 1970-1979

(1974 Prices)

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SECTOR OF ORIGIN	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Sugar	66.2	57.8	47.7	49.6	46.8	41.7	43.8	51.1	43.0	48.5
Other Agriculture and Fishing	25.4	24.2	21.3	22.8	21.7	24.5	27.1	21.3	29.4	30.9
Mining and Quarrying	1.0	1.1	1.1	0.9	0.8	0.9	1.3	1.1	1.6	1.7
Manufacturing	52.2	55.5	61.3	65.7	62.6	69.3	81.0	83.6	91.2	92.8
Electricity, Gas and Water	7.7	8.2	9.4	10.2	9.6	10.1	10.8	12.3	14.2	15.8
Construction	45.9	53.0	52.1	55.5	52.7	44.1	49.9	43.1	46.3	52.7
Wholesale and Retail Trade	122.8	120.0	123.9	124.3	118.3	119.6	122.2	124.6	129.5	142.0
Tourism	51.9	56.2	57.2	58.3	64.1	50.3	55.2	67.5	79.3	91.2
Transportation, Storage and Communications	44.6	44.0	44.9	44.9	43.6	43.4	44.4	45.5	46.6	48.3
Business and General Services	124.3	122.7	125.2	125.5	123.0	120.2	118.3	121.3	123.0	126.1
Government Services	85.6	86.9	93.5	97.1	97.1	97.1	97.1	97.1	99.5	102.0
Total	627.6	629.8	637.5	655.7	640.4	621.6	651.3	668.4	703.6	752.0
Change (%)	-	0.3	1.2	2.8	-2.9	-3.0	4.8	2.6	5.3	6.9
Per Capita GDP	2,610	2,600	2,610	2,675	2,600	2,500	2,590	2,640	2,780	2,960

Sources: Department of Statistics (1970-1973); Central Bank (1974-1979)

TABLE 4

## GROSS DOMESTIC PRODUCT - CURRENT PRICES

(BDS \$ 000)

SECTOR OF ORIGIN	1974	1975	1976 <sup>(P)</sup>	1977 <sup>(P)</sup>	1978 <sup>(P)</sup>	1979 <sup>(P)</sup>
Sugar	46,831	66,854	47,254	54,655	51,658	61,500
Other Agriculture and Fishing	21,665	26,631	31,859	37,050	40,034	45,117
Mining and Quarrying	807	1,562	1,989	2,761	7,149	9,324
Manufacturing	62,649	71,900	78,443	86,918	108,083	129,013
Electricity, Gas and Water	9,578	10,344	12,727	14,074	15,674	18,320
Construction	52,744	46,299	58,738	68,119	75,113	88,124
Wholesale and Retail Trade	118,337	127,187	147,724	158,673	178,538	226,139
Tourism	64,085	64,838	66,422	87,728	108,684	134,845
Transport, Storage and Communication	43,640	50,376	53,856	60,053	64,231	70,100
Finance, Insurance, Real Estate and Business Services	93,771	98,341	104,398	110,192	115,593	135,010
General Services	29,243	30,837	32,687	34,975	37,773	46,120
Government Services	97,050	105,474	127,843	142,207	150,566	179,584
GDP at Factor Cost	640,400	700,644	763,940	849,405	953,096	1,143,196
Add: Net Indirect Taxes	62,538	111,798	85,369	100,021	120,231	138,004
Gross Domestic Product at Market Prices	702,938	812,442	849,309	949,426	1,073,327	1,281,200

Source: Barbados Statistical Service

TABLE 5

## RETAIL PRICE INDEX - AVERAGES FOR PERIOD

OCTOBER 1965 = 100

Period Ended	Food and Beverages	Housing	Household Operations and Furnishings	Clothing	Medical and Personal Care	Transportation	Education and Recreation	All Items
Weights	58.7%	9.1%	8.9%	6.9%	5.3%	5.5%	5.6%	100%
1970	127.6	147.6	119.0	118.6	131.7	122.1	142.9	128.7
1971	147.6	153.8	129.6	130.7	155.6	125.0	150.7	144.7
1972	161.1	156.6	134.2	138.5	158.3	138.3	151.6	154.8
1973	189.7	186.7	153.6	157.6	171.1	158.7	182.0	180.9
1974	273.8	246.7	239.9	196.0	202.0	187.4	219.7	251.3
1975	335.0	269.0	274.0	252.5	237.4	222.3	259.9	302.3
1976	349.2	285.1	279.5	276.0	246.9	241.9	287.6	317.4
1977	379.0	321.3	287.0	292.1	285.1	237.2	327.1	343.9
1978	417.1	346.3	309.0	301.2	322.2	272.1	353.6	376.5
1979	463.3	398.2	418.6	335.9	365.1	310.7	374.8	426.1

Source: Barbados Statistical Service

TABLE 6

VISIBLE TRADE

(BDS \$ 000)

Period	Imports (CIF)	Exports (FOB)			Balance of Visible Trade
		Total	Domestic	Re-Exports	
1970	235,005	79,146	62,106	17,040	-155,859
1971	243,625	80,245	53,182	27,164	-163,340
1972	270,436	84,462	63,103	21,359	-185,974
1973	328,601	103,699	83,700	19,999	-224,902
1974	418,319	174,955	125,555	49,400	-243,364
1975	437,239	217,925	178,218	39,707	-219,314
1976	474,067	172,506	137,638	34,868	-301,561
1977	545,110	193,004	151,055	41,949	-352,106
1978	628,699	261,168	186,450	74,718	-367,531
1979(P)	850,752	303,934	232,684	71,250	-546,818

Source: Barbados Statistical Service



TABLE 7Part 1RETAINED IMPORTS BY BROAD ECONOMIC CATEGORIES(BDS \$ 000)

Period	Consumer Goods						Other Manufactured Goods	Total Consumer Goods
	Non-durables			Durables				
	Food and Beverages	Other	Total	Motor Cars	Other	Total		
1970	47,445	17,207	64,652	8,935	11,295	20,230	12,572	97,454
1971	50,900	18,183	69,083	8,658	10,345	19,003	12,192	100,278
1972	60,238	23,147	83,385	10,209	10,454	20,663	14,992	119,040
1973	74,235	24,726	98,361	8,183	10,542	18,425	16,852	133,938
1974	91,365	31,484	122,849	3,819	9,730	13,549	19,722	156,120
1975	92,793	35,090	127,883	4,459	9,999	14,458	18,311	160,652
1976	97,166	41,063	138,229	10,736	12,380	23,116	20,787	182,132
1977	103,502	50,992	154,494	10,354	14,454	24,808	24,929	204,231
1978	122,734	54,006	176,740	8,345	13,281	21,626	29,692	228,058
1979(P)	137,173	74,779	211,952	12,831	16,698	29,529	38,324	279,805

TABLE 7

## Part 2

## RETAINED IMPORTS BY BROAD ECONOMIC CATEGORIES

(BDS \$ 000)

Period	Intermediate Goods						Capital Goods			Un-classified Goods	Total Parts I + II
	Fuels	Chemicals	Textiles	Feeds, Fats and Crude Materials	Other Manu-factures	Total	Machinery	Con-struction Materials	Total		
1970	5,626	7,938	12,991	9,752	20,400	56,707	37,245	20,419	57,664	6,140	217,965
1971	1,543	8,366	12,467	10,593	21,650	54,619	37,133	19,472	56,605	5,020	216,522
1972	4,851	10,392	14,928	11,471	24,203	65,845	35,898	21,769	57,667	6,523	249,075
1973	12,841	13,641	19,863	15,566	22,954	84,865	49,035	32,107	81,142	8,657	308,602
1974	31,794	17,160	18,969	16,583	35,539	120,045	47,502	33,192	80,694	12,060	368,919
1975	46,686	17,331	19,548	18,231	31,354	133,150	66,876	23,543	90,419	13,311	397,532
1976	40,247	21,448	25,024	19,182	41,904	147,805	60,758	33,394	94,152	15,111	439,200
1977	47,458	23,176	24,192	22,272	53,121	170,219	76,867	35,947	112,844	15,867	503,161
1978	23,129	29,849	27,077	22,257	63,715	166,027	100,886	41,196	142,082	17,815	553,982
1979	92,258	40,489	37,803	27,032	86,303	283,885	150,453	56,409	206,862	8,951	779,503

Source: Barbados Statistical Service

TABLE 8

## COMPOSITION OF DOMESTIC EXPORTS

(BDS \$ 000)

Period	Sugar	Molasses	Rum	Shrimp	Mar- garine + Lard	Other Food + Beve- rages	Chem- icals	Elec- trical Compo- nents	Cloth- ing	Sports Equip- ment	Leather Pro- ducts	Other Manu- factures	All Other	Total
1970	29,434	5,056	3,250	4,172	1,611	947	2,095	6,421	3,650	92	-	3,397	1,981	62,106
1971	26,421	3,558	4,086	3	1,772	2,399	2,534	3,801	4,193	135	220	3,622	438	53,182
1972	27,061	3,338	4,637	7	2,076	3,086	3,329	4,202	5,447	175	2,839	6,313	593	63,103
1973	30,130	4,140	4,725	1,397	2,029	5,612	4,300	6,432	10,274	4,597	320	8,359	1,386	83,700
1974	52,185	10,450	4,975	2,783	2,276	4,571	4,867	8,777	18,466	649	584	11,397	3,575	125,555
1975	95,137	11,761	4,347	3,092	2,401	4,804	5,539	9,492	26,770	60	-	10,980	3,835	178,218
1976	46,928	9,343	4,429	378	3,155	5,178	5,869	13,766	30,554	-	21	15,540	2,477	137,638
1977	50,622	5,841	5,710	1,981	3,742	5,348	5,624	18,260	37,228	-	-	15,529	1,170	151,055
1978	47,049	6,716	5,988	96	5,430	7,221	9,267	37,859	40,600	1,873	-	22,730	1,621	186,450
1979 (P)	58,047	6,935	2,636	23	4,285	9,730	15,174	45,075	45,890	8,288	-	35,106	1,496	232,685

Source: Barbados Statistical Service

TABLE 9  
DIRECTION OF TRADE  
EXPORTS  
(BDS \$ Million)

Period	Sterling Area			CARICOM	Dollar Area				Other Areas	Total
	Total	U.K.	Other		Total	U.S.A	Canada	Other		
1970	31.2	30.5	0.7	16.7	19.6	14.5	3.6	1.5	11.6	79.1
1971	28.2	24.1	0.1	19.5	15.1	8.6	4.0	2.5	17.6	80.4
1972	29.4	29.0	0.4	23.4	15.7	10.6	4.9	0.2	16.0	84.5
1973	35.5	34.4	1.1	29.0	23.7	17.0	5.7	1.0	15.7	103.9
1974	27.7	27.1	0.6	38.8	57.7	47.3	9.8	0.6	50.7	174.9
1975	60.8	58.7	2.1	39.6	79.6	65.7	12.7	1.2	37.9	217.9
1976	6.6	5.6	1.0	45.8	66.8	52.3	12.2	2.3	53.3	172.5
1977	16.9	15.7	1.2	46.6	75.3	61.7	10.7	2.9	34.2	193.0
1978	39.7	32.5	7.2	64.1	84.3	65.6	12.1	6.6	73.0	261.1
1979	56.5	38.6	17.9	76.2	136.9	110.9	16.0	10.0	34.3	303.9

Source: Barbados Statistical Service

TABLE 9A  
DIRECTION OF TRADE  
IMPORTS  
(BDS \$ Million)

Period	Sterling Area				Dollar Area				Other Areas	Total
	Total	U.K	Other	CARICOM	Total	U.S.A	Canada	Other		
1970	83.7	71.5	12.2	26.4	82.3	49.3	24.6	8.4	42.5	235.0
1971	87.8	73.2	14.6	30.0	73.6	44.4	25.0	4.2	52.2	243.7
1972	93.5	72.6	20.9	36.5	90.0	51.9	27.1	11.0	50.5	270.0
1973	102.3	81.2	21.1	43.0	126.4	69.6	37.3	19.5	57.5	329.2
1974	113.7	85.7	28.0	73.0	161.0	81.1	38.0	41.9	70.6	418.3
1975	117.6	94.9	22.7	71.6	172.7	83.2	38.1	51.4	75.3	437.2
1976	111.1	88.5	22.6	82.2	189.6	108.9	40.7	40.0	91.2	474.1
1977	127.3	103.0	24.3	88.7	226.0	133.2	38.9	53.9	103.1	545.1
1978	142.1	115.2	26.9	92.0	264.6	175.3	46.2	43.2	129.9	628.7
1979	173.1	138.3	34.8	136.3	391.4	268.8	64.3	58.3	149.4	850.7

Source: Barbados Statistical Service

TABLE 10  
BALANCE OF PAYMENTS  
(BDS \$ Million)

SOURCE	1970	1975	1976	1977	1978	1979
1. Current Account	- 83.7	- 83.8	-128.4	- 92.1	- 62.9	-109.9
1 (a) Goods and Services	- 94.0	- 98.3	-153.8	-123.9	- 96.5	-153.8
Merchandise	-163.6	-246.9	-324.4	-363.2	-406.5	-566.0
Exports (f.o.b)	71.5	190.8	152.6	182.4	223.1	264.5
Imports (c.i.f)	-235.1	-437.7	-477.0	-545.6	-629.6	-830.5
Services	69.6	148.6	170.6	239.3	309.9	412.2
Government	3.0	7.4	2.6	5.2	12.6	15.7
Transportation	3.2	21.6	12.6	27.2	26.4	35.6
Travel	73.8	142.1	150.2	204.5	257.3	347.7
Other	- 10.4	- 22.5	5.2	2.4	13.6	13.2
1 (b) Transfers	10.3	14.5	25.4	31.8	33.7	43.9
2. Capital Account	26.5	56.7	50.0	59.8	81.0	54.8
2 (a) Long Term Capital	24.5	50.7	44.2	38.9	44.2	20.1
Public Sector	0.6	- 0.6	5.4	11.1	32.0	9.3
Private Sector	23.9	51.3	38.8	27.8	12.2	10.8
2 (b) Short Term Capital	2.0	6.8	4.7	10.0	30.6	44.3
2 (c) Other Capital	...	- 0.8	2.0	10.9	6.2	- 9.6
3. Errors and Omissions	32.3	61.9	42.5	26.4	40.3	68.7
4. Basic Balance (1 + 2a)	- 59.2	- 33.1	- 84.2	53.2	- 18.8	- 89.8
5. Balance for Official Financing	- 24.9	34.8	- 35.9	- 5.9	38.3	13.6
6. Allocation of SDR's	-	-	-	-	-	4.5

TABLE 10 (continued)

SOURCE		1970	1975	1976	1977	1978	1979
7.	Reserve tranche subscriptions to IMF	- 4.0	- 3.0	-	-	-	-
8.	Official Financing	-	-	-	-	-	-
9.	Net transactions with overseas						
	Monetary Authorities	4.0	3.0	-	35.1	-	-
	IMF	4.0	3.0	-	15.1	-	-
	Other	-	-	-	20.0	-	-
10.	Transactions of Central Government	-	-	-	-	20.0	-
11.	Reserve Change (increase-)	24.9	- 34.8	35.9	- 29.2	- 58.3	- 18.1

Source: Barbados Statistical Service and Central Bank of Barbados.

TABLE 11

CENTRAL ADMINISTRATION - CURRENT REVENUE

(BDS\$'000)

Source	1969/70	1974/75	1979/80
TAX REVENUE	62,027	137,723	318,327
Taxes on Income	27,162	70,379	139,718
Personal Income Tax	12,974	n.a.	85,600
Company Tax	12,067	n.a.	47,413
Other	2,121	5,828	6,705
Employers' Levy	-	-	4,067
Taxes on Property	1,658	8,516	17,813
Land Tax	-	5,078	11,696
Other	1,658	3,438	6,117
Taxes on Goods and Services	13,250	27,328	78,216
Consumption Tax	3,125	9,334	23,574
Excise Tax	4,178	3,820	5,554
Motor Spirits	3,142	6,276	16,395
Hotel and Restaurant Tax	-	1,853	13,420
Other	2,805	6,045	19,273
Import Duties	19,184	29,416	74,376
Other Taxes	773	2,084	4,137
NON-TAX REVENUE	11,807	21,956	35,982
Government Departments	10,495	14,115	18,140
Waterworks and Post Office (Net)	240	482	1,313
Property Income	268	328	7,336
Special Receipts	804	7,031	9,193
TOTAL	73,834	159,679	354,309
MEMORANDA ITEMS			
Loan Repayments	-	677	2,180
Waterworks (Gross)	1,453	4,321	7,663
Post Office (Gross)	2,325	3,519	6,686

Source: Accountant General.



TABLE 12

CENTRAL ADMINISTRATION - CURRENT EXPENDITURE

(BDS\$'000)

Function	1969/70	1974/75	1979/80
General Public Service	17,887	31,435	50,671
Defence	125	686	3,475
Education	15,778	37,316	77,722
Health	11,872	29,318	50,075
Social Security and Welfare	6,445	17,606	39,002
Housing and Community Amenities	179	1,539	6,479
Other Community and Social Services	262	3,059	10,291
Economic Services	11,076	23,589	48,429
Agriculture	1,688	4,186	9,247
Water and Post Office (Net)	1,237	2,450	3,952
Roads and Transport	5,913	13,314	32,165
Other	2,238	3,639	3,065
Charges of Debt	4,408	13,538	28,442
TOTAL	68,032	158,086	314,586
MEMORANDA ITEMS			
Sinking Fund Contributions	4,060	2,000	2,670
Amortisation	-	5,383	14,072
Loan Repayments	-	-	2,430
Waterworks (Gross)	2,690	6,294	10,873
Post Office (Gross)	2,085	3,514	6,115

Source: Accountant General.

TABLE 13  
CENTRAL ADMINISTRATION - CAPITAL EXPENDITURE  
(BDS\$'000)

Function	1969/70	1974/75	1979/80
General Public Service	2,990	2,837	7,015
Defence	-	1,544	1,750
Education	896	3,256	10,783
Health	227	766	15,593
House and Community Amenities	2,173	8,777	9,055
Other Community and Social Services	250	-	3,030
Economic Services:	4,467	20,349	39,580
Agriculture	1,097	9,301	7,983
Water and Post Office	829	2,487	6,578
Roads and Transport	1,695	6,185	19,202
Trade and Industry	576	2,376	5,817
TOTAL	11,003	37,529	86,806

Source: Accountant General.

TABLE 14

## MANUFACTURING ACTIVITY BY INCENTIVE STATUS - APRIL 1975

ISIC NO	Manufacturing Activity	Status				Total	% Approved
		(1) Approved	Approved Export	Not Approved	Pioneer Industry		
31	Food, Beverages and Tobacco	5	-	21	2	28	25.0
32	Textiles, Wearing Apparel and Leather Products	18	4	12	3	37	67.6
33	Wood and Wood Products	3	-	7	2	12	41.7
34	Paper and Paper Products	4	1	8	1	14	42.8
35	Chemicals	11	-	6	3	20	70.9
36	Non-metallic Mineral	-	-	12	-	12	-
37	Basic Metal Industries	1	-	6	-	7	14.2
38	Fabricated Metal	9	8	7	1	25	72.0
39	Others	4	2	-	1	7	10.0
	Total	55	15	80	12	162	50.6

Notes: (1) Includes two enterprises, one in section 35 and the other in section 39, which are approved under the Fiscal Incentives Act 1974-12.

Source: Barbados Industrial Development Corporation.

TABLE 15

EXPORTS OF CLOTHING BY MARKETS

(\$000)

Year	CARIFTA/ CARICOM		USA Puerto Rico and US Virgin Islands		Other		Total
	\$	%	\$	%	\$	%	
1962	140	90.4	14	9.1	1	0.5	155
1963	289	93.6	3	0.9	17	5.5	309
1964	268	92.7	3	0.9	18	6.4	289
1965	279	88.4	1	0.4	35	11.2	315
1966	366	84.0	7	1.6	63	14.4	436
1967	644	81.6	17	2.2	127	16.1	788
1968	1,033	75.3	218	15.8	123	8.9	1,373
1969	1,546	56.4	993	36.2	202	7.4	2,741
1970	1,937	53.1	1,515	41.5	198	5.4	3,650
1971	2,133	47.8	2,004	44.9	321	7.2	4,458
1972	2,476	45.4	2,571	47.2	401	7.4	5,448

Source: The Export Performance of the Clothing (Garment Industry) in Barbados 1962-1972, BIMAP 1973.

TABLE 16

## INDEX OF INDUSTRIAL PRODUCTION - AVERAGES FOR PERIOD

Average 1971 = 100

Period	Total All Industries	Quarrying	Manufacturing								Electricity and Gas
			Total	Food	Beverages and Tobacco	Wearing Apparel	Chemicals	Petroleum Products	Other Non-metallic Mineral Products	Other Manufacturing Industries	
Weights	1,000	29	800	151	170	111	29	38	42	259	171
1971	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972	111.6	100.6	110.9	108.6	114.9	113.2	110.6	105.1	91.1	110.9	116.6
1973	118.3	83.4	117.7	112.6	119.8	112.6	121.2	121.1	93.6	117.7	126.9
1974	112.3	71.2	112.2	110.8	97.7	122.1	110.0	107.2	83.8	116.1	119.3
1975	120.8	55.1	121.9	132.0	110.3	128.2	119.5	116.3	80.4	129.2	126.3
1976	140.7	96.3	143.7	149.7	109.0	158.6	134.9	114.9	77.2	174.4	134.2
1977	144.8	81.5	145.1	152.0	124.4	169.0	109.8	115.5	76.7	165.1	153.9
1978	150.9	83.7	147.7	160.4	139.4	159.7	119.0	118.8	81.2	159.4	176.9
1979	151.9	85.4	143.8	168.1	113.6	165.9	117.9	128.2	97.9	154.1	200.3

Source: Barbados Statistical Service

TABLE 17  
VALUE ADDED IN MANUFACTURING BY SUB-SECTORS  
1970 - 1972

Sub-sector	1970		1971		1972	
	\$	%	\$	%	\$	%
Food and Beverages	10.5	38.3	12.4	37.5	16.5	39.7
Textiles and Wearing Apparel	3.5	12.8	4.6	13.9	5.1	12.3
Wood and Wood Products	1.2	4.4	1.1	3.3	2.1	5.0
Paper and Paper Products	2.7	9.9	3.2	9.7	3.4	8.2
Chemicals	0.9	3.3	1.2	3.6	4.6	11.1
Non-Metallic Mineral Products	1.8	6.6	1.7	5.1	2.1	5.0
Fabricated Metal Products	1.0	3.6	1.2	3.6	1.9	4.6
Machinery and Equipment	2.2	8.0	3.1	9.4	2.7	6.5
Electrical Equipment	-	-	-	-	1.1	2.6
Miscellaneous Manufacturing <sup>1/</sup>	2.6	9.5	3.4	10.3	-	-
Other Manufacturing	1.0	3.6	1.2	3.6	2.1	5.0
TOTAL	27.4	100.0	33.1	100.0	41.6	100.0

<sup>1/</sup> Includes tobacco, textiles, paper, petroleum products, plastics, rubber, glass, transport equipment and a number of minor manufacturing industries.

Source: Survey of Industrial Establishments 1970, 1971 and 1972; Barbados Statistical Service.

TABLE 18  
NEW JOBS CREATED IN THE MANUFACTURING SECTOR  
1969/70 - 1973/74

Year	No. of Jobs	Investment (\$m)	Investment Per New Job (\$000)
1969/70	570	n.a.	n.a.
1970/71	226	0.4	1.7
1971/72	825	3.8	4.6
1972/73	506	n.a.	n.a.
1973/74	1,142	8.1	7.1
Total	3,269	-	-

Source: Annual Reports 1969/70 - 1973/74, B.I.D.C.

TABLE 19  
EMPLOYMENT IN MANUFACTURING BY SUB-SECTORS 1970-1972 AND 1974

Sub-Sectors	Employment <sup>1/</sup>			
	1970	1971	1972	1974
Food and Beverages	1,902	1,997	2,075	1,815
Textiles and Wearing Apparel	1,774	1,919	2,266	1,750
Wood and Wood Products	385	409	452	394
Paper and Paper Products	462	521	535	550
Chemicals	191	189	392	339
Non-Metallic Mineral Products	415	387	438	246
Fabricated Metal Products	283	324	539	1,857
Machinery and Equipment	806	1,054	804	-
Electrical Equipment	-	-	191	-
Miscellaneous Manufactures <sup>2/</sup>	423	641	-	-
Other Manufactures	426	591	724	665
Total	7,067	8,032	8,416	7,616

Notes: <sup>1/</sup> The estimates are year and employment except in 1974 where there are monthly averages.

<sup>2/</sup> See note <sup>1/</sup> of Table 17.

Sources: Survey of Industrial Establishments 1970, 1971 and 1972 and of Employment and Earnings 1974



TABLE 20  
WAGES/GROSS OUTPUT RATIO IN MANUFACTURING

Sub-sector	1970	1971	1972
Food and Beverages	0.1386	0.1368	0.1396
Textiles and Wearing Apparel	0.2241	0.2627	0.2938
Wood and Wood Products	0.2057	0.2779	0.2505
Paper and Paper Products	0.3087	0.3130	0.3150
Chemicals	0.1154	0.1263	0.0691
Non-Metallic Mineral Products	0.2348	0.2289	0.2251
Fabricated Metal Products <sup>1/</sup>	0.2086	0.2555	0.2110
Machinery and Equipment	0.2917	0.3045	0.3693
Electrical Equipment	-	-	0.1881
Miscellaneous Manufactures <sup>2/</sup>	0.0684	0.0779	-
Other Manufactures	0.3064	0.2120	0.2525

<sup>1/</sup> The wages/gross output for ISIC 38 is 0.2690 for 1970, 0.2909 for 1971 and 0.2631 in 1974.

<sup>2/</sup> See <sup>1/</sup> of Table 17

Source: Calculated from the Industrial Surveys 1970-1972.

TABLE 21

EMPLOYMENT AND INCOME BY ECONOMIC ACTIVITY 1974

Economic Activity	No. of Employees <u>1/</u>	Annual Wages and Salaries (\$'000)	Average Annual Income
Agriculture <u>2/</u>	7,655	20,528	2,680
Quarrying	60	263	4,385
Manufacturing	7,616	25,096	3,295
Public Utilities	421	2,835	6,733
Construction	2,211	8,823	3,990
Wholesale and Retail Trade	7,972	34,683	4,375
Transport and Communications	3,524	21,638	6,140
Services	7,778	40,716	5,235
Tourism	3,234	12,544	3,880
Public Administration	7,277	28,299	3,888
TOTAL	47,748	195,425	4,093

1/ Monthly average for 1974

2/ Includes sugar manufacturing.

Source: Survey of Employment and Earnings 1974, Barbados Statistical Service.

TABLE 22  
AVERAGE ANNUAL INCOME IN MANUFACTURING  
BY SUB-SECTOR 1970-1972 AND 1974

Sub-Sectors	Average Income (\$)			
	1970	1971	1972	1974
Food and Beverages	2,856	3,116	3,747	4,504
Textiles and Wearing Apparel	1,295	1,538	1,646	2,358
Wood and Wood Products	1,833	2,289	2,613	1,976
Paper and Paper Products	2,796	2,923	3,536	4,131
Chemicals	2,425	3,233	3,883	4,993
Non-Metallic Mineral Products	2,671	3,018	2,804	3,978
Fabricated Metal Products	1,773	2,084	2,206	3,122
Machinery and Equipment	2,316	1,983	2,051	
Electrical Equipment			2,381	
Miscellaneous Manufactures <sup>1/</sup>	3,124	2,570		
Other Manufactures	1,366	1,059	1,619	1,910
Sectoral Average	2,204	2,297	2,643	3,295
Real Income	100	96.9	99.7	76.5

Notes: <sup>1/</sup> See note <sup>1/</sup> of Table 17.

Sources: Survey of Industrial Establishments 1970, 1971, 1972 and Survey of Employment and Earnings 1974.  
Barbados Statistical Services.

## FISCAL INCENTIVE LEGISLATION IN BARBADOS 1958-1969

Act	Tax-Holiday on Profits	Tax-Holiday on Dividends	Tax-Holiday on Interest Payments	Depreciation Deductions	Carry Over of Losses of Tax-Holiday Period
1. Pioneer Industries Act, 1958 - 54	<p>i) 7 years from the date of production (Sec.14(1)); or</p> <p>ii) 4 years complete exemption followed 2/3 exemption in the 5th year and 1/3 exemption in 6th year provided that the first year of complete exemption is within 3 years of the date of production (Sec.15 (1)).</p>	Exempt from Tax in the hands of residents and non-residents if the latter were not liable to tax in their country of residence, provided that they are paid within 2 years after the expiry of the tax-holiday period. (Sec.19(2) and (2)(b)).	Interest on debenture stock exempt from tax in the hands of residents and non-residents if the latter are not liable to tax in their country of residence. (Sec.20(1) and 1(b)).	Subject to the Income Tax Act 1921 (Sec. 14 (3)).	Under-holiday option (i) losses may be carried forward for 5 years Sec.15 (6) under (ii) losses incurred during the 4 years of complete exemption may be carried forward for 7 years.
2. Industrial Incentives Act, 1963 - 31	i) 10 years from the date of production (Sec.12(1)).	Same as the above (Sec.17(2)).	Same as above (Sec.18(1)).	Same as above Under (Sec. 13(2)).	Under (1) same as above (Sec. 13(7) and under (ii) same as (ii) above (Sec.14 (8) (c)).

Act	Tax-Holiday on Profits	Tax-Holiday on Dividends	Tax-Holiday on Interest Payments	Depreciation Deductions	Carry Over of Losses of Tax-Holiday Period
2.	ii) 7 year complete exemption followed by 2/3 exemption in the 8th year and 1/3 exemption in the 9th year provided that the first year of complete exemption is within 3 years of the date of production (Sec. 14(1)).	Same as above (Sec.15(2)).	Same as above (Sec.16(1)).	Subject to the Income Tax Act 1968	May be carried forward for 5 years.
3.	Industrial Development (Export Industries) Act 1969 - 43 10 years from the date of production and 12 1/2% tax after expiry of holiday (Sec. 10, Sec.11)	Same as above (Sec.15(2)).	Same as above (Sec.16(1)).	Subject to the Income Tax Act 1968	May be carried forward for 5 years.

MAIN PROVISIONS OF THE FISCAL INCENTIVES ACT 1974-12

Type of Enterprise	Definition	Income Tax Tax-Holiday on Profits	Depreciation Deduction	Dividends and Interest	Carry-over of Losses of Tax-Holiday Period
Group I	Local value added of at least 50%	10 years	Governed by the Income Tax Act 1968 (Sec.15)	Dividends exempt from tax in the hands of residents and non-residents if the latter are not liable in their country of residence (Sec.18 (1) and (2))	Losses may be carried forward for 5 years after the expiry of the tax-holiday period Sec.17 (1)
Group II.	Local value added between 25-49%	8 years		Interest payments on debenture stock liable to tax (Sec.19)	
Group III	Local value added between 10-24%	6 years			
Enclave	Enterprise producing wholly for export outside CARICOM (Sec. 2)	10 years			
Highly Capital Intensive	Capital investment of not less than \$50million (Sec.13(2)).	10 years			

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