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# COMPETITIVENESS OF THE MANUFACTURING AND AGRO-INDUSTRIAL SECTORS IN THE CARIBBEAN WITH A FOCUS ON DOMINICA, GUYANA, SAINT VINCENT AND THE GRENADINES AND TRINIDAD AND TOBAGO

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## I. BACKGROUND AND INTRODUCTION

Change is the only constant in today's global economy. Countries that are flexible and prepared to undertake necessary change are more likely to grow and prosper in this challenging economic environment. The Caribbean economies were founded on trade and exchange. As a result, global commodity shocks and the need for domestic adjustment are not new to the region. In spite of this, though, much of the Caribbean production and exports are still based on preferential access to markets. This is so whether it is sugar, bananas and rum to the European Union (EU) market under the Lomé Convention; beef, rum and tobacco to the United States under the Caribbean Basin Initiative (CBI); or a range of commodities to Canada under CARIBCAN, (notable exception being textiles, clothing and footwear).

Trade liberalization, market opening and access stipulations by developed countries in the 1990s mean that the era of preferences may be fast coming to a close. The market is now the major shaper of the prospects and fortunes of countries. Moreover, the market is founded on competition that rewards efficiency and productivity. This means that the competitiveness of a nation's firms is an increasingly important determinant of its ability to generate wealth in international trade. Competitive industries reinforce the virtuous link between international trade, domestic growth and employment.

The creation of the World Trade Organization (WTO) with a mandate to regulate a liberal trading regime means that Caribbean manufacturers and other producers will have to play by the rules of the game. Protectionist policies that have sheltered less efficient producers are under attack. The regional manufacturing and agro-industrial sectors will have to compete on their own merit. In addition, with changing trade rules regulated by international arbitration bodies, competition policy would provide the basis for ensuring that firms play by the rules. Such rules seek to ensure that firms are not engaged in anti-competitive practices, such as illegal mergers and acquisitions, dumping and resale price practices. As an adjunct to this, the elements of industrial policy will fall increasingly under the microscope of such dispute settlement bodies.

This study examines the competitiveness of the manufacturing sector in the Caribbean with a focus on four countries. The countries selected are Dominica, Saint Vincent and the Grenadines, Guyana and Trinidad and Tobago. These countries are deemed to be fairly representative of the Caribbean Community (CARICOM), as a whole, in terms of the structure and market performance of the sectors. The study arose out of the recognition that the sectors have performed well below expectations in the past. The paper is divided into the following

sections: Section 2 defines competitiveness and examines its foundations; Section 3 provides an analysis of the structure of the regional manufacturing sector and the factors that influence the competitiveness of the sector; Section 4 provides an indicator of manufacturing export competitiveness; Section 5 outlines some policies for strengthening the competitiveness of CARICOM manufacturers; and Section 6 draws some conclusions.

## II. THE FOUNDATIONS OF COMPETITIVENESS THEORY REVISITED

There is no standard definition of competitiveness. Neither is there a cornucopia recipe for firms seeking to achieve it. There is much broad agreement, however, on what competitiveness entails and the conditions and policies necessary for achieving it. At this point, a few crude stylized principles about competitiveness are useful for guiding analysis of the competitiveness of the manufacturing sector in the selected countries.

First, international competitiveness has its foundation in the theory of comparative advantage. The view of some competitiveness pundits that the theory of comparative advantage is defunct is therefore fallacious[1]. Like comparative advantage, the concept of competitiveness strives to explain why the gains from international trade differ among countries. However, while comparative advantage places greater emphasis on why nations trade; competitiveness seeks to account for why some firms (and nations) benefit more than others from trade.

Competitiveness is a more recent concept, which has become more in vogue as growth in international trade has outpaced growth in world Gross Domestic Product (GDP). World output grew by about 3.6 per cent per annum between 1970 and 1997, whereas, world trade increased by roughly 5.8 per cent per year for the same period.[2] Moreover, some competitiveness advocates tend to focus heavily on international competition among nations and the winners and losers in this 'struggle'. This has led some economists[3] to attack this conceptual approach as ill-founded or misleading.

The second stylized principle is that international competitiveness is a concept that is relevant primarily at the level of the firm and not so much at the national level. This distinction is important, because it is firms or nations that compete for international market share and profitability, rather than the nation itself. Competitiveness as it relates to nations refers to the macroeconomic and socio-cultural and institutional environment. This environment can either facilitate or retard the competitiveness of the domestic or international firms that operate within the country's borders.

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1 The increasing mobility of capital and technology is usually advanced as undermining the theory of comparative advantage.

2 International Monetary Fund Annual Report 1998.

3 See Krugman, Paul. "Competitiveness: Myth or Dangerous Obsession", Foreign Affairs, 1994.

The third stylized principle, which arises out of the two previous ones is that competitiveness relates primarily to the degree of microeconomic productivity and efficiency at the level of the firm and the strength of the supporting macroeconomic and institutional environment of a country.

## IIa. Definitions of and types of competitiveness

A landmark definition of competitiveness was offered in the Report of the President's Commission on Industrial Competitiveness (1984) in the United States. According to this report, competitiveness is the extent to which a nation can, under free and fair market conditions, produce goods that can gain international market share and increase the real incomes of producers. Although this definition refers to the competitiveness of the nation, it is understood that the nation's firms are the producers that are seeking to gain profitable market share.

The World Competitiveness Yearbook 1996[4] takes a systems approach in looking at competitiveness. The Yearbook defines competitiveness as the "ability of a country to create added value and increase national wealth by managing assets and processes, attractiveness and aggressiveness, globality and proximity, and by integrating these relationships into an economic and social model". Assets and processes refer to the resources and production processes of the country. Attractiveness means that the country creates an environment that encourages inflows of foreign direct investment and other partnerships, while aggressiveness is the push to enter foreign markets by investing overseas. The economy globality refers to internationally traded commodities, while proximity means traditional primarily non-tradable output.

Meanwhile, a report on the competitiveness of Australia's information industries notes that a firm is considered to be competitive if it can hold or increase its market share, while making an acceptable return on its investment. Competitiveness, therefore, is reflected by market share and profitability benchmarks.

## IIb. Types of competitiveness

Since competitiveness is a goal of the firm, it is influenced by the strategic interface between the firm and the market place. Theory and empirical evidence suggest two broad types of competitiveness. These are: competitiveness based on costs or pricing of the product (price competitiveness); and competitiveness based on product quality, design, innovation and skill intensity and flexibility (quality competitiveness). Economic history seems to suggest that as countries grow and develop, there is a tendency to increase the relative share of quality competitive commodities that they produce. Strong recent evidence for this has been borne out in the Newly Industrialized Countries (NICs)

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[4] See The World Competitiveness Yearbook, 1996, International Institute for Management Development (IMD), 1996.

of Asia, which moved away from more resource intensive activities into high value added, high tech electronics, information technology, pharmaceuticals and other high quality activities. The question, then, is whether competitiveness is path dependent. The jurors are not clear on this, though, and some economists argue that competitiveness is dynamic and can be created.[5]

## III. THE STRUCTURE OF THE MANUFACTURING SECTOR IN SELECTED CARIBBEAN COUNTRIES

The Caribbean manufacturing and agro-industrial sectors were founded on import substitution industrialization. Nobel Laureate Sir Arthur Lewis' model of 'Industrialization by Invitation' provided the strategy for the development of the sector. The model recognized the need for a vibrant manufacturing sector to diversify the economy and to promote growth and employment. The employment factor was rather important for Lewis, given that Caribbean societies were deemed surplus labour societies, with high levels of unemployment. Consequently, import competing manufacturing was regarded as a means of exploiting economies of scale, with the use of cheap surplus labour. Economists, notably Paul Krugman,[6] have recognized the importance of the nexus between surplus labour, imperfect competition and economies of scale in providing the impetus to manufacturing activity in developing countries.

On the advice of Lewis and others, governments provided a number of incentives to attract foreign direct investment in manufacturing activities. These included the provision of basic infrastructure, such as industrial estates, roads, water and electricity. In addition, manufacturers were allowed duty free imports of plant and equipment. Companies were also allowed tax concessions for up to 15 years and accelerated depreciation allowances to boost investment.

Over time, three types of manufacturing activities have been dominant in the region. These are import substitution industries, the enclave sector and agro-processing activities. Among these were textile manufacturing, food processing, electronic components and household appliances.

However, these industries operated very much on the fringe and failed to capture any important foothold in foreign markets. Conceptually, aspects of Lewis' model were sound. Structural and operational constraints limited its impact, however. The import substitution industrialization had a particularly negative impact on competitiveness. Protection measures including tax exemptions, tariffs and quotas stifled competition and

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[5] Shifts in competitiveness could result from many factors including the discovery of new resources, the accumulation of resources, acquisition of new technological skills, new production processes, innovations, etc.

[6] Krugman, Paul. "Toward a Counter-revolution in Development Theory", in Proceedings of the World Bank Annual Conference on Development Economics, 1992.

strengthened unproductive, declining industries. Further, protectionist policies resulted in the allocation of credit to uncompetitive activities. Consequently, after 40 years of attempting to create a vibrant manufacturing sector, it remains weak and inflexible.

The following sections will focus on the manufacturing sector in Dominica, Saint Vincent and the Grenadines, Guyana and Trinidad and Tobago.

## IIIa. Dominica

Dominica, like most of her Caribbean counterparts, produces relatively simple, low value manufactured goods. The sector revolves around the processing of agricultural products, enclave industries and the assembly of plastic and metal goods. Agro-industry includes food and beverage production using a variety of raw material inputs, such as coconuts, citrus, other fruits and animal feed production. This subsector also produces beer, rum, soft drinks, vinegar, pepper sauces, seamoss, vanilla extracts, patchouli and bay oils. Light manufacturing generally geared towards import substitution in the early stages became more oriented towards export markets at a later stage. The more important of these light manufacturers include garments, timber products, handicrafts, galvanized metal and other metal products. Two manufacturers, the Dominica Coconut Products Limited which was taken over by Colgate Palmolive in 1994, and Bello Products have performed well over the years. Actually the Dominica Coconut Products' soaps, lotions and creams have become household toiletries in the region and have performed relatively well in the extraregional market. Bello Products specializes in the production of bay rum lotion, condiments, pepper sauce, fruit juice concentrates and jellies. Bello Products has also attained some success with its incursion into the export market. Critical to the success of these subsectors has been the niche market export strategy. This entails the targeting of a specialised segment in the export market that rewards product differentiation and cultural products with special qualities, such as taste, aroma or rareness.

Table 1 below shows that the contribution of the manufacturing sector to Dominica's real GDP averaged US$10.3 million between 1989 and 1993. Between 1994 and 1998, average manufacturing value added rose slightly to US$10.9 million. Moreover, the average percentage contribution of the manufacturing sector to total output fell marginally from 7.4 per cent between 1989 and 1993 to 7.0 per cent between 1994 and 1998. Growth in manufacturing real output also slipped marginally from an average of 10.3 per cent between 1989 and 1998 to 10.2 per cent between 1994 and 1998. In spite of commendable growth over the last decade, the low base from which this growth began means that the contribution of the sector to real output is still small and compares unfavourably with average value added contributions of over 22 per cent for agriculture, 11 per cent for wholesale and retail trade and 18.0 per cent for government services. However, this is more a reflection of the structure of economy which is primarily agricultural based. The importance of the banana subsector, for instance, is underscored by average growth of 18.3 per cent in the crops subsector. Nevertheless, the relative importance of agriculture and manufacturing could change even more over time, if

manufacturing continues to register vibrant growth and if the fallout from the WTO ruling on the EU banana regime adversely affects Dominica's banana production.

**Table 1**

**Selected indicators of real Gross Domestic Product by economic activity for Dominica 1989-1998**

| Sector | Average GDP 1989-1993 (US$ Million) | Average 1994-1998 (US$ Million) | Average Percentage Contribution 1989-1993 | Average Percentage Contribution 1994-1998 | Average Growth rate 1990-1993 | Average Growth rate 1994-1998 |
|---|---|---|---|---|---|---|
| 1. Agriculture | 34 | 32.1 | 24.4 | 20.5 | 3 | 3 |
| 1.1 Crops | 28.2 | 25.5 | 20.3 | 16.3 | 3.7 | 3.7 |
| 2. Mining and Quarrying | 1.1 | 1.3 | 0.8 | 0.8 | 94.6 | 81.4 |
| 3. Manufacturing | **10.3** | **10.9** | **7.4** | **7** | **10.3** | **10.2** |
| 4. Electricity and Water | 4.4 | 5.8 | 3.1 | 3.7 | 25.3 | 20.1 |
| 5. Construction | 10.3 | 13.1 | 7.4 | 8.4 | 10.5 | 8.2 |
| 6. Wholesale and Retail Trade | 15.6 | 19.4 | 11.2 | 12.4 | 6.7 | 5.6 |
| 7. Hotels and Restaurants | 3.1 | 4.2 | 2.2 | 2.7 | 43.9 | 24.8 |
| 8. Transport | 13.2 | 15.7 | 9.5 | 10 | 8.2 | 6.8 |
| 9. Communications | 10.3 | 14.7 | 7.3 | 9.4 | 11.2 | 8 |
| 10. Banks and Insurance | 16.6 | 19.3 | 11.9 | 12.3 | 6.5 | 5.5 |
| 11. Real Estate and Housing | 5.1 | 5.5 | 3.6 | 3.5 | 20.2 | 18.9 |
| 12. Government Services | 25.8 | 27.2 | 18.5 | 17.4 | 4 | 3.8 |
| 13. Other Services | 1.5 | 2 | 1.1 | 1.3 | 71.2 | 56.8 |
| 14. Less Imputed Service Charge | 11.9 | 14.7 | 8.5 | 9.4 | 10 | 7.2 |
| **15. TOTAL** | **139.2** | **156.5** | **100** | **100** | **0.8** | **0.7** |

Source: ECLAC, based on national data

Per capita manufacturing value added (per capita MVA) of Dominica's manufacturing industry increased from $78 in 1980 to $155 in 1997[7]. This compares with a movement from $694 to $641 in Latin America, from $161 to $290 in developing countries as a whole, and from $3,708 to $4,802 in developed countries. Therefore, in 1980, developing countries per capita manufacturing value added was two times that of

[7] See UNIDO Country Industrial Statistics at www.unido.org/data/stats/showstat.cfm?cc=DMI-a

Dominica, and by 1997, it had fallen but only marginally to 1.87. Similarly, real average per capita MVA grew by 8.6 per cent a year in Dominica between 1970 and 1980, but slipped badly to grow by only 0.1 per cent between 1990 and 1997. The comparable growth rates for Latin America were 3.2 per cent and 1.3 per cent, while for developing countries and developed countries they were 4.5 per cent and 5.5 per cent and 2.0 per cent and 1.3 per cent, respectively. These figures indicate that growth in real average annual per capita MVA declined in Dominica in contrast with the performance of developing countries as a whole, where MVA increased from 4.5 per cent to 5.5 per cent.

### IIIa.1 Productivity in Dominica

The unavailability of labour and capital cost statistics prevent the calculation of indices of productivity for the Dominican manufacturing industry. However, site visits and anecdotal information on labour and other input costs relative to worker output suggest that weak and slow growth in productivity is an important drag on the competitiveness of the country's manufacturers. Indications are that productivity growth in the Dominican manufacturing sector is lower than the average for medium to fast growing developing economies. Further, it is expected that like most other Caribbean countries, Dominica's productivity growth has lagged significantly behind that of the fast growing export-oriented NICs of Asia.

A number of reasons could be advanced for the sluggish productivity performance of the Dominican manufacturing sector. The more important of these include: the use of inappropriate and out-dated equipment and technology, low level of skills of the workforce, an inward-oriented import substitution industrial strategy with the export thrust coming relatively late and weak infrastructure and institutional support systems. The low technology base directly impeded the capacity to expand the quantity and quality of output in the sector. This problem has been compounded by inadequate technical and managerial competence.

Moreover, the lack of a serious commitment to outward-oriented, export based strategies has led to production and marketing systems that are substantially below internationally accepted best practices. Private sector failure at the production level is also aggravated by public sector failure with respect to the provision of infrastructure and institutional support systems. The geography of the island and inadequate road network result in high transportation costs. High electricity and telecommunications charges also raise the overhead costs burden of manufacturers. In addition, institutional weaknesses relating to the procedures for establishing a business, legal and customs clearance systems all hamper business startup and efficient functioning.

## IIIb. Guyana

### Table 2

### Selected indicators of real Gross Domestic Product by economic activity for Guyana, 1989-1998

| Sector | Average GDP 1989-1993 (US$ Million) | Average 1994-1998 (US$ Million) | Average Percentage Contribution 1989-1993 | Average Percentage Contribution 1994-1998 | Average Growth rate 1990-1993 | Average Growth rate 1994-1998 |
|---|---|---|---|---|---|---|
| Agriculture, Forestry and Fishing | 15.7 | 11.4 | 26.5 | 33.4 | -21.4 | 3.7 |
| Sugarcane | 6.9 | 5.3 | 12.1 | 15.6 | -18.9 | 3.8 |
| Rice | 1.1 | 1.3 | 1.9 | 3.7 | -19.5 | 16.4 |
| Other crops | 3.3 | 1.7 | 5.4 | 4.9 | -26.5 | 1.6 |
| Livestock | 1.3 | 0.7 | 1.8 | 1.9 | -30.6 | 7.2 |
| Forestry | 1.3 | 1.5 | 2.2 | 4.5 | -0.1 | -0.9 |
| Fishing | 1.8 | 0.9 | 2.9 | 2.8 | -26.5 | 2.9 |
| Mining and Quarrying | 5.3 | 3.8 | 9.2 | 11.4 | -14.7 | 1.1 |
| Bauxite and Alumina | 4.2 | 1.1 | 7.1 | 3.3 | -26.7 | -14.6 |
| Other | 1.3 | 1.1 | 2.8 | 3.3 | 19 | -23.2 |
| **Manufacturing** | 7.3 | 2.6 | 12.1 | 7.9 | -24.6 | -10.7 |
| Sugar Manufacturing | 2.2 | 0.3 | 3.8 | 0.9 | -18.8 | -20 |
| Rice Milling | 0.4 | 0.1 | 0.7 | 0.2 | -19.6 | -20 |
| Other | 4.7 | 0.4 | 7.5 | 1.4 | -27.5 | -20 |
| Engineering and Construction | 4.3 | 2.7 | 6.9 | 8 | -23.2 | 5.1 |
| Services | 27.7 | 13.3 | 44.7 | 39.4 | -27.1 | 0.5 |
| Distribution | 5 | 2.7 | 8.3 | 8 | -24.6 | 1 |
| Transport and Communications | 5 | 2.8 | 8.1 | 8.1 | -25.2 | 2.2 |
| Rent of Dwellings | 1.1 | 0.6 | 1.8 | 1.7 | -27.4 | 2.1 |
| Government | 10.8 | 4.3 | 17 | 12.8 | -30 | -1.7 |
| Financial Services | 3.5 | 1.8 | 5.6 | 5.4 | -25.6 | 1.9 |
| Other Services | 2.2 | 1.2 | 3.6 | 3.4 | -25.7 | 1.4 |
| **TOTAL GDP** | 60.5 | 33.9 | 100 | 100 | -24 | 0.6 |

Source: ECLAC, based on national data

Manufacturing activity in Guyana is largely resource based, in keeping with the notion of specialization based on the factor proportions model of comparative advantage[8]. In earlier times, the sector was driven primarily by public investment. However, with structural adjustment, liberalization and trade reforms of the 1980s and 1990s, private sector participation has increased commensurately. With respect to specific activities, manufacturing entails the traditional sugar production and rice milling, the production of food and beverages, agro-industries, forest-based products and mechanical parts and machinery. Similar to most CARICOM countries, the food and beverage subsector is one of the more dynamic areas of activity. Activity in the subsector is focused on the production of breakfast cereals, biscuits, sauces, jams and jellies. Beverage production includes the brewing of beer, distillation of rum, and the production of soft drinks. The Company Banks DIH is the leading producer in the food and beverage subsector, producing Banks beer, soft drinks and a range of cereals and other food products.

The government has promoted the furniture making industry to strengthen value added in the forestry sector. This is viewed as a means of making more optimal use of Guyana's abundant forestry resources. Furniture-making firms, such as Shiva Wood working, Precision Wood Working and Liana Cane Interiors, have been struggling against great odds to develop viable furniture-making operations. Shiva Woodworking has used the United Nations Industrial Organization's (UNIDO) assistance to good effect, to restructure the plant, undertake management training and to standardize its furniture. Liana canes produce the special, relatively exotic liana type furniture (somewhat like, but better than wicker). This firm with the right type of support could readily capture a high-end niche market in export markets.

Guyana has also ventured into the production of some machine parts and capital goods for the sugar and rice subsectors. This involves the production of punt barges for transportation in the sugar industry and machine parts for repairs and maintenance in the sugar and rice industries. One of these firms, IDI Engineering, uses state-of-the-art computerized production systems and seems to be relatively efficient and productive by international standards.

Other activities include extraction and processing of the heart of the manacled palm, shrimp and fish processing, largely for export, production of pharmaceuticals at the Guyana Pharmaceuticals Corporation and small-scale production of marble products.

Table 2 above indicates that the contribution of the manufacturing sector in Guyana to real GDP, averaged US$7.3 million between 1989 and 1993, and US$2.6 million between 1994 and 1998. Manufacturing value added in Guyana is quite small, even by the standards of small developing countries with populations of around 1 million. Further, the table shows that as a percentage of GDP, real manufacturing output which averaged 12.1 per cent between 1989 and 1993, slipped to 7.9 per cent between 1994 and 1998. Even more remarkable is the rate of decline of the Guyanese manufacturing sector. Between 1990 and 1993, the value of manufacturing production contracted by a startling

[8] Under this model, also known as the Heckscher-Ohlin model, comparative advantage is based on the relative abundance of factors of production.

24.6 per cent, and continued to decline by 10.7 per cent between 1994 and 1998. Of the subsectors, the value of sugar output declined by 19.4 per cent between 1989 and 1998, while value added in the rice milling contracted by a 19.6 per cent over the same period. Other manufacturing including the production of furniture, beverages and pharmaceuticals slipped by 23.8 per cent over the decade. The contraction in manufacturing value added in Guyana in the 1990s reflected the impact of a type of Schumpeterian 'creative destruction' in the aftermath of economic reforms and restructuring. From the 1960s to 1980s, Guyana was a classic case of the statist economy. Economic activity was concentrated in the public sector, the trade regime was extremely protectionist with high tariffs and quota barriers, price and exchange controls. Economic reforms in the 1990s resulted in a more open, market-oriented trade regime, with lower tariffs and the encouragement of foreign direct investment. The natural consequence of this has been a shake out in the manufacturing sector, with inefficient, marginal domestic firms going out of business and those that survive having to adjust to meet the new market requirements. This has led inevitably to a contraction in output in the short to medium term as firms adjust. However, it is anticipated that in the longer term firms would become more competitive as they come to terms with operating in a market-based environment.

In Guyana, per capita manufacturing value added contracted by over 49 per cent, from $120 in 1980 to $61 in 1997[9]. This compares unfavourably with a decline of 12.5 per cent for Latin America and growth of 80.1 per cent and 29.5 per cent, for developing and developed countries. Meanwhile, Guyana's real average annual per capita MVA grew by 4.6 per cent between 1970 and 1980, but rose slightly to 4.8 per cent between 1990 and 1997. This compares somewhat favourably with growth rates of 3.2 per cent and 1.3 per cent for Latin America, 4.5 per cent and 5.5 per cent for developing countries and 2.0 per cent and 1.3 per cent for developed countries.

### IIIb.1 Productivity

The productivity malaise in the Guyanese manufacturing sector is the result of factors that are similar to those for Dominica, Saint Vincent and the Grenadines and other CARICOM countries. However, there are some peculiarities that exist for Guyana. These relate to the extent to which the State controlled the economy in the past and the pace at which the market is opening. Even though Guyana's labour costs are comparatively lower than most other CARICOM and many developing economies, this advantage was generally offset by relatively weak productivity. An overwhelming majority of manufacturers from site visits cited worker productivity as an important constraint on business performance.

Guyana's productivity problem is the end result of a confluence of factors. Important among these are the brain drain, low level technology, inadequate capital, lack of spare and replacement parts and poor plant maintenance. Over time, the brain drain

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[9] See UNIDO Pg 12 op cit.

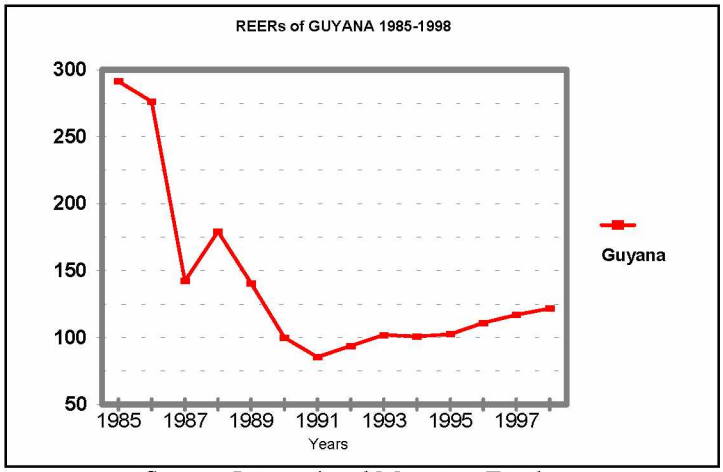
has depleted the human capital base of the country. The loss of skilled technical and managerial expertise, and the shortage of funds for acquiring foreign expertise have acted as major constraints to productivity growth in Guyanese manufacturing. This has resulted in many plants operating below optimum production capacity, thereby wasting resources. In addition, the use of rudimentary technology and the poor state of repair and maintenance of plants have hindered productivity growth. This problem was particularly acute during the height of the statist command of the economy, and still affects a number of manufacturing plants.

### IIIb.2 Real effective exchange rate developments in Guyana

Graph 1 below shows the pattern of the Real Effective Exchange Rates (REERs) for Guyana for the period 1985 to 1998. Guyana's REERs declined from 291.2 in 1985 to 142.2 in 1987. The REER appreciated somewhat between 1987 and 1988, but depreciated steadily until 1991, after which there was a general appreciation. Changes in the REERs suggest that Guyana's price competitiveness improved broadly up to 1991, after which its price competitiveness relative to its more important trading partners worsened.

**Graph 1**

**Real Effective Exchange Rates for Guyana**
**1985-1998**




Source: International Monetary Fund

## IIIc. Saint Vincent and the Grenadines

### Table 3

**Selected indicators of real Gross Domestic Product by economic activity for Saint Vincent and the Grenadines**

| Subsectors | Average 1989-1993 (US$ Million) | Average 1994-1998 (US$ Million) | Average Percentage Contribution 1989-1993 | Average Percentage Contribution 1994-1998 | Average Growth rate 1990-1993 | Average Growth rate 1994-1998 |
|---|---|---|---|---|---|---|
| Agriculture | 32.6 | 26.4 | 18.8 | 13.4 | 1.3 | -0.3 |
| Bananas | 15.1 | 7.6 | 8.7 | 3.9 | 4.3 | -2 |
| Mining and Quarrying | 0.5 | 0.7 | 0.3 | 0.4 | 11.0 | 2.3 |
| Manufacturing | 15.6 | 16.2 | 9 | 8.2 | -0.9 | -0.4 |
| Electricity and Water | 8.4 | 10.9 | 4.8 | 5.5 | 5.2 | 5.9 |
| Construction | 16.7 | 20.7 | 9.5 | 10.4 | 6.7 | 5.6 |
| Wholesale and Retail | 20.8 | 29.6 | 11.9 | 15.0 | 9.0 | 6.3 |
| Hotels and Restaurants | 4.0 | 4.9 | 2.3 | 2.5 | 8.6 | 1.3 |
| Transport | 22.3 | 26.5 | 12.8 | 13.4 | 3.9 | 5.5 |
| Communications | 12.9 | 16.6 | 7.4 | 8.4 | 8.6 | 5.5 |
| Banks and Insurance | 13.1 | 17.0 | 7.5 | 8.6 | 3.7 | 7.0 |
| Real Estate & Housing | 4.8 | 5.5 | 2.7 | 2.8 | 4.4 | 2.0 |
| Government Services | 27.5 | 33 | 15.8 | 16.7 | 4.6 | 2.6 |
| Other Services | 3.1 | 3.3 | 1.8 | 1.7 | 1.3 | 2.0 |
| Less imputed Service Charge | 9.9 | 13.3 | 5.7 | 6.7 | 4.0 | 7.7 |
| Total GDP | 174.3 | 198 | 100 | 100 | 2.7 | 3.1 |

Source: ECLAC, based on national data

Manufacturing in Saint Vincent and the Grenadines comprises resource-based activities and foreign enclave assembly and production. The food, beverage and tobacco subsector, especially the brewery, has been fairly dynamic over time, accounting for over 60 per cent of value added in manufacturing. Agro-industrial activities include flour and animal feed production and fruit processing. Other areas of activity include the production of textiles and wearing apparel, paper products, furniture making, cardboard boxes, galvanize sheets and electrical parts and machinery. Generally, apart from the food and beverage and flour and animal feed subsectors, the other areas of activity have not performed well. Their performance has been negatively affected by the small scale of operations, high overhead costs for factory space and utilities and relatively weak demand.

The trend in manufacturing value added provides some indication of changes in the performance of the sector. The contribution of the manufacturing sector to GDP in Saint Vincent and the Grenadines averaged US$15.6 million between 1989 and 1993, and 16.2 million between 1994 and 1998 (table 3). Meanwhile, the average percentage contribution of manufacturing to real value added decreased from 9.0 per cent between 1989 and 1993 to 8.2 per cent between 1994 and 1998. The poor performance of the sector is reflected in the growth in output. Real manufacturing output declined by 0.9 per cent during the period 1990-1993 and by 0.4 per cent between 1994 to 1998. Trade diversion and the migration of companies to Mexico due to lower labour costs and proximity to the United States, led to contractions in output in Saint Vincent and the Grenadines. Some domestic producers, accustomed to sheltered markets, were incapable of facing foreign competition with the lowering of the Common External Tariff (CET) and increased openness of the economy. This resulted in business failures that have adversely affected value added.

MVA per capita in Saint Vincent and the Grenadines increased from $105 in 1980 to $147 in 1997, compared with a decline from $694 to $641 in Latin America and an increase from $161 to $290 in developing countries as a group. Real average annual growth in per capita MVA, however, fell from 5.0 per cent between 1970 and 1980 to 1.0 per cent between 1990 and 1997. This was accounted for in part by some firms going out of business because of their inability to face import competition and the migration of other firms to cheaper labour destinations, such as Mexico.

### IIIc.1 Productivity in Saint Vincent and the Grenadines

As in Dominica and Guyana, the majority of manufacturers visited at plant sites in Saint Vincent and the Grenadines regarded low productivity as a major constraint to competitive operations. Labour productivity is adversely affected by low skills level of the workforce and inadequate training and extension systems. Capital productivity is also low because of the crude technology and inefficient plant and equipment used. Plant layout, organization and management of the work-flow and inventory compound the productivity problem.

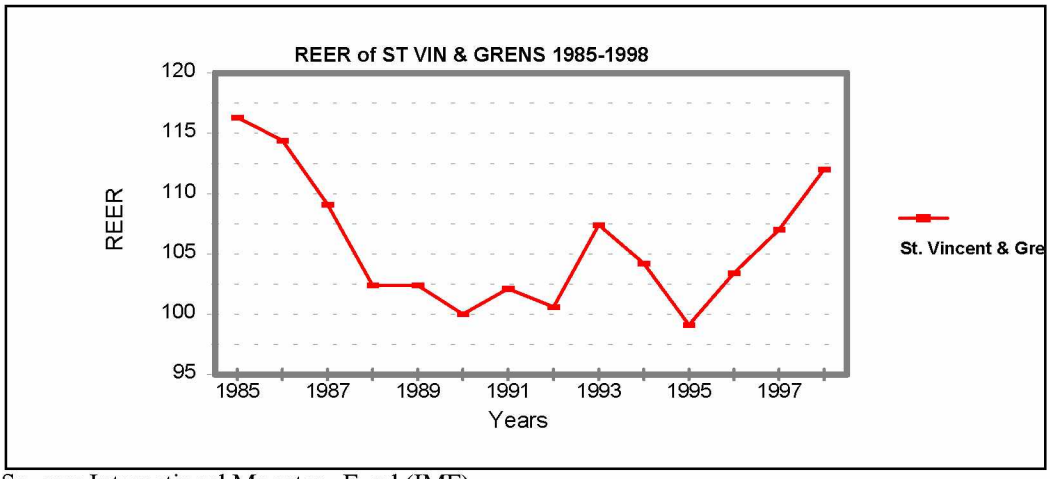
### IIIc.2. Real Effective Exchange Rate developments for Saint Vincent and the Grenadines

As seen in graph 2 below, the REER for Saint Vincent and Grenadines depreciated from the middle of the 1980s until around 1992. Thereafter it appreciated, except between 1993 and 1995, when it depreciated somewhat. This pattern suggests some broad improvement in price competitiveness from the latter half of the 1980s to the early 1990s and deteriorating relative price-cost conditions, compared with trading partners during the latter part of the1990s. Since Saint Vincent and the Grenadines and other Organization of Eastern Caribbean States (OECS) countries maintain a fixed exchange rate of EC$2.70 to the United States dollar, its REER reflected relative

movements in the United States dollar compared with other currencies, and its inflation rate compared with its trading partners.

**Graph 2**

**Graph of the Real Effective Exchange Rates of Saint Vincent and the Grenadines -1998**




Source: International Monetary Fund (IMF)

## IIId. Trinidad and Tobago

Trinidad and Tobago has the most advanced manufacturing sector in CARICOM, as measured by the closeness of the sector to international best practice. Manufacturing activities are divided into two fairly distinct segments. There is the heavy capital intensive manufacturing segment clustered around oil and natural gas refining and the non-oil lighter manufacturing activities. Typical of oil-based manufacturing world-wide, this part of the manufacturing sector in Trinidad and Tobago has been oriented to the export market from the outset. Meanwhile, non-oil manufacturing evolved from the import substitution model of industrialization under sheltered tariff, quotas and other forms of protection. With structural reforms and trade liberalization, however, this subsector has become much more attuned to export promotion. Oil-based manufacturing consists of a range of activities, including petrochemicals (ethylene, propylene, and epoxy resins), inorganic chemicals, plastics and pharmaceuticals. Other manufacturing activities include direct reduced iron, steel, wire rods and household appliances such as refrigerators and cookers.

## Table 4

### Selected indicators of real Gross Domestic Product by economic sector for Trinidad and Tobago, 1989-1998

| Sector | Average 1989-1993 (US$ Million) | Average 1994-1998 (US$ Million) | Average Percentage Contribution 1989-1993 | Average Percentage Contribution 1994-1998 | Average Growth rate 1990-1993 | Average Growth rate 1994-1998 |
|---|---|---|---|---|---|---|
| Agriculture, hunting, forestry and fishing | 115.4 | 85.0 | 3.2 | 2.9 | 0.3 | -6.1 |
| Mining and quarrying<1> | 716.7 | 476.7 | 19.8 | 16.4 | -10.2 | -1.7 |
| **Manufacturing** | **361.1** | **374.2** | **10.1** | **12.9** | **-4.2** | **4.8** |
| Electricity, gas and water | 49.8 | 44.9 | 1.4 | 1.5 | -3.2 | 3.8 |
| Construction<2> | 310.6 | 306.8 | 8.6 | 10.5 | -5.9 | 8.1 |
| Wholesale and retail trade | 452 | 392.7 | 12.5 | 13.5 | -8.8 | 3.6 |
| Transport and communication<3> | 379.4 | 334.9 | 10.5 | 11.5 | -6.1 | 4.9 |
| Finance<4> | 343.4 | 285.5 | 9.6 | 9.8 | -3.2 | 0.3 |
| Hotels, Guest Houses & Restaurants | 5.4 | 39.8 | 0.2 | 1.4 | ... | 19.2 |
| Community, personal and social services | 806.5 | 217.5 | 21.6 | 7.5 | -18.6 | 0.6 |
| General government | 602.6 | 418.3 | 16.7 | 14.4 | -6.8 | -1.8 |
| LESS: Imputed Bank Services | 89.8 | 71.1 | 2.5 | 2.4 | -9.5 | 7.0 |
| **TOTAL Gross Domestic Product** | **3606.4** | **2905.2** | **100.0** | **100.0** | **-6.3** | **1.8** |

Source: ECLAC, based on national data

Some of the major areas of activity in the non-oil based sector are food, beverages and tobacco processing, furniture manufacturing and small-scale assembly of various items. The food and beverage subsector along with chemicals and downstream activities and metals are the most dynamic segments of manufacturing. Activities in the food and beverage subsector entail production of flour, animal feed, cereals, oils and fats, rum and beer and fruit processing. Production of sawn timber, plywood and household furniture is carried out by a number of small producers and the main State-owned enterprise, Trinidad and Tobago Forest Product Co. Ltd. (TANTEAK). TANTEAK, however, has accumulated losses over time due to technical, financial and managerial problems.

Table 4 above indicates that the value of real output in the manufacturing sector in Trinidad and Tobago averaged US$361.1 million for the period 1989 to 1993 and increased to US$374.2 million between 1994 to 1998. The average percentage contribution of the manufacturing sector to real output stood at 10.1 per cent between 1989 and 1993, but rose to 12.9 per cent between 1994 and 1998. Meanwhile, manufacturing value added contracted by 4.2 per cent from 1990 to 1993. However, real output recovered to grow by 4.8 per cent between 1994 and 1998. Per capita MVA[10] declined from $450 in 1980 to $403 in 1997. This was similar to the decline from $694 to $641 for Latin America, but was unfavourable relative to the increase from $161 to 290 for developing countries as a group. Manufacturing output in the latter part of the

[10] See UNIDO op. cit. p.g.12

1990s seems to have benefited from faster growth in productivity, strengthened business investment and the streamlining and restructuring of systems of production.

### IIId.1 Productivity in Trinidad and Tobago

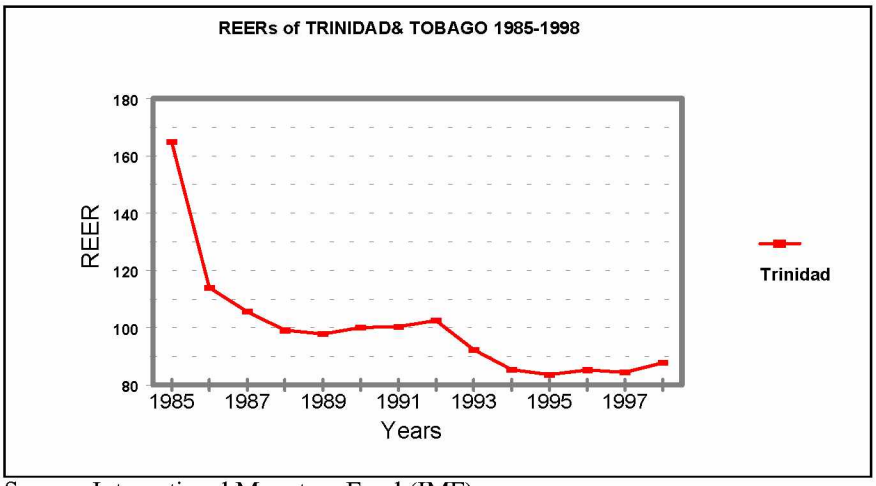
Labour productivity in Trinidad and Tobago's manufacturing sector, as measured by value added per employee grew by 27.51 per cent between 1985 and 1995, from $16,111 to $20,543. This resulted in an annual average productivity growth of 2.5 per cent, which is probably one of the higher rates in CARICOM. The market oriented reform of the late 1980s, the modernization of plant through new investment and the policies to improve the skills of the labour force have contributed to increased productivity in the Trinidad and Tobago manufacturing sector.

### IIId.2 Real Effective Exchange Rate Developments for Trinidad and Tobago

The REER of Trinidad and Tobago trended downwards for the most part since 1985 (see Graph 3 below). From a high of 164.8 in 1985, the REER depreciated to 87.74 in 1998, suggesting steadily improving price competitiveness of the country's exports. Improved price competitiveness was influenced largely by the devaluation of the 1980s and 1990s that made Trinidad and Tobago's exports relatively cheaper. Further, price competition was reinforced by improved quality competitiveness that resulted from structural reforms in the manufacturing industry, leading to improved productive efficiency, strengthened management and the use of more up to date technology. Trade liberalization and the disciplining impact of foreign competition also resulted in the closure of unprofitable and marginal producers and forced those that remained to adopt the measures that were required to compete.

**Graph 3**

**Graph of the Real Effective Exchange Rates of Trinidad and Tobago1985-1998**




Source: International Monetary Fund (IMF)

# IV. FACTORS AFFECTING THE COMPETITIVENESS OF CARIBBEAN MANUFACTURERS

## IVa. Efficiency in factor markets and competitiveness of CARICOM manufacturing

In assessing the competitiveness of regional manufacturers, efficiency and productivity is relevant not only for product markets, but also for factor markets. Factor market efficiency speaks of the extent to which the markets for factors, especially labour and capital, are transparent, free of structural rigidities and reward participants according to their productivity.

Labour market flexibility is vital to the allocation of labour to areas and activities where it is demanded. In the countries studied and the region, as a whole, turgid, inflexible labour markets, however, hinder the movement of labour to productive activities where it is demanded. In many cases, the lack of freedom of movement of labour between industries is a reflection of a shortage of needed skills. In Dominica, Guyana and Saint Vincent and the Grenadines, for example, manufacturers noted that although a large pool of labour could be found for low level, repetitive tasks, there was a severe shortage of highly skilled technicians and managers. This skills mismatch has been an important constraint to the ability of manufacturers to undertake timely improvements to their production and management machinery. Moreover, it is a reflection of the dualistic structure of the regional labour market and the impact of the brain drain on the availability of skilled labour.

With respect to the price of labour, the wage formation process in the region is largely determined by forces other than the market. Therefore, it is not uncommon to find market situations where wage rates are either higher or lower than the productivity of workers. Imperfect labour markets provide room for the capture of rents by workers or employers. Furthermore, regional trade unions often demand wage increases that seek to maintain the purchasing power of workers, but which may not be based on labour productivity. Such wage increases that over-shoot growth in labour productivity tend to undermine competitiveness. Competitiveness is particularly affected in industries, such as textiles and electronic parts assembly, where comparative advantage is based on cheap abundant labour. Moreover, given the limited room for the use of monetary policy in countries such as the OECS, containment of factor costs and fiscal restraint are particularly important in fostering competitive industries. Unsustainable growth in labour and other input costs undermine industrial competitiveness and the capacity of manufacturers to generate future productive employment.

## IVb. Industrial policies and the competitiveness of CARICOM manufacturers

As suggested earlier, Caribbean manufacturing was developed based on an industrial policy strategy that was largely protectionist. High levels of effective protection resulted from high tariffs, quota restrictions and a wide range of incentives and

subsidies, including tax holidays, accelerated depreciation allowances and duty free imports of raw materials and capital goods.

It is widely accepted that the most appropriate industrial measures are those which are price based (such as tariffs), uniform and applied horizontally or evenly across sectors. This was hardly what occurred in the case of Caribbean manufacturing. The drive to replace imports with domestic production resulted in a severe anti-export bias, and an over-reliance on a small domestic and regional market for manufactured goods. For Barbados, for instance, Whitehall[11] found that nominal and effective rates of protection increased between 1960 and 1980.

In the Caribbean, the infant industry argument that justified the provision of incentives to facilitate manufacturing activities was either taken too far or taken out of context. The logic of the argument that infant industries would grow up to compete based on merit did not materialize in most countries. The import substitution, protectionist strategy stifled competition, promoted declining manufacturing activities notably in electronics and textiles, and acted as a disincentive to exports. In addition, the strategy of 'picking winners' or targeting prospective growth industries led to the promotion of some activities in which most of the countries might never be able to compete. A notable example of this was the automobile industry in Trinidad and Tobago and refrigerators and household appliances in Guyana and other countries.

## IVc. Industrial investment and competitiveness of regional manufacturers

Investment in manufacturing plant and equipment and training of workers is an important factor underpinning competitiveness. The investment process, though, is not a straightforward one. Generally, expectation of future long run profit is an important consideration in the decision to invest. In real life, investors are not as rational as theory makes them out to be due to information shortage. However, even crudely, the present value of the future expected profits from the investment must equal or exceed the costs of the investment (in terms of interest rate, use of retained earnings and so on).

Unstable demand for their products and weak profit expectations and difficulties in accessing finance have led to low levels of new manufacturing investment in the Caribbean. In addition, inadequate and poor quality new investments result in poor competitive performance that adversely affects profitability and the ability to invest in the future. Many plant managers in the countries of focus noted a strong positive relationship between sales, especially export proceeds, and their ability to undertake new investment. Exports are particularly important, since they earn the foreign exchange required to purchase imported plant and machinery. Indications are that the majority of manufacturers in the region have failed to retool and restructure their operations sufficiently to meet the competitive challenge.

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[11] See Whitehall, P., (1984) "Protection in the Manufacturing Sector of Barbados", Central Bank of Barbados, Quarterly Economic review, Vol. 11 No.2, pp. 9-27.

Foreign direct investment has been attracted to the sector under joint ventures, subcontracting and other arrangements. However, a number of factors have retarded the competitiveness of these branch plants. Important among these is a competitive strategy that is based on cheap labour and incentives rather than on quality and innovation. Also the footloose nature of these foreign enterprises limits the transfer of skills and techniques. In a study of innovation Agamus,[12] a German consulting Group, found that companies that manufacture other enterprises' products under licence tend to be poor innovators. This has been the case with the arrangements under which Caribbean manufacturers have produced.

In countries such as Guyana, Jamaica and Saint Vincent and the Grenadines the high cost of finance in terms of interest rates, cash-based collateral requirements and closing fees have impeded new plant investment. Low investment in new plant and machinery has been aggravated by the problem of poor maintenance of established plants. In the Caribbean, as in many other less developed regions, the effective useful life of infrastructure and capital (plant, machinery and equipment) is adversely affected by poor maintenance. In many instances, these factors of production are used for extended periods with little or no servicing, repairs and upgrading. This severely limits the productive life of these assets. Therefore, in many situations, completely new capital has to be bought or installed over fairly short time periods just to continue the production process. This leads to high fixed costs and with relatively low levels of output results in high average production costs. In some countries, notably Guyana and Jamaica adverse macroeconomic policies and the foreign exchange constraint severely limited the ability of manufacturers to carry out plant maintenance during the last two decades.

## IVd. The impact of competition policies on manufacturing competitiveness

Polices that promote market competition based on prices and discourage monopoly and other anti-competitive practices are crucial in the development of competitive manufacturing enterprises in the Caribbean. Lipsey and Chrystal[13] state that competition could be promoted by influencing either market structure or the behaviour of individual firms. Where possible, though, these policies should aim to impact on the broad market structure, rather than the individual firm. This provides the basis for widely applicable benchmarks, rather than policies selected on a case-by-case basis. Except for Jamaica, Caribbean countries do not have competition policies. However, like other countries, competition in the manufacturing sector is influenced by the level of concentration of the firms in the sector and the degree of contestability in the market. Here contestability means that sunk costs of entry or exit are low enough to allow new firms to limit the ability of incumbent firms to make above normal profits. Competition, therefore, has a disciplining effect on incumbent producers.

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12 See Financial Times, Monday, 19 July 1999.

13 See Lipsey, R. G., and Chrystal, K. A., (1995) " An Introduction to Positive Economics", Oxford University Press.

The extent to which the Caribbean manufacturing industry is contestable is related to two other issues. These are the extent to which new entrants serve to discipline established ones and whether internal X-inefficiencies in the firm are eliminated as a result of competition. Today, as in the past, Caribbean manufacturers still seek protection from competition. Many manufacturers and agro-processors still view competition as a threat to their market share and survival. Therefore, the virtuous effects of learning from competitors and responding by differentiating their products have not been fully utilized by Caribbean manufacturers. Many manufacturers with a fairly sheltered domestic market and niches overseas fail to invest needed capital on modern technology, research and development and innovation. Internal inefficiencies in these firms remain high as output is not maximized from resource input. Undoubtedly, such firms are unlikely to sustain market share in outdated protected markets. Forstner and Ballance[14], in cross country regression analysis, found that levels of industrial concentration tend to be higher in the developing country group than the Developed Market Economies group. This, they explained, may be due to differences in market size and economies of scale, acting as a greater entry barrier in developing countries.

Caribbean industrial structure suggests that levels of industrial concentration are significant. The largest firms tend to hold significant market share because of their entrenched positions. Also, established market outlets and arrangements and access to credit based on reputation provide an advantage for existing firms. In many cases, government industrial incentive policies favour large firms because of the presumption that they are more likely to penetrate foreign markets and have greater ability to create employment.

## IVe. Marketing strategies and arrangements and the competitiveness of CARICOM manufacturers

Marketing, being a more recent area of specialization, has not benefited to the same degree from learning by doing as industrial production. However, it is indisputable that Caribbean manufacturers cannot compete on the local market or attain growth in exports without quality marketing systems. The marketing arrangements for Caribbean manufactures evolved out of those that existed for agricultural products. The market for sugar and bananas, for instance, was largely a ready-made preferential market. These two exports had established marketing channels with brokers and market makers.

Caribbean manufacturers have not been as fortunate as the exporters of these agricultural products. In the first place, manufacturers have not benefited to the same extent from such a wide-ranging preferential trading regime. Secondly, as fairly new comers to the international market for manufactures, they needed to actively promote the credentials of their products. This has not been easy for most manufacturers, especially small-scale producers, with limited finance and marketing expertise.

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[14] See Forstner, H and Balance, R., (1990) "Competing in a Global Economy", UNIDO.

Strategic, scientific market intelligence that is vital to the competitiveness of Caribbean manufacturing exports is sadly lacking. Further, the market intelligence exercise that should precede the production of a manufactured good is either not done at all or undertaken after production. Hence, there is little or no demand analysis to assess consumers' preferences for the product. Majaro[15], for instance, holds the view that investment within the firm should include the full cost of pre-launch marketing, market research, promotion, sampling and physical distribution. However, the inattention of regional manufacturers' to these areas has affected them negatively.

Studies have shown that the efficiency and timing of delivery to the market impact significantly on the export success of firms. Many smaller exporters of manufactured products face a serious delivery and distribution constraint. Even where the product is capable of making a profitable market entry, weak delivery channels prevent this possible outcome. Most Caribbean manufacturers can be considered as small to medium-size firms by international standards. As such, their limited capital base precludes them from having company-based delivery and distribution systems.

Moreover, the use of foreign distribution channels puts regional firms at a disadvantage, compared with foreign multinational corporations. Large multinational corporations (MNCs) have their own well-established channels of distribution. They can, therefore, harness economies of scale and scope from a combined internal marketing channel within the corporation. Being seasoned exporters, MNCs accrue significant learning from experience and well connected delivery outlets. Where Caribbean manufacturers undertake joint marketing with MNCs, they need to ensure that the arrangements can cater to their needs and present opportunities for learning.

In many cases regional producers utilize only one or two channels of communication. For the most part, regional manufacturers have not made good use of surveys, sales promotions, publicity campaigns, direct marketing, network marketing and personal selling and other marketing techniques.

Further, high advertising costs and limited expertise adversely impacted on manufacturers' export promotion capacity. Some of the larger manufacturers have undertaken overseas advertising campaigns. Especially where niche agro-industrial goods are concerned, there is need for targeted advertising. With respect to their objectives, it is fair to say that much of the advertising undertaken by Caribbean manufacturers is without any clear focus. Generally, manufacturers are aware of the need to advertise the products, but seem unaware of the potential of strategic advertising.

Marketing in the manufacturing and agro-processing sectors is hampered by a shortage of finance, skilled personnel and institutional support systems. In countries where export credit is available, for instance, much of the funds is used for the purchasing of raw materials and intermediate goods and little is allocated to marketing. This results from too much emphasis on production. Further, many manufacturers do not

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[15] See Majaro, S., "The Essence of Marketing", Prentice Hall International Ltd, 1993.

borrow enough funds to cover the marketing function of their operations. In fact, it is still viewed by many as a 'soft ' function. In addition, for the most part marketing institutions are lacking or inadequate.

## IVf. Environmental standards and manufacturing competitiveness

The comparative advantage of a country, especially during the early stages of development, is usually based on its abundant resource or factor endowment. This provides an important role for the rate and manner in which factors are used up or depleted. The old school of thought viewed the environment as an unlimited basket of resources which firms could exploit at will. In recent times, however, the rapid rate of resource depletion, species extinction and the adverse effects on man have led to calls for environmental regulations and preservation.

The new school of thought regards the global environment as the so-called 'global commons'. Consequently, these thinkers argue that humanity at large has a stake in environmental preservation everywhere. Further, some developed countries have been trying to get the WTO to include environment provisions in its general trade rules. This, no doubt, would allow these countries to impose tariffs, countervailing duties or other trade restrictions on commodities from countries that do not meet their environmental standards. The motive for such measures is often protectionist and they should not be included in WTO regulations.

Environmental considerations are closely linked to the evolution of production and trade in the Caribbean. Comparative and competitive advantage in the region has been based strongly on natural resource endowment. This has been the case from sugar to tourism. This underscores the need for appropriate environmental considerations in production and marketing of products. Two examples are instructive here. First, had the Windward Island banana industry marketed the fruit as a 'green', fairly organically grown, sweet and environmentally friendly fruit, it could have obtained better returns in the EU market. Second, the furniture-making and fisheries industries in Guyana need to adopt environmentally sustainable production practices in terms of the exploitation of the raw materials and market their products as such.

It is suspected that a number of regional manufacturers would put up resistance to meeting established environmental standards. They would contend that the costs of achieving these standards are added overheads for them. But as long as these standards are not onerous and take into consideration the level of development of the countries, they normally contribute to the success of the firms.

## IVg. The impact of macroeconomic fundamentals on manufacturing competitiveness

Although competitiveness is largely determined by factor productivity and the ability to offer lower prices and higher quality products, the macroeconomic environment is also an important influence on the ability of firms to compete. Macroeconomic fundamentals are a package of policies which, from theory and practical evidence, are proven to promote economic growth and development. Economic fundamentals in the context of a study of competitiveness in the Caribbean include: an open, liberalized trading environment, stable and competitive exchange rates, positive real interest rates which promote savings and productive investment. Also, inflation rates should be low and predictable, budget deficits and debt should be contained and the financial system must be sound and imbued with high levels of competition.

In the 1980s and 1990s, CARICOM countries undertook structural adjustment and reforms to make their economic environments more open and competitive. This reflected the change in focus from import substitution to export promotion. Adjustments and reforms undertaken included trade and foreign exchange liberalization, the dismantling of quotas, and the implementation of a harmonized lower tariff - under the Common External Tariff (CET). Lower CET rates should benefit regional manufacturers by reducing the price of imported raw materials, plant and other factor inputs. Further, in some countries, notably Jamaica, Trinidad and Tobago and Guyana, many State monopolies that have burdened government finances for a long time have been privatized. Privatization is sometimes viewed as a one-time capitalization of the net future stream of income from these enterprises. However, in many cases, the choice was between allowing these enterprises to continue making losses or making them profitable. Vital to the success of the privatization effort is the investment of part of the proceeds in infrastructure and training facilities to help export manufacturing enterprises. Moreover, where privatization leads to lower costs of utility inputs (electricity, telecommunications transport, etc.), it could facilitate manufacturing competitiveness.

Sound monetary policy favourably influences the cost and availability of credit. This leads to competitive interest rates and the deepening of capital markets. Manufacturers and agro-processors in Dominica, Saint Vincent and the Grenadines and Guyana note that access to reasonably priced finance is a major constraint on production. Tight monetary policy in Jamaica in recent times, however, has basically crippled manufacturing production. A weighted average loan interest rate of 33 per cent and an interest rate spread of over 17 per cent in Jamaica in 1998 has made a number of agro-processing and manufacturing activities unprofitable.

Sound exchange rate policy is crucial to strengthening manufacturing export competitiveness. Unstable and overvalued exchange rates retard the competitiveness of a country's exports. Overvalued exchange rates, in particular, artificially inflate the price of exports and deflate the price of competing imports, resulting in reduced demand for price elastic exports and increased demand for imports. An overvalued exchange rate is a tax on exports and a subsidy for imports. Therefore, to help exporters provide competitively priced manufactures, policy makers must ensure a realistic exchange rate.

This is particularly important for the region since most of its manufactures are weakly differentiated, making price competitiveness more important. In Guyana and Jamaica fluctuating and overvalued exchange rates in the 1980s and 1990s have adversely affected manufacturing exports. Meanwhile, Trinidad and Tobago's competitive devaluation in the latter part of the 1980s, wage and public expenditure restraint all helped to improve the export performance of the non-oil manufacturing sector.

The type of exchange rate regime is also crucial. Evidence shows that fixed exchange rates tend to promote price stability. This is as a result of the discipline imposed on policy makers who desire to avoid the inflationary costs of a fluctuating rate. Also, confidence in the domestic currency is strengthened, thereby reducing the likelihood of it being undermined. Some countries, such as Jamaica and Trinidad and Tobago, have adopted adjustable exchange rates. Their aim is to provide room for exchange rate realignment when domestic price/costs and external conditions change. However, this peg system only works well when supported by credible and responsible monetary and fiscal policies and non-political intervention for maintaining the peg.

Fully flexible exchange rates tend be associated with higher productivity and economic growth. Productivity gains stem from improved efficiency, because flexible rates allow suitable adjustments in prices and real wages in response to economic or policy shocks.

In general, the evidence on the exchange rate suggests that flexible rates may be more conducive to promoting competitiveness. However, in small countries such as the OECS States, the fixed pegged rate have imbued the macroeconomy with stability and confidence, encouraged investment and kept inflation in check. Given the harsh experience of Jamaica, Guyana and Trinidad and Tobago with flexible exchange rates, countries with fixed rates may be reluctant to change. In fact, it might be more appropriate to maintain fixed exchange rates. What this means, however, is that these countries will have to make other macroeconomic tools work harder to promote industrial competitiveness. Policy tools could include the strengthening of fiscal savings for facilitating capital projects, strengthening capital markets and financial intermediation. Meanwhile, countries with flexible rates could use competitive devaluation to boost export growth, where necessary.

# V. INDICATORS OF THE COMPETITIVENESS OF CARIBBEAN MANUFACTURERS

In addition to the indicators of competitiveness provided by the examination of productivity and real effective exchange rates in the countries of focus, this section looks at other, more general indicators of competitiveness in the Caribbean.

## Va. Trade performance

Czinkota and Wongtada (1997)[16] have provided a basic ex-post or realized measure of competitiveness that shows how the industries of a country perform in trade. The long-term changes in these indices provide some indication, however crude, of the ability of a country's industries to gain market share. They offer the following definition:

$$\text{Competitiveness} = \frac{\text{Export volume - Import volume}}{\text{Export volume + Import volume}}$$

The above indicator measures competitiveness as the sector's trade balance as a proportion of total trade volume (exports + imports). The values of this competitiveness measure range from +1 to –1, which are extremes and are highly unlikely. A competitiveness measure of +1 indicates that the industry only exports and has no imports, while a measure of -1 means that the industry only imports, but does not export.

Highly competitive industries would tend to have competitiveness figures that are relatively close to +1. Although values may be distorted by inflation, they provide for improved standardization. They are, therefore, used in an adapted version of the above measure to evaluate the trade competitiveness of the manufacturing sector of selected countries. In this measure -

$$\text{Competitiveness} = \frac{\text{Export Value - Import Value}}{\text{Export Value + Import Value}}$$

The values of this measure range from 1 to -1 like the volume measure.

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[16] See Czinkota, M. R., and Wongtada N., (1997). "The Effect of Export Promotion on U.S. Trade Performance: An Analysis of Industry Internationalization", The International Trade Journal, Vol. XI, No.1, Spring, pp. 5-37.

## Table 7

### Indices of competitiveness (measured as Exports value - Imports value/ Exports value + Imports value) for selected countries for the period 1986-1996

| Country | | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | Indices |
| Barbados | | -0.378 | -0.618 | -0.550 | -0.619 | -0.653 | -0.656 | -0.598 | -0.598 | -0.614 | -0.777 | -0.832 | -0.551 |
| Belize | | -0.475 | -0.686 | -0.586 | -0.672 | -0.682 | -0.792 | -0.718 | -0.740 | -0.680 | -0.763 | ... | -0.618 |
| Guyana | | ... | -0.875 | -0.878 | -0.883 | -0.871 | -0.814 | -0.904 | -0.891 | -0.847 | -0.772 | -0.813 | -0.703 |
| Jamaica | | -0.653 | -0.628 | -0.667 | -0.704 | -0.744 | -0.730 | -0.662 | -0.629 | -0.621 | -0.650 | -0.757 | -0.608 |
| Trinidad and Tobago | | -0.507 | -0.421 | -0.220 | -0.247 | -0.177 | -0.310 | -0.285 | -0.257 | 0.214 | -0.435 | -0.997 | -0.240 |
| Antigua and Barbuda | | -0.713 | -0.850 | ... | -0.843 | -0.836 | -0.727 | ... | ... | ... | ... | ... | -0.361 |
| Dominica | | -0.432 | -0.524 | -0.606 | -0.642 | -0.647 | -0.600 | -0.624 | -0.596 | -0.550 | -0.950 | -0.953 | -0.561 |
| Grenada | | -0.903 | -0.957 | -0.795 | -0.819 | -0.768 | -0.528 | 0.524 | -0.901 | -0.899 | -0.906 | ... | -0.632 |
| Montserrat | | -0.760 | -0.684 | -0.823 | -0.958 | -0.990 | -0.977 | -0.973 | -0.977 | ... | ... | ... | -0.649 |
| St. Kitts and Nevis | | -0.558 | -0.559 | -0.624 | -0.655 | -0.630 | -0.684 | ... | ... | ... | ... | ... | -0.337 |
| St. Lucia | | -0.677 | -0.630 | -0.668 | -0.728 | -0.686 | -0.737 | -0.613 | -0.661 | -0.754 | -0.732 | -0.816 | -0.626 |
| St. Vincent | | -0.730 | -0.702 | -0.600 | -0.672 | -0.642 | -0.783 | -0.762 | -0.815 | -0.828 | ... | ... | -0.594 |
| United States | | -0.309 | -0.284 | -0.232 | 0.819 | 0.221 | -0.088 | 0.258 | -0.136 | -0.154 | -0.119 | -0.859 | -0.002 |
| United kingdom | | -0.063 | -0.075 | -0.115 | -0.110 | -0.074 | -0.034 | -0.055 | -0.089 | 0.007 | 0.078 | 0.003 | -0.048 |
| Japan | | 0.650 | 0.691 | 0.506 | 0.460 | 0.432 | 0.459 | 0.498 | 0.493 | 0.605 | 0.485 | 0.459 | 0.480 |
| Mexico | | -0.303 | 0.039 | -0.158 | -0.170 | -0.297 | -0.365 | -0.074 | -0.174 | -0.119 | 0.032 | ... | -0.144 |
| Venezuela | | -0.711 | -0.713 | -0.982 | -0.395 | -0.304 | -0.591 | -0.654 | -0.761 | -0.368 | -0.412 | ... | -0.536 |
| Hong Kong | | 0.053 | 0.043 | 0.027 | 0.041 | 0.847 | 0.122 | 0.008 | 0.008 | -0.112 | -0.032 | 0.026 | 0.091 |
| Singapore | | -0.108 | -0.081 | -0.069 | -0.066 | -0.088 | -0.078 | -0.067 | -0.078 | -0.022 | -0.024 | -0.021 | -0.062 |
| Republic of Korea | | 0.219 | 0.235 | 0.233 | 0.169 | 0.140 | 0.101 | 0.114 | 0.029 | -0.008 | 0.100 | 0.070 | 0.121 |

Source: ECLAC based on Official figures and the International Trade Statistics Yearbook, various issues

Table 7 above shows ex-post indices of competitiveness based on the indicator provided. The table reveals that on average the manufacturing industry in Caribbean countries tends to have high negative values. This suggests that average trade competitiveness is weak, as is reflected in the large manufacturing trade deficits relative to total trade.

There are some variations at the country level, but the pattern of weak competitiveness generally holds. For Guyana, export competitiveness is rather weak with the index ranging from -0.772 in 1995 to -0.904 in 1992, while the average for 1987 to 1996 was -0.855. This average figure indicates that the trade deficit was a full 85 per cent of total trade. The high negative average clearly reveals the weak quantitative and qualitative aspects of Guyana's manufacturing trade performance. From a quantitative viewpoint, the absolute volume of Guyana's exports has been small over the period. Meanwhile, from a qualitative standpoint, exports have consisted primarily of low value (near commodity) manufactured goods with low income and price elasticities of demand in foreign markets. These include garments, textiles, processed food and beverages and pharmaceutical products.

The average value of the competitiveness measure for Dominica is -0.648, which clearly reflects the weak trade performance. This performance, however, was generally stronger than that of Guyana and probably reflects the success of a few Dominican industries such as the soap and detergents manufacturers that have gained some success on the regional and international markets.

The manufacturing sector in Saint Vincent and the Grenadines had an average value of the competitiveness measure of -0.726 for the period 1986 to 1994. The values ranged from -0.600 in 1988 to -0.83 in 1994. Further, since 1988, the indices have tended to become larger negative numbers, suggesting worsening trade competitiveness over time. The weak trade performance over time seems to be linked to the inability of the major sectors to compete. These sectors include the food, beverages and tobacco, textiles, clothing and footwear and miscellaneous manufacturing. Declining export performance was also linked to the closure of a number of textile factories.

As expected, Trinidad and Tobago was the only exception to the pattern of extremely weak competitiveness in CARICOM. The average value of the competitiveness indicator for Trinidad and Tobago was -0.331. Therefore, although the manufacturing trade of Trinidad and Tobago was in deficit for the whole period, except 1994, the deficit was only 33 per cent of total trade. The indicator for Trinidad and Tobago is influenced by the classification of manufacturing as SITC 5 to 8, which includes SITC 5 (chemicals), SITC 6 (basic manufactures), SITC 7 (machines, transport equipment) and SITC 8 (miscellaneous manufactured goods). The petrochemical subsector remains the dominant contributor to manufacturing exports, but it has been increasingly supported by non-petrochemical based manufacturing in recent years. The more important petrochemical contributors to exports are inorganic chemical, elements and oxides, ammonia and anhydrous products and fertilizers. These are supported by downstream activities, including iron and steel and plastic products.

In fact this diversification into higher value added downstream activities is crucial to improving the competitiveness of the sector in Trinidad and Tobago.

The indicators for Hong Kong (0.094) and the Republic of Korea (0.127) reflected trade surpluses relative to total trade. Meanwhile Mexico (-0.144) and Singapore (-0.062) both had average trade deficits to total trade over the period, indicating comparatively weaker competitive positions.

## Vb. Caribbean participation in international trade

### Table 8

### The share of different countries and regions in world trade share of world trade 1960-1994 (percentages in current dollars)

| | Exports | | | | | Imports | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1960 | 1970 | 1980 | 1990 | 1994 | 1960 | 1970 | 1980 | 1990 | 1994 |
| World | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Developed Countries | 65.9 | 70.9 | 62.6 | 71.7 | 69.4 | 64.9 | 71.6 | 68.3 | 72.4 | 67.9 |
| Group of Seven | 48.9 | 52.7 | 46.3 | 52.1 | 51.3 | 41.9 | 44.8 | 43.1 | 52.3 | 50.2 |
| United States | 15.8 | 13.7 | 11 | 11.5 | 12.3 | 11.1 | 12.2 | 12.5 | 14.5 | 16.3 |
| Japan | 3.1 | 6.1 | 6.5 | 8.4 | 9.5 | 3.3 | 5.8 | 6.8 | 6.6 | 6.5 |
| European Union | 32.2 | 35.5 | 32.5 | 39.5 | 36.5 | 32.7 | 35.3 | 34.6 | 39.6 | 34.6 |
| Economies in Transition | 10.1 | 9.8 | 7.7 | 5 | 3.5 | 10.2 | 9.7 | 7.7 | 5.5 | 3.1 |
| Developing Countries | 21.9 | 18.4 | 28.7 | 23.3 | 26.7 | 22.6 | 17.9 | 22.9 | 22.1 | 28.9 |
| L.A. & Caribbean | 7.7 | 5.5 | 5.5 | 3.9 | 3.8 | 7.3 | 5.5 | 5.9 | 3.3 | 4.8 |
| LAIA | 5.6 | 4 | 4 | 3.3 | 3.4 | 5 | 3.5 | 4.1 | 2.4 | 4 |
| CACM | 0.3 | 0.4 | 0.2 | 0.1 | 0.1 | 0.4 | 0.4 | 0.3 | 0.2 | 0.2 |
| CARICOM | 0.5 | 0.4 | 0.5 | 0.2 | 0.1 | 0.6 | 0.6 | 0.7 | 0.2 | 0.2 |
| Asia | 9.5 | 8.1 | 8.2 | 16.7 | 21.4 | 9.7 | 7.8 | 12.3 | 15.9 | 22 |
| Newly Industrializing Economies (NIEs) | 3.4 | 3 | 6 | 10.3 | 14.3 | 3.6 | 3.8 | 5.8 | 10.3 | 14.6 |
| China | 2 | 0.7 | 0.9 | 1.8 | 2.9 | 1.9 | 0.7 | 0.9 | 1.5 | 2.7 |
| India | 1 | 0.6 | 0.4 | 0.5 | 0.6 | 1.7 | 0.6 | 0.7 | 0.7 | 0.6 |
| Africa | 4.2 | 4.1 | 4.7 | 2.3 | 1.7 | 4.9 | 3.4 | 3.6 | 2.2 | 1.8 |
| Oil-exporting Countries | 6.8 | 6.3 | 16.4 | 5.9 | 5.2 | 4.8 | 3.5 | 7 | 3.9 | 5.1 |
| Non-oil-exporting Countries | 15.1 | 12.1 | 12.3 | 17.4 | 21.5 | 17.9 | 14.4 | 15.9 | 18.2 | 23.8 |

Source: ECLAC, from UNCTAD, Handbook of International Trade and Development Statistics, 1991, New York. 1992, Sales No. E/F.92.II.D.6; United Nations, World Economic Survey, 1993, New York. United Nations publication, Sales No. E.93.II.C.1; and International Monetary Fund (IMF), Direction of Trade Statistics Yearbook, Washington, D.C., 1993.

Table 8 above, shows that between 1960 and 1990, CARICOM provided 0.5 per cent of world exports in 1960, and 0.4 per cent and 0.2 per cent in 1970 and 1990,

respectively. However, by 1994 the figure declined to 0.1 per cent maintaining a declining trend. In contrast, developed countries' share of world exports increased from 65.9 per cent in 1960 to 69.4 per cent in 1994. Within this group, exports of the Group of 7 rose from 48.9 per cent of the total in 1960 to 51.3 per cent in 1994. For Latin America and the Caribbean as a group, the share of world exports slipped from 7.7 per cent in 1960 to 3.8 per cent in 1994. Actually, for the region, this decline reflected a persistent contraction over the period, which could be explained by a number of factors including weak competitiveness. In the Newly Industrializing Economies of Asia (NIEs), however, world export market share expanded from 3.4 per cent to 14.3 per cent, the fastest rate of growth for any region.

CARICOM's share of imports slipped from 0.6 per cent of the world total in 1960 to 0.2 per cent in 1994. This suggests that contracting export proceeds might have adversely affected the capacity of the countries to import. This underscores the importance of foreign exchange availability in the import function of Caribbean economies. For Latin America and the Caribbean, as a group, the share of world imports declined from 7.3 per cent in 1960 to 4.8 per cent in 1994.

World share of imports of developed countries increased from 64.9 per cent in 1960 to 67.9 per cent in 1994. Of this total, imports of the seven Industrialized Economies grew from 41.9 per cent in 1960 to 50.2 per cent in 1994. Meanwhile, the NIEs' share of world imports grew from 3.6 per cent in 1960 to 14.6 per cent in 1994.

**Competitiveness: A note on the experience of the Asian Tigers**

The Asian tigers' experience has been showcased as a model for developing countries. What is hardly ever said, is that the Asian model is a classical case of Sir Arthur Lewis' model of export-led industrialization. The Asian NICs emphasized export growth, whereas Caribbean manufacturers focused on import substitution.

The emphasis on export growth in Asia provided the benefits of competition, foreign direct investment and adaptation of technology and learning by doing. These factors, combined with sound macroeconomic fundamentals, provided the catalyst for competitive strength abroad. In the case of Singapore, Soon and Stoever note that the economy was transformed from an uncompetitive import substitution base in the early 1960s to a vibrant, diversified, competitive export-led base by the mid 1980s.[17] In Singapore, like the other tigers, there was also a movement away from economic controls and State planning to market price signals and competition forces. Therefore, Singapore is now viewed as a stable economy with sound macroeconomic fundamentals built on market forces. This led the Business Environment and Risk Information (BERI) to rank Singapore as one of the safest foreign investment havens in the world in 1984 and 1985.

[17] See Soon, T. and W. A, Stoever, "Foreign Investment and Economic Development in Singapore: A Policy-Oriented Approach", The Journal of Developing Areas 30(3):317-340 April 1996.

## Vc. Caribbean export concentration

Manufacturing competitiveness seems to be related to the degree of industrial concentration. Countries whose output and exports of manufactured goods are concentrated in a few products tend to be less competitive than countries with more diversified export structures. This may partly reflect the fact that countries whose exports are concentrated in a few products tend to specialize based on crude resource-based comparative advantage in primary production or low value added manufacturing. Caribbean manufacturers tend to focus on the production of food and other products at the lower end of the value chain. Howard[18] has noted that Barbados' manufactured exports are highly concentrated both by commodity and market destination. This reflects a weakly diversified production structure, a focus on a few export products and a few selected markets, notably the United States and the European Union.

**Table 9**

**Indices of export concentration and diversification for selected countries**

| | 1980 | | 1994 | |
|---|---|---|---|---|
| COUNTRY | Number of commodities exported | Concentration index | Number of commodities exported | Concentration index |
| | | | | |
| Barbados | 64 | 0.367 | 56 | 0.234 |
| Belize | 76 | 0.421 | 14 | 0.43 |
| Guyana | 38 | 0.545 | 53 | 0.381 |
| Jamaica | 93 | 0.769 | 112 | 0.493 |
| Trinidad & Tobago | 119 | 0.636 | 127 | 0.343 |
| Dominica | 9 | 0.675 | 48 | 0.454 |
| Grenada | 22 | 0.399 | 26 | 0.316 |
| St. Lucia | 28 | 0.423 | 32 | 0.621 |
| United States | 236 | 0.064 | 236 | 0.073 |
| United Kingdom | 237 | 0.083 | 236 | 0.065 |
| Japan | 224 | 0.118 | 225 | 0.129 |
| Hong Kong | 164 | 0.164 | 177 | 0.153 |
| Singapore | 232 | 0.235 | 229 | 0.195 |
| Republic of Korea | 207 | 0.085 | 217 | 0.125 |

Source: UNCTAD, International Trade and Development Statistics

Table 9 above shows that the exports of Caribbean countries are highly concentrated. It is likely that the concentration indices for the manufacturing sector are similar to the indices for aggregate exports. Although the export concentration of most of the CARICOM countries listed declined between 1980 and 1994 (with the exception of Belize and Saint Lucia), it remained high, averaging 0.347 in 1994. For the CARICOM countries listed, Saint Lucia had the highest concentration index in 1994, reflecting the

[18] See Howard, M., (1989) "Dependence and Development in Barbados 1945-1985", Carib Research and Publications Inc.

importance of banana exports in total exports. Despite its relatively larger size and production base, Jamaica had the highest concentration ratio in 1980, and although it declined in 1994, it was the largest for the More Developed Countries (MDCs) of CARICOM. Among the Asian economies, the concentration ratios were fairly low. Hong Kong had indices of 0.164 and 0.153 in 1980 and 1994, respectively. Meanwhile, the indices for The Republic of Korea were 0.085 and 0.125 in 1980 and 1994. The low indices for these Asian economies reflect their success in developing competitive, diversified export structures, especially export manufacturing.

## VI. POLICY RECOMMENDATIONS FOR STRENGTHENING THE COMPETITIVENESS OF CARICOM MANUFACTURERS

We are now left to examine how to provide some recommendations for promoting the competitiveness of the regional manufacturing and agro-processing sectors. This requires that we consider practical and workable policies and approaches and the time needed to implement them. The first issue to be addressed is the microeconomic or firm level changes and policies which are needed to promote competitive industries. Second, the institutional changes necessary for policies to succeed must be examined. Finally, competitiveness policies must be assessed for their compatibility with regional and international obligations (for instance the WTO). Some of the core areas to be addressed are examined below.

### VIa. Technology

The plant visits in the countries surveyed clearly showed a number of constraints that must be removed for industries to become competitive. A major constraint noted was the state of technology. The majority of firms admitted that their level of technology was much lower than what was required for them to be competitive. The solution, however, is not as simple as obtaining more up-to-date technology. There is a need for industries to adopt an integrated technology policy geared towards enhancing their competitiveness. This policy should address a number of key issues.

The first issue concerns the need for a technology information data bank. Governments in collaboration with the private sector should undertake an audit of the technology available on the market. This would include information on the available technology for different lines of manufacturing production, the costs, purchasing arrangements and the scope for hands-on training from the developers. To provide such information, there is need for a central agency to coordinate technology policy. This agency could be located at the Ministry of Trade or the Entrepreneurial Development Centre, if there is one. Important for the firm also, is the potential cost-benefit of the technology to be used. This notion of value for money is crucial, since it might be unprofitable for firms to acquire cutting edge plant and machinery, if their scale of production and the size of their market do not warrant this.

In Saint Vincent and the Grenadines, Dominica and Guyana, for instance, for many small manufacturers and agro-processors the most up-to-date technology may not be the most appropriate and cost effective. These manufacturers only need an improvement in their plant and equipment to produce their optimum output. For agro-processors, these include mechanized juice extractors instead of hand-operated ones and uniform weights and measures calibration kits, refractometers and pH metres that could raise productivity and quality of output. Expensive, advanced equipment might not be well-suited to their operations.

A related problem has to do with the role of entrepreneurial development centres. In the OECS and Guyana, such centres have been conceptualized as one-stop shop focal points for providing a variety of services to entrepreneurs. These include quality control and extension, training of entrepreneurs and product development assistance. It is recommended that the role of these institutions be streamlined. This would permit them to focus on a few areas of comparative strength and to deliver them well. The areas of their focus could be training in product development, quality control and management and providing information on changes in product standards and international market requirements such as the Hazard Analysis Critical Control Point (HACCP).

Manufacturers and government-funded research and development institutes need to pay more attention to the adaptation technology. Teams of the most skilled workers should be brought together to do research and experiments to adapt and enhance standard technology to better serve local producers. By making technology more suited to indigenous needs, manufacturers can produce more differentiated and higher quality goods that could capture niche markets abroad.

### VIb. Joint ventures

Caribbean manufacturers and agro-processors need to actively seek joint venture partners where this would be beneficial. In textiles, electronic parts and electrical goods, where economies of scale are important, joint venture production for export is particularly important. However, furniture manufacturers, fruit processors and seafood processing can also benefit from the finance, technology and experience of joint venture partners. For example, Willmore[19] (1994) noted that subcontracting arrangements in Jamaica helped to ease the raw material and working capital constraint of local producers. Governments and local manufacturers should strive to ensure that joint venture production systems are not overly capital intensive, so that adequate employment is created. Also, joint ventures should be structured to facilitate the transfer of higher order knowledge and skills through learning by doing. Like the Asian Tiger economies, Caribbean joint venture partners should try to get provisions for the training of local skilled technicians and managers, both locally and overseas, at the branch headquarters within a given period of time. This would promote local learning by doing and should provide a group of experts to continue operations, should the multinational corporations migrate to other destinations.

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[19] See Willmore, L., (1994), "Export Processing in Jamaica", ECLAC Port of Spain.

The Economist of 27 June 1998, for example, suggested that the United States Silicon Valley culture of innovation and enterprise has been repeated in Chinese industrial areas, such as Shenzhen Province. The moving force behind this has been the ability of local firms such as Huawei Technologies, a telecommunications equipment maker to adapt and improve on foreign technology. Although Caribbean conditions are not identical to those of China, regional manufacturers can also benefit from similar kinds of innovation and adaptation of technology.

## VIc. Areas of specialization

Manufacturers need to seek out opportunities in the high value added segments of the production chain. Industry in the region has focused for too long on the simple, low value added activities at the lower end of the value chain. This was linked to specialization based on the use of cheap labour. These forms of specialization are no longer viable. There is no good reason why regional manufacturers and agro-processors cannot produce higher value added products. In many cases what is required is resourcefulness and creativity. A number of manufacturers can produce high quality, differentiated goods by improving work organization, management and training, obtaining high quality inputs and establishing a quality assurance and management system. There is need for better inventory and production management, especially in the electronics and small machines subsectors to reduce the number of defective products to international best practice standards.

With some necessary changes, regional agro-processors should be able to capture suitable niche markets for high quality fruit beverages, condiments and herbal extracts. There are also good market prospects for fish processing, and furniture making in Guyana, Saint Vincent and the Grenadines and Dominica. There is little value added in the 'fisheries' industry in Guyana. There is no fish canning or large scale processing of fillet fish or pre-cooked fish products. However, these are some of the high cost products in the industry. In furniture making, the use of standardized high quality raw wood, better machinery, improved plant layout and upgrading the skills of the labour force, could enable the production of high quality furniture. This is particularly so for Guyana with its exotic greenheart and purple heart woods.

## VId. Industrial and trade policy

Industrial and trade policy must be simple and clearly articulated. Generally, governments should avoid picking winners or promoting national champions. Investment in specific activities is best left to the entrepreneur. Governments with the limited resources available should focus on functional policies aimed at providing top quality infrastructure (transport, utilities, etc), strengthening education and training, especially the link between research and development institutes and the work place. The quality and timeliness of manufacturing extension services also needs to be improved. Manufacturers and agro-processors in all sectors can benefit from such policies, not just a selected few.

Governments should also promote horizontal policies that entail the development of generic technology, managerial and marketing systems to assist manufacturers in broad sectors.[20] A vital area for strengthening the sector concerns linkages among firms. As Michael Porter[21] suggests, linkages among firms lead to virtuous clusters of development. These enable manufacturers to benefit from the comparative strength of each other. Manufacturers need to form regional clusters for joint purchase of plant and equipment, joint financing arrangements and for contracting managerial, insurance and marketing services. Indeed these joint arrangements could permit economies of scale which are not otherwise gained by individual small and medium-sized enterprises (SMEs), such as those of the Caribbean.

The generally weak competitive ability of regional manufacturers and agro-processors means that government assistance at the level of the firm is necessary. Producers could benefit from technical assistance to improve plant layout and work-flow and training of the work force. A mechanism for sharing the costs of international product certification, such as International Standards Organisation ISO 9000 and 14000, would also be beneficial. Government's industrial policy must provide clear guidelines on the types and extent of assistance that can be provided to firms. Moreover, performance criteria and targets must be established (for example, percentage increase in exports, revenue and employment generation), for continued access to assistance. In the area of marketing, government could assist in the promotion of manufactured goods to take advantage of potential positive externalities.

## VIe. Financing

Most of the firms visited in the country case studies, stated that the access to, cost and terms of finance were major problems. This problem results partly from an imperfect, oligopolistic financial market that provides risk capital only at penal rates of interest and under harsh terms. It is, therefore, recommended that development finance institutions (Development Banks, National Development Funds [NDFs], etc) be streamlined and better funded to provide soft financing for the sectors. Governments should attempt to tap into soft enterprise development resources available from the World Bank and other agencies and support these with counterpart funds. Further, since SMEs are at a particular disadvantage due to weak collateral security and lack of reputation in the market, some forms of finance may have to be configured to their needs. Adequate channels of risk capital are needed for SMEs, for example, venture capital, merchant bank funds and development funds. The venture capital institution should be ably supported by equity capital through a dynamic stock exchange. In this regard, there is need for governments and the private sector to actively pursue the development of a regional stock exchange with new company listings and active trading of shares. The Eastern Caribbean Central Bank's (ECCB) plans, to develop an OECS-wide stock

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[20] See Sanjaya, Lall, "Market-Stimulating Technology policies in Developing Countries: A Framework with examples from East Asia", World Development Vol. 26 No. 8, pp. 1369-1385, 1998.

[21] Michael Porter: op cit., p.

exchange and Venture Capital Fund, for example, should ease the financial difficulties of manufacturers in the OECS.

## VIf. Macroeconomic policies

### VIf.1 Fiscal and monetary policies

Relevant and consistent policies must be implemented to boost domestic savings and investment. Savings by manufacturers and agro-processors are particularly important, since they are likely to be re-invested in the enterprises. Two crucial factors influencing saving are interest rates and tax policies. There is a need for changes in these policies to boost savings that could be channeled into manufacturing production. Interest rates are estimated to be generally high in the Caribbean and tend to discourage investment in the manufacturing sector. In Guyana and Jamaica, for example, manufacturers faced interest rates of 20 to 30 per cent and 29 to 30 per cent, respectively. Many manufacturers visited said that the high cost of borrowing was a significant constraint on industrial start ups and plant maintenance.

Small manufacturers and agro-processors are also affected by limited collateral security and high reputational risks. Further, even after the plant is up and running, lack of access to working capital constrains day-to-day operations. This problem is particularly severe for SMEs that usually have locked up most or all of their savings in the enterprise. As indicated by Green and Villanueva[22], investors in developing countries must save and build up money balances to invest because of their limited access to credit and equity markets. In fact in the countries surveyed, many of these small manufacturers and agro-processors noted that they were barely operating on a day to day basis. High cost of finance should be addressed through a lowering of the interest rate consistent with stable and competitive exchange rates. In this context, policies to keep inflation at low levels is necessary to ensure that the returns on financial savings remain positive. Also, more competition in the banking sector is necessary to increase its efficiency.

There is a need for policies to make the investment climate more attractive. These include demand management to control inflation, which acts as a tax on the profitability of investment. Policies must encourage manufacturers to use available savings for investment projects. This is important since the availability of savings does not necessarily lead to investment. A number of factors prevent a smooth link between savings and investment. Important among these are high real lending interest rates, a lack of entrepreneurial projects and unduly high collateral requirements. Commercial banks must be encouraged to reduce lending rates.

Tax competition is now an important tool in the competitive strategy of nations. Governments should examine the scope for reducing corporation tax rates to

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[22] Green, J. and D. Villanueva, (1991), "Private Investment in Developing Countries: An Empirical Analysis", IMF Staff Papers, Vol.38, No. 1.

increase the retained earnings available to manufacturers for productive investment. Tax changes would have to be a part of an overall strategy of tax reform including, for instance, reduction in trade taxes and the introduction of an appropriate VAT. This might be particularly relevant for the OECS countries where trade taxes represent more than 50 per cent of total tax revenue in all the countries.

### VIf.2 The exchange rate

Recommendations on the use of exchange rate policy to aid manufacturing competitiveness are difficult because the regimes vary among the countries. In the OECS countries which operate a fixed peg to the United States dollar of EC2.70=1$US, it is possible that a devaluation of the currency could benefit tradable goods and services, such as export manufacturing, by improving price competitiveness. The potential adverse effects of this devaluation, however, in terms of higher inflation and domestic prices of imported inputs, could offset the potential competitiveness and terms of trade benefits. It is, therefore, advisable for these countries to continue their policy of maintaining their fixed exchange rate and to make macroeconomic policies work harder to promote competitiveness (REER for the OECS and other countries are attached as Annex 1). Such policies include tripartite arrangements to ensure sustainable wage increases that are matched by productivity growth. Also, the supply of 'inputs', such as finance, electricity and telecommunications, should be competitively priced. These polices should help to control the cost of operations, thereby enhancing the competitive position of manufacturers.

In Trinidad and Tobago, Guyana and Jamaica flexible exchange rate regimes mean that timely devaluation could boost the price competitiveness of manufactured exports. In fact, the devaluation of the 1980s and 1990s supported by more competitive input costs contributed to the growth in non-petroleum manufacturing exports in Trinidad and Tobago. Unfortunately, the manufacturing sector in Guyana and Jamaica did not benefit much from the devaluation of the 1990s. This was probably because any gains in price competitiveness were swamped by high production costs and relatively low quality production. To be beneficial, devaluation must be supported by strategies to strengthen productivity.

## VIg. Entrepreneurship

A vital, but difficult, area that requires a creative approach is the stimulation of entrepreneurship. Caribbean societies are fairly risk averse and this is manifested in the reluctance of current producers to venture into export markets and the shortage of new entrepreneurs. Entrepreneurs respond to incentives and there is a need for practical changes in policy to boost entrepreneurship. Useful policies include competition policy to encourage entry into and exit from manufacturing activities, protection of property rights and regulation of contracts, competitive prices to facilitate investment in new technology and adequate public investment in infrastructure and training of the work force. Entrepreneurship, though, is driven by more than good macroeconomic policies. In a real sense, cultural and institutional factors are important influences on the entrepreneurial spirit of a society. Therefore, the promotion of a culture of excellence and a positive

attitude towards risk-taking, supported by suitable rewards, could facilitate entrepreneurship.

### VIh. Human resource development

The acquisition of knowledge and skills needs to be promoted by government and private sector policies. Governments must lead the way by providing systems of primary, secondary and tertiary liberal and technical education. Manufacturers, on the other hand, need to develop a structured system for on-the-job training and research and development with science, engineering, technology and management training institutions. Manufacturers also need to undertake periodic inventory of the skills and performance of the workforce, and provide systems for retraining and upgrading workers' skills to meet international best practices. Given the financial constraints, the private and public sector could provide training loans to workers and defer repayment until the worker is back in employment.

### VIi. The quality of institutions

Economics Nobel Laureate Douglas North[23] states that history is characterized by the interaction between three main elements - institutions, organizations and individuals. Owing to their importance, there is need for a major reform and restructuring of institutions that influence manufacturing competitiveness. The productivity and administrative efficiency of the public sector is a good starting point. Public sector administrative reform must provide systems for ensuring cost effective, timely and competent delivery of customer service. The procedures and legislation for establishing manufacturing enterprises must be simplified and documented to ensure transparency. Similarly, incentive mechanisms must be clear and impartially administered. Customs and other services must be streamlined to reduce unnecessary form completing and bureaucracy.

## VII. CONCLUSION

The creation of a dynamic and competitive manufacturing sector in the CARICOM region is no easy task. In fact, it is an arduous task that requires a systematic strategy. At the core of this strategy there must be measures to address the very structure of the economies. Systems of production and exchange in the region are characterized by very imperfect markets. The countries have recourse to one of two approaches. Either they adopt market reforms to iron out the imperfections in their markets so that these markets can work properly, or they can devise an ingenious strategy for promoting competitiveness in imperfect markets. Given the current prevalence of the market system world wide and the economic reforms that the region has undergone, the first approach might be more practical and relevant.

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[23] North, Douglas (1990), "Institutional Change and Economic Performance," New York, Cambridge University Press.

Structural market reforms to promote manufacturing competitiveness must include some key ingredients. These include, first, policies and incentives to boost new and productive manufacturing investment. The problem here is that current price, cost and profit margin incentives promote trading activities (such as the buying and selling of household goods and consumer durables), and real estate development, rather than manufacturing activities. This is a policy relic of the import substitution era, when policy incentives favoured rent seeking trading concerns in uncompetitive markets. To address this problem, financial markets must be made more open and competitive, through policies to facilitate market entry and exit. Commercial and development banks must be provided with appropriate incentives to make available longer-term finance for potentially viable manufacturing activities - through lower central bank discount rates, for example, in the case of commercial banks, where appropriate. Interest rates should also be liberalized to provide true signals of the cost and availability of credit.

In addition, macroeconomic policy reforms which foster domestic and import competition must be strengthened. Such reforms improve the attractiveness of the domestic business environment for growth inducing foreign direct investment and reduce the incentives for rent-seeking 'hot' capital inflows. Moreover, businesses will need to optimize the benefits of information and communications technology. Better use could be made of the technology to compare equipment and material supplies prices, market intelligence, consumer requirements and standards and for networking among manufacturers, suppliers and consumers.

Human resource development must be brought in line with the demands of the market place. This demands adequate institutions for and methods of training and retraining. In this respect, universities need to integrate broad generic research with product development and service delivery research. Also, public administration must be upgraded to provide quality customer service in a timely manner.

A vital issue relates to the promotion of a culture of entrepreneurship. This is a rather difficult area. However, lessons from economic science and human psychology indicate that entrepreneurs respond to appropriate incentives. Therefore, the integrated macroeconomic and institutional support framework should be geared to the promotion of manufacturing entrepreneurship.

The challenge of developing competitive manufacturing activity in CARICOM is a major one. It is necessary to provide a more balanced use of domestic resources and to diversify the economies away from dependence on primary agriculture and tourism, the prospects of which are both declining. Moreover, the returns from a competitive manufacturing sector, in terms of foreign exchange generation, growth, employment and improved living standards, more than outweigh the challenge.

Annex

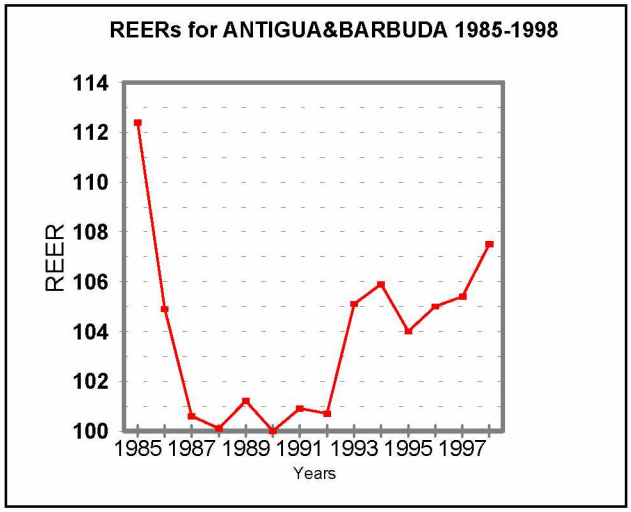
## Real Effective Exchange Rates for Selected Countries 1985-1998

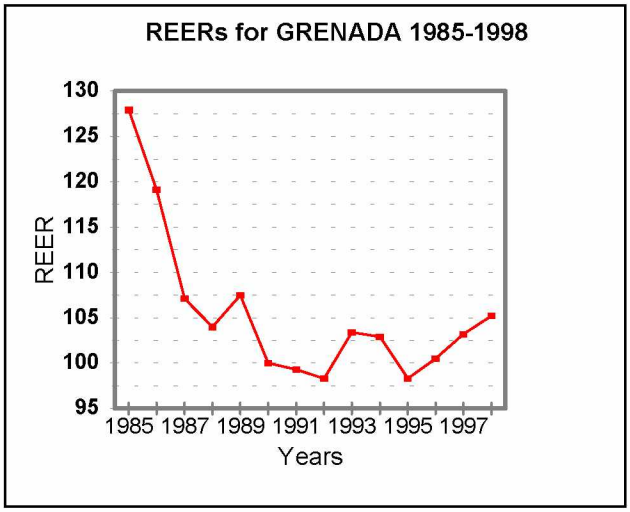
| Years | Belize | Guyana | Trinidad & Tobago | Antigua & Barbuda | St. Kitts and Nevis | St. Lucia | St. Vincent & Grenadines | Japan | United Kingdom | United States | Bolivia |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1985 | 129.80 | 291.20 | 164.80 | 112.40 | 121.10 | 120.00 | 116.30 | 86.50 | 104.90 | 153.70 | 457.79 |
| 1986 | 116.10 | 276.20 | 114.00 | 104.90 | 116.90 | 112.80 | 114.40 | 108.60 | 97.00 | 124.30 | 134.93 |
| 1987 | 107.70 | 142.20 | 105.60 | 100.60 | 109.70 | 110.70 | 109.10 | 113.20 | 99.10 | 108.80 | 118.24 |
| 1988 | 106.40 | 179.20 | 99.10 | 100.10 | 102.60 | 103.60 | 102.40 | 118.60 | 106.30 | 102.40 | 100.00 |
| 1989 | 106.20 | 140.70 | 97.80 | 101.20 | 107.50 | 105.80 | 102.40 | 111.20 | 100.30 | 106.50 | 104.47 |
| 1990 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 102.46 |
| 1991 | 101.30 | 85.40 | 100.38 | 100.90 | 99.54 | 102.20 | 102.10 | 107.00 | 103.20 | 97.50 | 104.47 |
| 1992 | 99.20 | 93.80 | 102.44 | 100.70 | 98.23 | 102.90 | 100.60 | 111.60 | 100.00 | 95.00 | 102.36 |
| 1993 | 101.50 | 102.10 | 92.36 | 105.10 | 101.00 | 106.90 | 107.40 | 135.40 | 92.90 | 97.60 | 100.54 |
| 1994 | 96.90 | 100.90 | 85.34 | 105.90 | 100.97 | 106.30 | 104.20 | 144.50 | 92.80 | 96.40 | 93.26 |
| 1995 | 94.60 | 102.60 | 83.58 | 104.00 | 98.84 | 105.10 | 99.10 | 150.20 | 87.50 | 90.80 | 90.14 |
| 1996 | 99.70 | 110.90 | 85.22 | 105.00 | 99.65 | 105.60 | 103.40 | 126.10 | 90.60 | 96.00 | 95.36 |
| 1997 | 102.80 | 116.90 | 84.45 | 105.40 | 108.02 | 108.10 | 107.00 | 119.33 | 110.10 | 104.50 | 99.20 |
| 1998 | 104.00 | 121.75 | 87.74 | 107.50 | 111.39 | 109.65 | 112.00 | 77.70 | 120.85 | 112.40 | 105.03 |

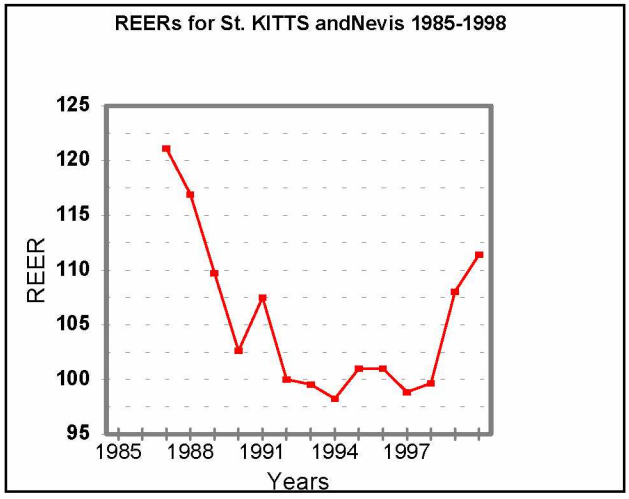
Source: International Monetary Fund (IMF)

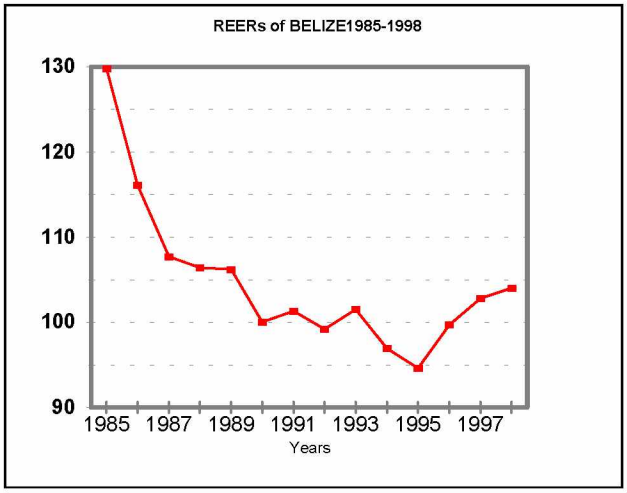
## Graph of the Real Effective Exchange Rates for Selected Countries 1985-1998

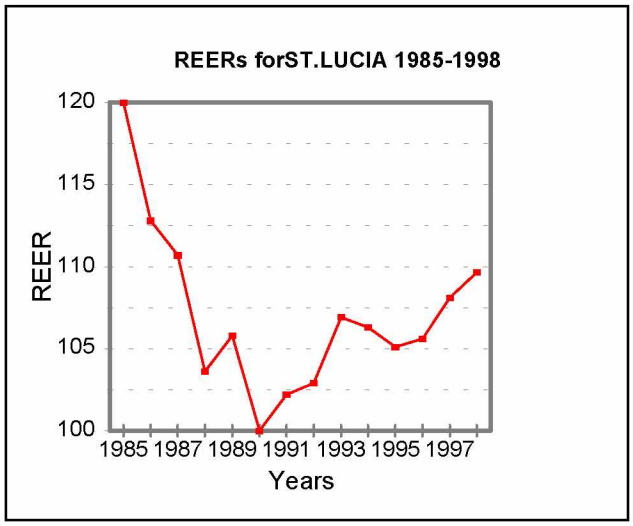
Please note that the source for all graphs presented below is the International Monetary Fund

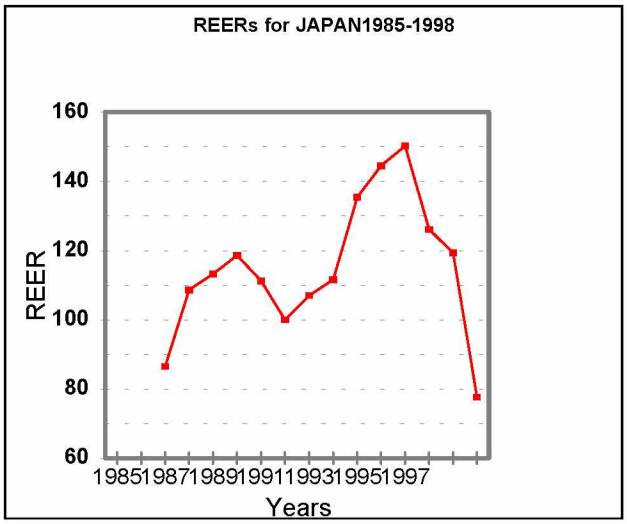


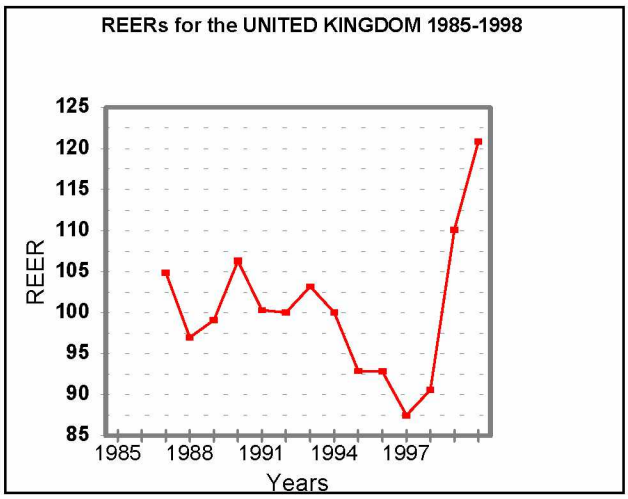



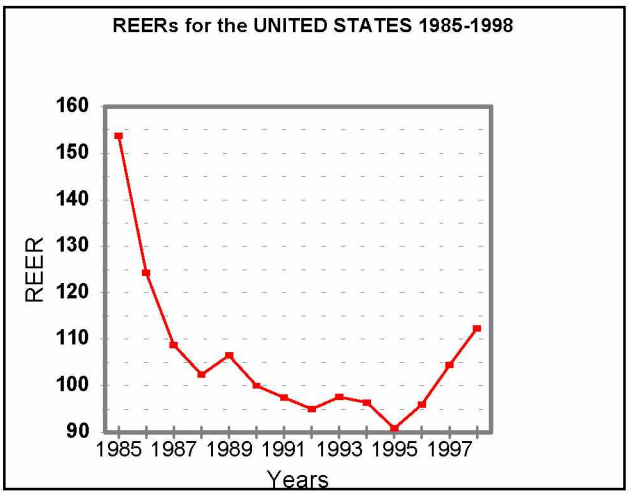



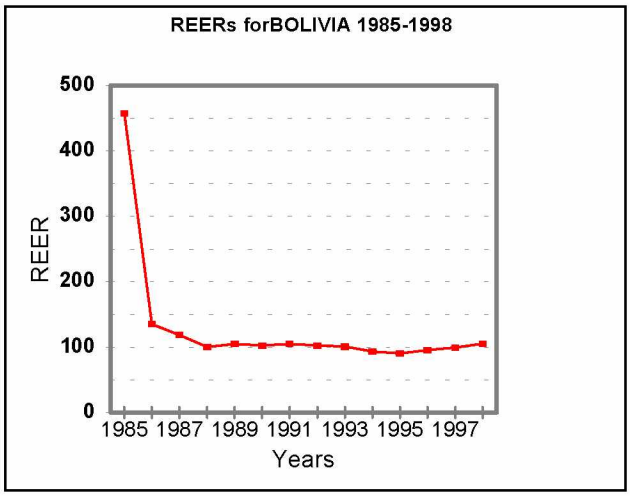




REERs for the UNITED KINGDOM 1985-1998
REER
125
120
115
110
105
100
95
90
85
1985
1988
1991
1994
1997
Years


REERs for the UNITED STATES 1985-1998
REER
160
150
140
130
120
110
100
90
1985 1987 1989 1991 1993 1995 1997
Years


REERs forBOLIVIA 1985-1998
REER
500
400
300
200
100
0
1985 1987 1989 1991 1993 1995 1997
Years

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