

**CRITICAL ISSUES IN CARIBBEAN DEVELOPMENT**

**Jamaica's Export Economy:  
Towards a Strategy of  
Export-led Growth**

**DONALD J. HARRIS**

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**Number 5**

## **Jamaica's Export Economy: Towards a Strategy of Export-led Growth**

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Donald J. Harris



**Ian Randle Publishers**

*in association with*



**Jamaica Exporters' Association**

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First published in Jamaica 1997 by  
Ian Randle Publishers  
206 Old Hope Road, Box 686  
Kingston 6,  
Jamaica W.I.

ISBN 976-8123-43-5

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A catalogue record for this book is available from the National Library of Jamaica.

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## Preface

This monograph reports the results of research done by the author in Jamaica during 1995-1996, involving a close first-hand study of various data sources, interviews and discussions with numerous persons among exporters, private-sector representatives, government officials, and academics. In addition, an interview survey of a stratified random sample of exporters using a specially designed questionnaire instrument was conducted by a contracted firm specifically for the purpose of this study. Further analysis was carried out at Stanford University to complete the report in its present form.

The results reported here represent the outcome of in-depth analysis of (a) available data on recent export performance of the Jamaican economy at both the aggregate and sectoral level, (b) features of the existing incentive regime facing exporters, and (c) new data obtained from the interview survey. On this basis, an effort has been made to provide a comprehensive, analytical, and empirically grounded assessment of Jamaica's export economy.

The analysis uses quantitative techniques to measure different dimensions of export performance, to make relevant comparisons with a select group of developing countries, and to estimate the effect of key macroeconomic variables on export performance. The survey data are used to examine relevant group characteristics of Jamaican exporters, the conditions in which they operate, their perceptions of the obstacles and constraints affecting their operations, and the business strategies that they seek to adopt in pursuing success in the export market.

From this analysis is derived certain clear pointers as to the requirements for a strategy of export-led growth for the Jamaican economy.

This work has benefitted from the encouragement, assistance, and guidance generously offered by numerous persons. To all I give thanks. I wish to acknowledge especially the help of the dynamic team from the Jamaica Exporters Association (Beverly Lopez, Beverly Morgan, Pauline Gray). Thanks also to Emerson Young (JAMPRO), Hernal Hamilton (JETCO), and Clark Reynolds (Stanford University). Able research assistance was provided by Bruce Donald and Mushtaq Khan at Stanford and Ludlow Jones in Jamaica. Organization of the interview survey and preliminary tabulation of the results were performed by the firm of J. A. Young Research Limited.

Financial support for the study was provided by grants to the Jamaica Exporters' Association from both the World Bank and the United States Agency for International Development, and by a grant from the Ford Foundation to the North America Forum of Stanford University.

*Donald J. Harris*  
*Professor of Economics*  
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*May 1997*

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# Executive Summary

## 1.0 Overview

- 1.1 Exports are of basic importance to the Jamaican economy. The mechanism of export-linked and export-led development accounts for observed success in economic development in other countries. It also has direct relevance to Jamaica.
- 1.2 In the past decade, Jamaica has had a fairly impressive export performance overall, with export-growth exceeding the long-term average for the past 45 years.
- 1.3 The basic question that arises now is: how to sustain and build on this performance, given the current environment facing exporters, and taking account of relevant expected future developments.
- 1.4 The current situation in the international economy involves far-reaching changes which alter fundamentally the conditions which Jamaica-based firms face as producers and as exporters.
- 1.5 On the domestic front, the process of structural adjustment begun in the early 1980s is now at an advanced stage. Problems remain that are of crucial concern to exporters.
- 1.6 Exporters must prepare themselves to deal with these developments at different levels. Through their collective response and active participation, they can play a decisive catalytic role.
- 1.7 A crucial requirement for an adequate response by policy makers is to maintain and deepen the flow of information and analysis concerning matters of relevance to exporting activity.
- 1.8 This study aims to contribute to this process by generating information that is useful for strategic planning and policy formulation. This is done through analysis of (a) available data on recent export performance at both the aggregate and sectoral level, (b) features of the existing incentive regime facing exporters, and (c) new data obtained from an interview survey of a sample of exporters carried out specifically for the purpose of this study.
- 1.9 The analysis uses quantitative techniques to measure different dimensions of export performance and to estimate the effect of key macroeconomic variables. Special attention is given to the role of the real exchange rate, the terms of trade, financial conditions, and macroeconomic instability.
- 1.10 With the survey data, the analysis examines relevant group characteristics of exporters (all anonymous), the conditions in which they operate, their perceptions of the obstacles and constraints affecting their operation, and the business strategies that they seek to adopt in pursuing success in the export market.
- 1.11 In these various ways, this study provides a more comprehensive, analytical, and empirically grounded assessment of Jamaica's export economy than has been offered in previous studies.
- 1.12 From the analysis presented here is derived certain clear pointers as to the requirements for a strategy of export-led growth for the Jamaican economy. Policy recommendations are put forward on this basis.

## 2.0 Jamaica's Export Performance: Key Features

- 2.1 The market for Jamaica's exports is highly concentrated in the NAFTA region.
- 2.2 Export concentration by product mix has declined, but still remains relatively high.
- 2.3 The unskilled labour-intensive category of products predominates in exports, the human-capital/technology intensive category is a very small component, and the natural-resource-intensive category, though declining, is the largest component.
- 2.4 The long term pattern of growth shows significant change in composition of the manufacturing sector's exports accompanied by increase in the export share of manufactures.
- 2.5 Jamaica's competitive performance, measured by the share of dynamic sectors in merchandise exports, though impressive on its own terms, lags significantly behind that of other countries.
- 2.6 Areas of market strength and weakness exist at the sectoral level, indicating unevenness in the performance at this level. These areas are identified in terms of the dual criteria of market capability and market potential. A diagnostic guide for export policy is developed on this basis, focusing on the need for and possibilities of export growth through product diversification.
- 2.7 Consistent with global trends in the structure of world trade, a dramatic shift has been taking place in export shares between merchandise and services.
- 2.8 The single most important and continuing growth-factor in services has been tourism. This industry shows strong market capability and strong market potential, but current and prospective changes in competitive conditions within the region demand a considerable effort to realize that potential.
- 2.9 In general, a successful export-growth strategy requires an ability to adjust to evolving market conditions by shifting into areas of high growth-potential, i.e. to diversify into new and dynamic product lines, while taking advantage of whatever growth opportunities are offered by existing product lines.

## 3.0 The Role of Macroeconomic Factors

- 3.1 In Jamaica, the period of the 1980's to the present has been marked by high nominal interest rates, high inflation rate, devaluation of the currency, and a certain degree of instability and risk associated with variability in these macroeconomic conditions.
- 3.2 The exchange rate is one of the key variables which enter into exporters' calculation of the relative costs and returns as well as risk involved in export activity.
- 3.3 Changes in the fundamentals of relative costs and prices among trading partners alter the real exchange rate (RER). The nominal exchange rate (NER) is one of the main policy instruments for managing adjustment to the fundamentals.
- 3.4 In general, for exporters, the correct exchange rate policy is a matter of preserving their international competitiveness by maintaining a competitive exchange rate through predictable adjustment

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to the economic fundamentals.

3.5 Jamaica's experience in exchange-rate adjustment indicates an overall tendency of inertia in the NER relative to movements in the RER. In every case, the depreciation in NER came after a long period (typically 4 years) of substantial and sustained appreciation in RER.

3.6 Results of a detailed econometric analysis of the effect of changes in the exchange rate on Jamaica's export performance since 1965 are presented. The results strongly confirm that exports are significantly and positively affected by change in the real exchange rate. The most responsive sectors are tourism and other services, and some of the non-traditional sectors, specifically food and apparel.

3.7 High variance in the exchange rate, as a measure of exchange-rate risk, has a negative effect on export growth. This suggests that exporters have an interest in a stable exchange rate. This does not mean constancy over time, as the exchange rate has to adapt to the fundamentals in order to remain competitive.

3.8 There is an evident divergence of interest, as between the exporter committed for the long term and the short-term speculative investor. But there exists room for a cooperative solution.

3.9 As regards the role of financial conditions in export performance, some complexities are found in the data which resist any simplistic interpretation or mono-causal view.

3.10 Financial risk plays a crucial role, operating specifically through variance in the exchange rate

3.11 The interest rate has a differential effect within the economy across different sectors and firms. What matters here is not only the cost of capital but also the differential conditions of access to finance by different firms and the preference among many firms for short-term debt-financing as against long-term equity-financing. Small and medium-size firms are handicapped by limited collateral and by the expectation of higher risk by lenders.

3.12 Export policy must be sharply clear in identifying and locating the specific effects of the cost of capital within and across different export sectors and for different types of firms. Second, export policy must focus, not only on the issue of the level of interest rates as such, but also more broadly on the wide range of conditions which govern access to credit and the terms of credit.

#### **4.0 The Incentive Regime**

4.1 Incentives and disincentives are two sides of the same coin. Both are important insofar as they affect directly and indirectly operating costs, transactions costs, and profitability of export activity and ease of market access.

4.2 A balanced export policy would seek to address both sides of the coin in a consistent and integrated manner. In the long term, incentive schemes are effective in contributing to sustained economic development only if they are combined with policies that directly seek to remove the disincentives associated with other features of the economic environment.

4.3 Jamaica has a complex structure of incentive schemes: a system of protected import-substitution, export incentives, export processing zones, and trade preferences.



4.4 This whole system of incentives has been under critical scrutiny for some time. Changes have been taking place in some components and there are proposals for change in others. The system of trade preferences is under serious challenge.

4.5 Concern for a pro-import substitution/anti-export bias in the structure of incentives has been considerably weakened in recent years, due to trade liberalization and deregulation of the domestic economy. These changes may have shifted the balance significantly in favour of exports.

4.6 One economic rationale for export incentives is that they are necessary to maintain competitive parity with other countries. It is therefore relevant to assess exactly how Jamaica stands in relation to the pattern of incentives prevailing in other countries. This assessment is done here through comparison with a selected group of Asian countries, with other Free Zones in the Caribbean region, and with the special case of Trinidad & Tobago. Jamaica's incentive system turns out to be relatively strong in tax exemptions and tariff relief for exporters, but it is weaker in many other respects.

4.7 The new rules emerging from the Uruguay-Round-Agreement may render moot the possibility of adjusting upwards Jamaica's existing structure of incentives or introducing new ones, as far as certain types of measures in favour of exporters are concerned. It has become necessary to re-examine the existing structure to bring it into conformity with the rules in a definite time frame.

4.8 The outcome, in terms of the specific set of incentive measures that Jamaica adopts, is not predetermined and allows for some flexibility. In particular, there is still room for maintaining or introducing certain kinds of incentive measures, provided they are not restricted to exporters or to a specific industrial sector but are made generally available.

4.9 As countries move away from specific (exporter-targeted) fiscal incentives, one area that will be of increasing concern is that of the rate of corporate income tax generally applicable to all firms, and the structure of tax rates across different categories of income (profits, dividends, capital gains, and personal income).

4.10 Certain broad policy directions seem clear as regards the path to be taken to foster continued growth of exports in the era of the WTO:

(1) redesigning the whole structure of incentives so as to achieve coherence, uniformity, transparency, and clear performance standards;

(2) upgrading the administrative support system in the public sector;

(3) addressing directly the disincentives and constraints that face exporters;

(3) shifting the balance from pursuit of fiscal incentives as such to the increasingly important issue of providing support services for firms in the areas of production, scientific research and product development, finance, and market access;

(4) developing a dynamic and flexible trade policy, focused on promoting Jamaica's interest and on strategic bargaining to defend those interests in all the relevant international arenas and fora.

## **5.0 Jamaica's Exporters: a Microeconomic Profile**

5.1 The microeconomic analysis presented here addresses the characteristic features and problems of

export activity as they appear at the microeconomic level of the individual exporting firm. This is especially useful for export policy in helping to identify and locate the specific needs and interests of exporters.

5.2 Statistics are constructed on the characteristics of exporting firms in terms of the size distribution of firms by number of employees, the distribution by sectors of production, and the distribution by location of their operations. This is done using the list of registered exporters regularly compiled and updated by JAMPRO.

5.3 The analysis focuses also on survey data generated by a stratified random sample of exporting firms selected for intensive interviewing, using a specially designed questionnaire instrument. Statistical analysis of the responses to the questionnaire is done so as to identify distinctive patterns among exporters.

5.4 The specific findings concern the following areas as they relate to the firms' exporting capability, needs, and potential for growth and development:

- (a) profile of owners and managers;
- (b) structure of the firm;
- (c) entry into exports, change, and adjustment;
- (d) competitive advantage: strengths, weaknesses, and size of the gap;
- (e) strategic planning and decision-making;
- (f) investment financing;
- (g) research and development activity;
- (h) incentives for exporters;
- (i) labour relations;
- (j) support network for exporters.

5.6 In general, the results provide a highly detailed set of information on a wide range of relevant features of the exporting firm and the conditions in which it operates. From this information a rich, multi-dimensional, and complex picture emerges of Jamaica's exporters.

## **6.0 Requirements for an Export-led Strategy**

6.1 The question of how to maintain the momentum of export growth and the associated process of export-led development is directly addressed.

6.2 There is no simple formula for success.

6.3 The preceding analysis explores the complexity of the problem. The results of this analysis make it possible to identify sharply the factors that need to be addressed from the standpoint of export policy and to draw inferences about the specific requirements of such policy.

6.6 These requirements are classified and enumerated here in detail. They are broken down into six key components, representing the crucial functions and capabilities that this investigator considers to be involved in the successful carrying out of export activity. These six components are:

1. market expansion and diversification;
2. production and technology;
3. product innovation;
4. supply of inputs;
5. financing;
6. information generation and access.

6.7 The specific roles and activities that need to be performed in these areas are organized according to three groups of actors: the individual exporter, business organizations, and the government.

6.8 In this way, a definite identification of the respective roles and responsibilities of these actors can be made, and structured according to a definite analytic conception of crucial elements of the overall process of export growth and development.

6.9 No single component or requirement taken by itself is sufficient. An integrated mix of many different elements is required. It is therefore necessary to strive for consistency and balance among the different elements. This implies, furthermore, a need for coordination and constant monitoring of policy.

6.10 In general terms, what is required is the building of an export culture in Jamaica, grounded in a broad-based commitment to the goals of export-led development. That culture itself grows out of the concrete and specific activities identified in this analysis.

### 1.1 The Importance of Exports

Exports are of basic importance to the Jamaican economy. This has always been so. From the time of its early colonization, the country's economic survival has always depended on exports. If this was so in the past, it has become much more so today. For instance, in recent years the share of exports has come to be around 60 to 70 percent of GDP, up from around 30 percent in the 1960s, and hence has more than doubled in the past quarter century.

The significance of exports derives, in part, from its direct contribution to GDP. Associated with this is its direct contribution to employment. In addition, there is a multiplier effect which serves to generate income and employment gains in the economy as a whole because of the many other economic activities, in both production and consumption by the private sector, as well as public-sector revenues, which depend on export activity.

For example, a recent analysis of the tourism industry (OAS, 1994) estimated that the direct contribution of this sector of the Jamaican economy to GDP (net of intermediate purchases from other sectors) was J\$8,319.3 million in 1992. The indirect and induced contribution was almost two and a half times as much, at J\$20.1 billion. Direct employment was estimated to be 71,710 full-time persons while indirect and induced employment was 145,528 persons, more than twice as much. Revenue earned by the government of Jamaica from the tourism industry was estimated to be 1.53 times government expenditure on tourism. After deducting direct and indirect imports attributable to the sector, it turned out that there was a retention factor of 63% of the sector's foreign exchange earnings.

Exports also provide the main source of foreign exchange earnings for the economy. In this way, exports make it possible to acquire from the rest of the world the imports necessary to sustain all activities in the economy. In this sense, the import capacity of the economy, which is a basic factor governing the economy's productive capacity and growth potential, depends crucially on exports.

For instance, in 1994 export earnings covered 92 percent of the total import bill for goods and non-factor services. Considering the total payments abroad on the current account of the balance of payments in 1994, export earnings covered 82 percent of this amount, the remaining gap being filled by factor incomes from abroad, private remittances, and other transfers.

Accompanying these effects of exports, as in the case of certain major export sectors such as bauxite, is a process of technology diffusion, skill development, and creation of basic infrastructure, which enhances the base for further development of the economy.

In these various ways, exports constitute a basic driving force in the process of growth and development of the economy. The stimulus originating in the export sector creates a feedback effect on all-round growth in the economy.

This mechanism of export-linked and export-led development is what accounts for and in part helps to explain the much heralded success cases of the high-performing Asian economies. But it also has wider

and more general relevance in other contexts, including the Caribbean, as revealed by systematic cross-country analysis (see Harris, 1994b).

Beyond all this, of course, a crucial consideration for Jamaica is that, because of the small size of the domestic market, there is no alternative avenue for sustained growth and development of the economy other than through exports.

## 1.2 Jamaica's Export Performance: The Long-Term Comparative Picture

During the entire decade of the 1950s, Jamaica's export growth-rate (measured in aggregate terms, for total merchandise exports) averaged 14.6% annually, equivalent to four times the average rate of 3.6% for all developing economies and more than twice the rate of 6.4% for the world as a whole (see Table A.01).<sup>1</sup> This was a truly outstanding performance and corresponded to what has been called "a golden age of growth" in the Jamaican economy (see Harris, 1994a).

This extraordinary performance, the product of unique circumstances related to the growth of the bauxite and tourism industry and a boom in traditional agricultural exports, has not been repeated since then. In the subsequent period up to the early 1980s, Jamaica's export-growth performance, though showing brief spurts of high growth, lagged far behind the average for all developing economies and for the world as a whole. Other countries simply took off during this period, including not only the high-performing Asian economies but also, on a smaller scale, others like Chile, Costa Rica, Cyprus, Malta, Mauritius. Jamaica failed to sustain the earlier momentum.

However, in the past decade (1986-1995), Jamaica has had a fairly impressive export performance overall, amounting to 9% average annual growth in total exports of goods and services, 10.1% for merchandise exports (see Table A.02). This exceeds the long-term average rate of 7.5% established for the entire period since 1950. It could therefore be regarded as a sign of recovery of growth momentum. Export growth in this latest phase has been driven by the tourist industry, now the dominant export industry, and the emergence of dynamic non-traditional sectors in apparel, agro-processing, fresh produce, and other services (entertainment and cultural products).

Given this recent performance, the basic question that arises at this time, and the corresponding policy problem that this raises, is: how to sustain and build on this apparent turnaround, given the current environment facing exporters, and taking account of relevant expected future developments.

## 1.3 The Current Situation in the International Economy

In the meantime, external conditions have changed quite markedly relative to those prevailing in the

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<sup>1</sup> In measuring export growth, and for comparative purposes, it is important to distinguish between volume and price effects as different components of the overall growth rate. The data considered in this Table do not make that distinction. In a previous study (Harris, 1995), it was found that, during the 25-year period 1965-1990, the price effect constituted as much as 76 percent of Jamaica's growth rate of merchandise exports, and 65 percent on average for all of Latin America and the Caribbean.

past.

Far-reaching transformations have been taking place in the international economy such as to alter fundamentally the conditions which Jamaica-based firms face as producers and as exporters. These transformations cover a wide range of areas and, correspondingly, affect the operations of exporting firms across a broad front. They include the following:

- **Formation of the World Trade Organization (WTO) as the outcome of the Uruguay Round Agreements on International Trade.** This has introduced a whole new complex of rules and regulations for international commerce, going beyond the GATT, and affecting such matters as:
  - tariffs and quantitative restrictions
  - incentives oriented specifically to benefit exporters
  - environmental, health, and safety standards
  - intellectual property rights.These rules and regulations entail obligations for all governments that are signatories to the Agreement, including the Government of Jamaica, with consequences for the conduct of business by all firms operating in the country. New mechanisms and procedures have been developed to ensure that signatories comply with prescribed obligations.
- **Revision of the LOME Agreement and restructuring of relations with the European Union.** The system of preferential access to the European market, long enjoyed by former colonies of Europe, including Jamaica, is up for revision. Trade and investment relations with the European Union will accordingly be restructured. The most immediate and direct impact is on Jamaica's banana exports. Sugar falls under a separate agreement, but may face other pressures later on.
- **Establishment of the North American Free Trade Agreement (NAFTA) between Canada, Mexico, and the United States of America.** Mexico's preferential status has altered significantly the advantage previously held by Jamaica's exports to the North American market under the Caribbean Basin Initiative (CBI) and Canada-Caribbean agreements. The outcome of ongoing negotiations for parity of the Caribbean on non-reciprocal terms is at this time uncertain, as is also the question of the strategy for accession of new members.
- **Deepening of the regional integration process in the western hemisphere.** This is creating new realignments and deepening of existing alignments, with a potential for significant change in patterns of regional trade and investment. From MERCOSUR in the south to the Central American Common Market in the west, there are direct and indirect effects on Jamaica's exports to be expected. Jamaica is directly involved in developments taking place within CARICOM and the newly formed Association of Caribbean States (ACS). All of these sub-regional developments occur within the broader movement for



formation of a Free Trade Area of the Americas (FTAA) by the year 2005 which will bring further change.

- **Intensification of competition for investment and markets.** Recent political and economic changes in China, Viet Nam, and Eastern Europe, and closer to home, in Cuba, have thrust into the relevant arena of Jamaica's trade and investment interests (e.g. textiles, tourism, light manufacture) new competitors, both actual and potential. At the same time, the global competitive process has brought increasing globalization of investment, production, finance, and marketing activities of transnational firms which creates new opportunities to be seized by firms that are properly positioned to take advantage of them.
- **Changes in technology and modes of business organization.** Introduction of just-in-time methods, flexible specialization, information technology, new communication systems and devices, has put a heavy premium on delivery time, product quality, range and variety of products, technical research and product development, while imposing new and stricter requirements for education and training at all levels within the firm, and calling for upgrading of managerial competence and efficiency, downsizing of operations, subcontracting of activities, and the like. These changes alter the conditions and requirements for exporters in Jamaica to remain internationally competitive in existing areas of specialization and to be able to diversify successfully into new areas.
- **Changing patterns of international aid and technical assistance.** Cutbacks in the general pool of funding for aid and concessionary loans and redirection of the flows to other regions mean less reliance can be placed on these sources of assistance for the development effort in broad areas of physical and social infrastructure that are crucial for sustaining productivity and efficiency in the operations of firms.

#### 1.4 The Current Situation in the Domestic Economy

On the domestic front, the process of structural adjustment begun in the early 1980s is now at an advanced stage. This has brought significant change in certain areas of the Jamaican economy, through liberalisation of the trade regime (tariff reduction, removal of quotas and licensing, opening of the foreign exchange market), deregulation of domestic markets, privatisation of government-owned enterprises, administrative reform in the state sector (e.g. customs), and new measures of fiscal and monetary management.

Problems remain that are of crucial concern to exporters: uncertainty in the foreign exchange market, persistence of high inflation, high cost and restricted availability of credit for both short term working-capital and long term investment, deficiencies in physical infrastructure and in the supply of educated and skilled labour.

Recently announced government policy, the National Industrial Policy (1996), is aimed at addressing

the problems in a comprehensive and consistent manner. Exporters are awaiting the implementation of the policy and seek to influence its process of evolution.

### 1.5 The Response of Exporters

In the midst of this mix of adverse and favourable circumstances, Jamaican exporters evidently were able to cope well enough with their situation in order to have generated the observed results consisting of a 9% annual average growth in exports of goods and services during the past decade. Nevertheless, whatever is the judgement of this particular performance, the question remains of how to cope with current and future developments.

The fact is that ongoing developments taking place in both the international and domestic economy pose new challenges as well as open new opportunities and advantages for exporters. The situation is a dynamic and fluid one. There is need, therefore, for exporters to be alert to these developments and to maintain flexibility and adaptability so as to be able to respond to them.

Exporters must prepare themselves to deal with these developments at different levels: in terms of their internal operations at the level of the individual firm, as well as through collective forms of business organization among firms, and through active participation in the policy-making arena. Through such responses, exporters can play a decisive catalytic role in the ongoing process taking place in the economy and broader society.

### 1.6 The Need for Information and Analysis

At all levels of their engagement with the evolving situation, whether at the firm-level, within organizations, or in government, policy-makers need to be in a position to determine priorities and act upon them on the basis of adequate up-to-date information and knowledge. Moreover, the informational requirements for effective decision-making in the contemporary international environment are complex, extensive, and necessitate ongoing systematic analysis.

A crucial requirement for an adequate response is, therefore, to maintain and deepen the flow of information and analysis concerning matters of relevance to exporting activity. Exporters themselves, and the private sector generally, have an important role and responsibility in this information-generating process, complementary to that played by public agencies, educational institutes, and international institutions.

### 1.7 Objectives of this Study

In keeping with this requirement, this study aims to deepen the base of information and analysis that will enable policy-makers in Jamaica to deal effectively with the conditions they face and to develop appropriate strategies to promote export expansion and growth of the Jamaican economy. The focus is on generating information that is useful for strategic planning and policy formulation.

This is done through analysis of (a) available data on recent export performance at both the aggregate and sectoral level, (b) features of the existing incentive regime facing exporters, and (c) new data

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obtained from an interview survey of a sample of exporters carried out specifically for the purpose of this study.

### 1.8 Methodology

The study examines in detail the actual pattern of recent export performance of the Jamaican economy and some of the key factors that have influenced that performance in one way or another. The analysis is carried out at two levels.

One is *macroeconomic*. Here, consideration is given to some of the factors that operate in the economic environment of exporting firms so as to affect their export performance. Various statistical and econometric techniques of estimation are used in order to obtain rigorous quantitative measures of different dimensions of export performance and to estimate the effect of key macroeconomic variables. Special attention is given to the role of the real exchange rate, the terms of trade, financial conditions, and macroeconomic instability. The nature of the system of incentives available to firms is also examined.

The other level is *microeconomic*. Here, the analysis examines relevant group characteristics of exporters (all anonymous), the conditions in which they operate, their perceptions of the obstacles and constraints affecting their operation, and the business strategies that they seek to adopt in pursuing success in the export market. The data obtained from the sample survey provide the main source of information used for this purpose.

Thus, this study focuses on both macroeconomic and microeconomic levels of analysis. In this respect, it strives to achieve a happy medium between these two extremes of analysis and, thereby, to avoid the bias towards one extreme or the other evident in previous work. It uses quantitative analytic techniques to get behind the purely descriptive data and discover systematic patterns in export performance. It also uses qualitative data derived from the responses to the questionnaire to identify subjective perceptions of exporters.

In these various ways, this study provides a more comprehensive, analytical, and empirically grounded assessment of Jamaica's export economy than has been offered in previous studies.

From this analysis is derived certain clear pointers as to the requirements of a strategy of export-led growth for the Jamaican economy. Policy recommendations are put forward on this basis.

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### Summary of Chapter 1

- \* *Exports are of basic importance to the Jamaican economy. The mechanism of export-linked and export-led development accounts for observed success in economic development in other countries. It also has direct relevance to Jamaica.*
- \* *In the past decade, Jamaica has had a fairly impressive export performance overall, with export-growth exceeding the long-term average for the past 45 years.*
- \* *The basic question that arises now is: how to sustain and build on this performance, given the current environment facing exporters, and taking account of relevant expected future developments.*
- \* *The current situation in the international economy involves far-reaching changes which alter fundamentally the conditions which Jamaica-based firms face as producers and as exporters.*
- \* *On the domestic front, the process of structural adjustment begun in the early 1980s is now at an advanced stage. Problems remain that are of crucial concern to exporters.*
- \* *Exporters must prepare themselves to deal with these developments at different levels. Through their collective response and active participation, they can play a decisive catalytic role.*
- \* *A crucial requirement for an adequate policy response is to maintain and deepen the flow of information and analysis concerning matters of relevance to exporting activity.*
- \* *This study aims to contribute to this process by generating information that is useful for strategic planning and policy formulation.*
- \* *From the analysis presented here is derived certain clear pointers as to the requirements for a strategy of export-led growth for the Jamaican economy. Policy recommendations are put forward on this basis.*

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## JAMAICA'S EXPORT PERFORMANCE: KEY FEATURES

### 2.1 Analysis of Export Characteristics

This chapter presents an analysis of the structure and growth of Jamaica's exports at a sufficiently detailed sectoral level so as to identify the distinctive features of recent performance that show up at that level and are not revealed in aggregate data. The focus is on long-term trends during the period 1980-1993. It is possible thereby to assess the strengths and weaknesses of Jamaica's export performance and to provide on this basis a more detailed guide to formulation of policy.

The analysis is done with reference to a number of performance characteristics, including the actual pattern of sectoral growth, degree of concentration of exports in terms of both product mix and destination of exports, technology and skill content of the product mix, and international competitiveness. Relevant comparisons are made with a select group of developing countries so as to place in perspective Jamaica's pattern of exports and to provide an objective standard for assessment. In this respect, some significant contrasts stand out from the data.

### 2.2 Export Concentration, by Destination

The market for Jamaica's exports is highly concentrated in the NAFTA region. About 48 percent of merchandise trade went to this region in the past three years, and this share has not changed much since 1985 (see Table A.03). Most of it went to the USA, the share of which has been increasing (now around 36 percent), while Canada's share has been decreasing. The market in the European Union runs a distant second, with a share of about 24 percent that has declined from a high of 31 percent in 1989. The CARICOM market represents a small and diminishing share, now slightly less than 5 percent. The biggest increase has occurred in the share of exports to the EFTA region, consisting mostly of bauxite/alumina to Norway. The East Asian market, which is today the world's fastest growing market-region, is a miniscule share, but the share of Japan has been increasing in the past five years.

The overall index of market concentration by destination is estimated to be an average of 0.295 over the period since 1980 with no clear-cut trend (see Table A.04). This is at the low end of the measured concentration index for comparable countries in the Caribbean region, and about on a par with that of Costa Rica.

### 2.3 Export Concentration, by Product Mix

The top ten sectors of exports, defined at the 2-digit level of the Standard International Trade Classification (SITC), constitute 94 percent of total merchandise exports in 1993 (see Table A.05). The bauxite and alumina sector (SITC section 28), which has the largest share by far, has been declining from the peak share of 78 percent in 1980 to 51 percent in 1993. Among other large sectors, the shares of sugar (section 06), vegetables and fruit (section 05), and coffee (section 07) declined sharply between 1970 and 1980 but have recovered in the 1990s, though not to the previous level in the case of sugar. The beverage sector (section 11) has done consistently well, more than doubling its share between 1970 and the 1990s.

The largest increase in share has taken place in the apparel sector (section 84) which now occupies second place. Newcomers in the top ten list are: miscellaneous edible products and preparations (section 09) and fish, crustaceans and molluscs (section 03).

Measured in terms of the index of concentration by product mix, the degree of concentration has declined sharply since 1980, by about 50 percent (see Table A.04). However, the level of the index is still quite high by the standards of the Caribbean region and in relation to other comparable countries like Chile, Cyprus, Mauritius. It is very much higher than that of the Asian countries.

#### 2.4 Technology and Skill Characteristics: the Manufacturing Sector

For identification of the technology and skill characteristics of the export structure, it is useful to consider a classification of manufactures by factor-intensity category (see Table A.06). The classification scheme used here is a standard one, adapted from Lord (1992). It paints a rather broad brush, but is a useful first approximation.

Evidently, the *unskilled labour-intensive category* predominates in manufacturing. Its share of total merchandise exports has grown by a factor of 6.5 since 1970, due chiefly to the increasing share of the apparel sector. The *human-capital/technology-intensive category* remains a very small component at around 3 percent of total exports on average. It contains a diverse mix of sectors, some undergoing a significant process of long-term decline in relative share of exports. The *natural-resource-intensive category* is smaller still, with a share of less than one percent on average.

Natural-resource-intensive exports are, of course, a much larger share of merchandise exports when minerals, mineral fuels, and agriculture (food, animal and vegetable materials) are included. It turns out that their overall share of merchandise exports has declined significantly from the high of 94 percent prevailing throughout the period up to 1980, due largely to the declining share of bauxite/alumina. But it still remains quite high, at 76 percent in 1993 (see Table A.06).

#### 2.5 Pattern of Sectoral Growth: Short-term and Long-term Features

Viewed in terms of sectoral growth-rates at the 2-digit level in the period 1990-93, it appears that the short-term pattern of export growth has been highly uneven (see Table A.07).

One striking feature is that the fastest growing sectors (albeit from a low base) are mostly located in the manufactured-goods group. The largest declines are also in the same group. This indicates that the manufacturing sector has been undergoing a great deal of internal change during this recent period. Yet, the manufacturing sector as a whole (defined as the aggregate of SITC one-digit sectors 5, 6, 7, 8) was also growing at a faster rate in the same period than all others (excluding the special case of sector 4). Thus, it is clear that internal change within the manufacturing sector was accompanied by overall rapid growth of this sector relative to others.

Data for the longer time period of 1970-1993, in terms of the percentage composition of



merchandise exports, confirm a similar picture of significant change in composition of the manufacturing sector's exports accompanied by long-term increase in the export share of manufactures (see Table A.08). This finding runs counter to the impressionistic view of a long-term decline in the Jamaican manufacturing sector. When it is examined from the standpoint of export performance, this view turns out to be factually incorrect.

In fact, what has been taking place in the Jamaican economy is a long-term process of structural transformation in manufacture that involves (a) restructuring of the manufacturing sector in terms of changes in its internal composition, while at the same time (b) the sector as a whole undergoes sustained expansion in terms of its share in total merchandise exports.<sup>2</sup>

Furthermore, this finding confirms that the manufacturing sector has been a leader in Jamaica's pattern of export growth during this period. Therefore, in this respect, one may infer that the process taking place in this sector involves a transition from the dominant pattern of import substitution in the past to a new one of export-led growth.

## 2.6 Jamaica's Competitive Performance in the Global Market

An important test of the performance of Jamaica's exports is to consider their competitive rating in the global market-place.

This is done here by measuring the change in their market-share relative to the change in the corresponding global market-sectors, defined at the SITC 3-digit level. For this purpose, the global market is taken to be the OECD countries, due to data availability. The period considered is between two three-year sub-periods: 1979-1981 and 1991-1993 (with average annual shares used for each sub-period).

On this basis, a classification scheme of four types of export sectors can be constructed, each type defined by a specific combination of change in Jamaica's market share and change in the corresponding OECD sector-share. This scheme is shown below in Box 2.1.

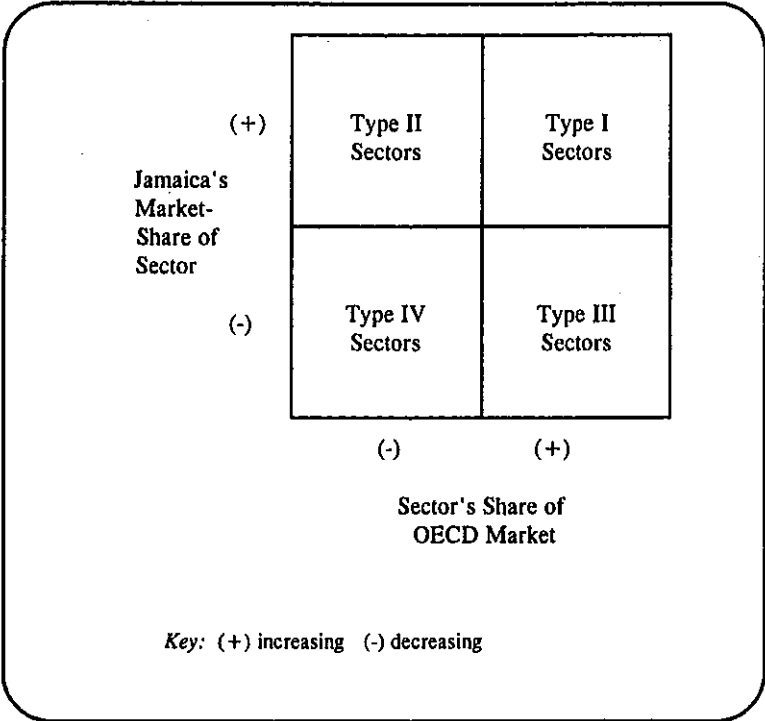
From the perspective of Jamaica, *dynamic sectors* are those of Types I and II, in which Jamaica's market share has been growing. *Lagging sectors* are those of Types III and IV, in which Jamaica's market share has been declining. From the perspective of the global market, dynamic sectors are those of Types I and III, characterized by rising sector-share in the OECD market. It follows that sectors of Type I are dynamic in a double sense and, hence, have the special status of *super-dynamic sectors*, because they have a growing market share in a growing market.

The results of the analysis using this scheme allow us to identify clearly some distinctive patterns, both in the aggregate and at the highly detailed 3-digit level of the SITC.

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<sup>2</sup> These conclusions follow from using the definition of manufactures as the aggregate of SITC sectors 5, 6, 7, 8. This is a narrow definition because there are important elements of manufacturing involved in other SITC sectors as well (e.g. processing of food and raw materials, beverages and tobacco), which should properly be included in manufactures. Using a broader definition that includes such sectors confirms the conclusions presented here.

Box 2.1 Competitive Performance Matrix



2.7 Index of Competitive Performance: Share of Dynamic Sectors

Consider, first, Jamaica's overall competitive performance in terms of dynamic sectors in comparison with other countries and regions (see Table A.09).

The overall market share of Jamaica's dynamic sectors, starting from a relatively small base of .02 percent in 1979-1981, grew by 50 percent to .03 percent in 1991-1993. Considered as a share of Jamaica's merchandise exports, dynamic sectors increased their share from 10.92 percent to 40.17 percent.

On the whole, this may be judged to be a creditable performance, when it is compared to the regional average for the Caribbean as well as for other regions. However, on a country-level basis of comparison, it turns out that Jamaica's performance lags significantly behind other comparable countries in terms of both the relative change in share of dynamic sectors between the two sub-periods and the share achieved in 1991-1993. For instance, during the same period Costa Rica more than quadrupled (increased by a factor of 4.5) the overall share of dynamic sectors in its exports from 11.11 percent to 49.7 percent. By the end of this period, Dominican Republic had achieved a share of 80.04 percent, the Asian tigers a share of 90.85 percent, compared with Jamaica's share of 40.17 percent.

Evidently, there exists here a *performance-gap* that may be considered a source of concern from

the standpoint of Jamaica's export policy. A more detailed analysis of sectoral performance, presented in the next section, allows closer identification of underlying features of this export pattern and the sources of strength and weakness.

## 2.8 Competitive Performance: Sectoral Characteristics

Consider, next, the pattern of competitive performance at the sectoral level. For this purpose, the detailed results of the competitive analysis for the 3-digit sectors are presented below in Box 2.2.

It turns out that Type IV sectors have the largest share, 43.4 percent, of total merchandise exports. These are the sectors that show a relatively weak performance, because of a declining market share in a declining market-sector. The largest component of this group is the bauxite/alumina sector, which had an uneven record during the particular period covered by this analysis.

Type I sectors come in second, with a share of 32.93 percent. These are the super-dynamic sectors, with a growing market share of a growing market. They include the apparel sector (the largest component) and the non-traditional sectors in food and beverages (the second largest component), as well as a wide range of other product lines that form a very small share of total exports.

Type II sectors are third, with a share of 16.43 percent. They have an increasing market share, but operate in non-dynamic market-sectors that are a declining share of global trade. The largest component is the traditional agricultural exports. Some items of raw materials, chemicals, and manufactured goods also form a small part of this group.

Type III sectors are the smallest group, with a share of 7.24 percent. They operate in dynamic market-sectors of global trade but have a decreasing market share and, hence, have not been able to take advantage of the opportunity for growth that these market-sectors present.

## Box 2.2 Competitive Performance of Exports by Sector

<i>Sectors (SITC group number)</i>	<i>Share of Exports (% , 1991-1993)</i>
<b>TYPE I SECTORS</b> (growing market-share of a growing market)	
<i>Food and Beverages (0, 1)</i>	<u>2.60</u>
<i>Fresh vegetables, roots, tubers (054)</i>	1.24
<i>Fish and fish products (034, 035, 036, 037)</i>	0.62
<i>Processed foods (022, 046, 048, 062, 073, 098)</i>	0.68
<i>Beverages (111)</i>	0.05
<i>Limestone and gypsum (273)</i>	<u>0.09</u>
<i>Fixed Vegetable Oils and Fats (423)</i>	<u>0.06</u>
<i>Chemicals and Related Products (5)</i>	<u>0.10</u>
<i>Essential oils &amp; perfumes (553, 554)</i>	0.09
<i>Manufactured Goods, classified chiefly by materials (6)</i>	<u>0.33</u>
<i>Leather, rubber, cork, wood, paper products (612, 625, 633, 635, 642)</i>	0.10
<i>Textile yarn, fabrics, made-up materials (653, 656, 657, 658)</i>	0.20
<i>Others (661, 663, 665, 672, 679, 684, 692, 696)</i>	0.03
<i>Machinery and Transport Equipment (7)</i>	<u>0.50</u>
<i>Electrical circuit breakers, machinery and appliances (772, 773, 775, 778)</i>	0.25
<i>Office machines and data processing equipment (752, 759)</i>	0.15
<i>General industrial machinery and equipment (742, 749)</i>	0.05
<i>Road vehicles and parts (781, 782, 783, 784)</i>	0.02
<i>Other machinery, equipment and parts (713, 714, 718, 725, 728, 737, 761, 762, 791, 792)</i>	0.03
<i>Miscellaneous Manufactures (8)</i>	<u>29.23</u>
<i>Clothing and accessories (842, 843, 844, 845, 846, 847, 848)</i>	28.81
<i>Footwear (851)</i>	0.23
<i>Other miscellaneous articles (812, 872, 873, 885, 893, 894, 895, 899)</i>	0.19
<u>Total Type I Sectors</u>	<u>32.93</u>
<b>TYPE II SECTORS</b> (growing market-share of a declining market)	
<i>Food, Beverages, and Tobacco (0,1)</i>	<u>14.17</u>
<i>Sugar (061)</i>	7.01
<i>Fruits and nuts (bananas, citrus, coconuts) (056, 057)</i>	5.65
<i>Coffee, cocoa (071, 074)</i>	1.38
<i>Tobacco (121)</i>	0.04
<i>Dairy products; cereal preparations, animal feedstuff. (024, 047, 081)</i>	0.09
...../ cont'd	

## Box 2.2 Competitive Performance of Exports by Sector (continued)

<i>Sectors (SITC group number)</i>	<i>Share of Exports (% , 1991-1993)</i>	
<i>Crude Materials, Petroleum Products, Oils &amp; Fats (2, 3, 4)</i>	<u>0.24</u>	
<i>Metalliferous and metal scraps (282, 286, 288)</i>		0.18
<i>Pulp and waste paper (251)</i>		0.02
<i>Cork and wood products (244, 246, 247, 248)</i>		0.02
<i>Chemicals and Related Products (5)</i>	<u>1.85</u>	
<i>Organic chemicals (512)</i>		1.60
<i>Inorganic chemicals, fertilisers, resins, plastics (522, 523, 562, 584, 585)</i>		0.25
<i>Manufactured Goods, (6, 7, 8)</i>	<u>0.17</u>	
<i>Textile yarn, fabrics, made-up materials (651, 652, 655)</i>		0.07
<i>Power generated machinery and equipment (712)</i>		0.04
<i>Non-metallic mineral manufactures (667)</i>		0.03
<i>Others (611, 673-678, 682, 721, 793, 881)</i>		0.03
	<u>Total Type II Sectors</u>	<u>16.43</u>
 <b>TYPE III SECTORS</b> <i>(decreasing market-share of an increasing market)</i>		
<i>Food, Beverages, and Tobacco (0,1)</i>	<u>4.71</u>	
<i>Alcoholic beverages (112)</i>		3.82
<i>Vegetables and fruit, preserved and prepared (058)</i>		0.46
<i>Tobacco manufactured (122)</i>		0.43
<i>Crude Materials, Chemicals, Manufactured Goods, &amp; Others (2, 5, 6, 7, 8, 9)</i>	<u>2.53</u>	
<i>Crude vegetable materials (292)</i>		0.24
<i>Furniture and parts (821)</i>		0.17
<i>Essential oils and perfumes (551)</i>		0.10
<i>Travel goods (831)</i>		0.05
<i>Others</i>		1.97
	<u>Total Type III Sectors</u>	<u>7.24</u>
 <b>TYPE IV SECTORS</b> <i>(decreasing market-share of a declining market)</i>		
<i>Food, Beverages, and Tobacco (0,1)</i>	<u>0.53</u>	
<i>Cocoa, spices (072, 075)</i>		0.52
<i>Meat and cereal preparations, live animals (001, 014, 045)</i>		0.01
<i>Crude Materials, Chemicals, Manufactured Goods, &amp; Others (2, 5, 6, 7, 8, 9)</i>	<u>42.87</u>	
<i>Bauxite and alumina (281, 287, 289)</i>		42.79
	<u>Total Type IV Sectors</u>	<u>43.40</u>

## 2.9 The Market-based Test as a Diagnostic Guide to Export Policy

The preceding analysis provides a crucial yardstick for assessing Jamaica's export performance. As a market-based test of performance, it indicates precisely what are the sectors of Jamaica's competitive market-strength in exports and what are the sectors of market-weakness. It therefore has considerable diagnostic value for policy purposes, both from the standpoint of the strategic decision-making of exporters and from the standpoint of public policy.

The diagnostic results yielded by this analysis are presented schematically below in Box 2.3. The diagnosis is specified in terms of two key parameters of market performance:

- (1) *Market capability* refers to the capacity for market penetration by Jamaica-based exporters, as measured by the change in their market share.
- (2) *Market potential* refers to the state of the market itself in terms of its ability to provide a vehicle for growth, as measured by the change in its share of the global (OECD) market.

On this basis, the super-dynamic sectors, Type I, are clearly the most successful and the sectors of greatest strength, while Type IV are the sectors of greatest weakness. Type II sectors exhibit strength in their capacity for market penetration, but are vulnerable because of weak market potential in these particular market-sectors. Type III sectors show weak marketing capability in the face of strong market potential, hence an inability to realize the potential presented by available market opportunities.

**Box 2.3** Diagnosis of Market Strength/Weakness of Export Sectors

<i>Sectors</i>	<i>Share of Exports (%)</i>	<i>Market Capability</i>	<i>Market Potential</i>
<i>Type I</i>	32.93	<i>strong</i>	<i>strong</i>
<i>Type II</i>	16.43	<i>strong</i>	<i>weak</i>
<i>Type III</i>	7.24	<i>weak</i>	<i>strong</i>
<i>Type IV</i>	43.40	<i>weak</i>	<i>weak</i>

Corresponding to this diagnosis, there are two sets of basic issues which would require to be addressed, as regards export policy.

One relates to the specific sources of market strength or weakness, as the case may be, in terms of market capability within each of the sectors. This calls for closer and continuing analysis, with regular updating, on a sector-specific basis. The concern here is to build on the sources of strength and to address directly the sources of weakness by adopting appropriate measures to deal with them.



Take, for example, the case of the apparel industry. This industry warrants special attention because it has been a star performer and now constitutes the major share of exports of manufactures. Despite being a super-dynamic sector in the period examined, it has experienced in the past four years a sharp decline in its export growth-rate from the peak of 61 percent achieved in 1992 to 13 percent in 1995. This is an indication of the need to address the essentials of competitiveness within the sector in the face of increasing competition in the US market from low-cost producers in Mexico (operating with the advantage of NAFTA), Central America, and Asia.

The other set of issues relates to market potential, i.e. the available market opportunities and the potential for growth that they offer. These opportunities may be, to some extent, and in certain product lines, the result of global forces that are outside the control of any one exporter or, for that matter, any one country. But, even so, the exporter must still be positioned to make appropriate strategic adjustments, depending on whether the market potential in his current product line is determined to be strong or weak.

In general, a successful export-growth strategy requires an ability to adjust to evolving market conditions by shifting into areas of high growth-potential, i.e. to diversify into new and dynamic product lines, while taking advantage of whatever growth opportunities are offered by existing product lines.

In this connection, it is useful to consider what exactly are the fast growing sectors in world trade. As a first step, this can be determined using the existing performance data for the OECD market as a whole. On this basis, it is possible to identify the top 100 fastest-growing sectors in OECD imports at the 3-digit level of SITC. These sectors are listed in Table A.10.

This list represents, of course, only a menu of possible options for a strategy of export-growth through product diversification. Naturally, to become practically relevant, these possibilities would need to be examined further in terms of feasibility and other relevant criteria. However, it is interesting to examine which of Jamaica's exports are *currently* included in this list. These items are listed below in Box 2.4. It turns out that 34.68 percent of Jamaica's exports are included in the list of top-100 fastest-growing OECD sectors. Evidently, the apparel sector dominates the list, with items totalling 28.62 percent of exports.

In this respect, it appears that Jamaica's exporters have been able so far to seize hold of available market opportunities for growth to a significant extent. This achievement is, however, concentrated in a rather narrow range of product lines. A strategy of export-growth through product diversification would seek to expand the number of items included in this list and their share in Jamaica's total exports.

Of course, *past performance is no guarantee of future success*. This means that it is necessary, therefore, to look to the future, to try to anticipate future market developments, and to plan to deal with them. In this sense, exporters cannot escape the necessity for active and continuous strategic planning.

### Box 2.4 Jamaica's Exports Included in the Top-100 Fastest-Growing OECD Sectors

(ranked by export share in 1991-1993, SITC 3-digit categories)

<i>SITC#</i>	<i>Export Sectors (SITC group number)</i>	<i>Export Share (%)</i>	<i>Market Share (%)</i>
846	<i>Under garments</i>	14.399	1.579
845	<i>Outer garments and others</i>	7.191	0.392
843	<i>Outer garments (women's, girls' &amp; infants'), of textile fabrics</i>	2.978	0.144
842	<i>Outer garments (men's &amp; boys'), of textile fabrics</i>	2.234	0.170
844	<i>Under garments of textile fabrics</i>	1.875	0.330
931	<i>Special transactions &amp; commodities not classified by kind</i>	1.845	0.058
036	<i>Crustaceans and molluscs</i>	0.524	0.056
058	<i>Fruit, preserved and prepared</i>	0.461	0.078
122	<i>Tobacco, manufactured</i>	0.430	0.105
098	<i>Edible products &amp; preparations, n.e.s.</i>	0.307	0.064
772	<i>Electrical apparatus, for electrical circuits, etc.</i>	0.244	0.013
851	<i>Footwear</i>	0.227	0.012
821	<i>Furniture and parts</i>	0.168	0.009
551	<i>Essential oils, perfume, and flavour materials</i>	0.103	0.053
831	<i>Travel goods</i>	0.049	0.008
898	<i>Musical instruments &amp; parts &amp; accessories</i>	0.043	0.004
892	<i>Printed matter</i>	0.017	0.002
..	<i>All other items</i>	1.587	..
	<i>Total</i>	<i>34.682</i>	

## 2.10 Exports of Services

A general shift has been taking place in the structure of world trade towards the export of services. In the past decade and a half, world trade in services has grown much faster than in goods (see Table A.11). Among services, the fastest growing sectors are Travel, Passenger Services, and (fastest of all) the heterogeneous category of Other Services (using the UN classification scheme shown in the Table). Developing countries as a group, though lagging considerably behind in growth of merchandise trade, have managed nevertheless to keep up with the growth of services across almost all of the major categories.

A similar pattern of structural change has been taking place in Jamaica's exports, involving a dramatic shift in export shares between merchandise and services. The share of services has shot up from a level of 32.3 percent in 1980 to an average of about 53 percent in the 1990s (see Table A.02). The share has levelled off and has actually been declining in the past three years due to a resurgence in growth of merchandise exports in both traditional and non-traditional categories.

A significant part of this increase in export services was due to special circumstances, i.e. sudden large inflows of insurance payments associated with the aftermath of hurricane Gilbert in 1988. But the single most important and continuing growth-factor has been the *tourism industry*, which has increased its share of receipts on the services account of the balance of payments from 52.4 percent in 1980 to an average of 66.6 percent in the 1990s (see Table A.12).

The second biggest foreign exchange earner in services, with a share of about 15 percent, is the category of *transportation services* consisting mostly of passenger fares from the national airlines and port disbursements for use of the increasingly important cargo transshipment facilities.

Third in relative share is the miscellaneous category of *other services*, the components of which are mostly personal income of migrants (farmworkers, students, and nurses), payments for rental and utilities by firms operating in the Free Zones, and fees for various types of professional services. In recent years an emerging growth sector is in the data processing field, estimated to be now about 2 percent of foreign-exchange receipts in services. An uncounted contribution, but considered to be large and rising at a fast pace, is associated with the entertainment industry.

As to Jamaica's overall growth-performance in export services relative to the rest of the world, it appears that its growth rate has been above the average for developing countries as a group, in particular in the categories of Travel, Labour Income, and Other Services (see Table A.11). It has been relatively weak in the two categories of Merchandise Insurance & Freight and Passenger Services.

## 2.11 Tourism

Because of its sheer size and significance in the Jamaican context, a closer analysis of the competitive position of the tourism sector is warranted.

During the past decade the tourism sector of exports has put in an impressive performance in terms of overall growth relative to other export sectors and to the economy as a whole.

This performance must also be evaluated with respect to Jamaica's position in relation to other competing destinations in the region. For this purpose, Table A.13 presents data, constructed from available sources, on the position of 22 countries in the Central American and Caribbean region in terms of their share of the overall regional tourism market in 1993 and the growth rate of their market shares during the period 1980-1993.

Mexico is obviously the big market leader, with a share of almost one-half the overall market. Jamaica ranks fourth, behind Bahamas and Dominican Republic, with 7.22 percent. These top four market leaders constitute 73.11 percent of the total market. Next in line are: Netherlands Antilles, Costa Rica, Barbados, and Aruba, in order of market share, with an average share of about 4 percent among them. Then there is a string of other markets, each with a share below 2 percent.

Significant changes have occurred in relative market positions during 1980-1993. The following features stand out from the data:

- \* the big leaders, Mexico and Bahamas, have been losing market share;
- \* Jamaica is among the twelve countries with an increasing market share;
- \* Dominican Republic has grown at more than twice the rate of Jamaica so as to achieve by 1993 a bigger market share than Jamaica's;
- \* Costa Rica is behind, but growing at more than twice the rate of Jamaica, so that, if past performance continues, it is likely to catch up with Jamaica very soon;
- \* the smallest market segments, operating from a very small base, have been growing the fastest, with Belize being

the biggest gainer.

It is thus evident that there is a great deal of flux and dynamism in the regional tourism market. Jamaica has managed not only to hold its own in this market but also to improve its relative position. In this respect, it has demonstrated strong *market capability*. However, it is being challenged by strong competitors. Its market-leadership position has already been overtaken by Dominican Republic. There are other competitors that are coming from behind with a potential to further erode Jamaica's position. Costa Rica is a case in point, and Cuba is emerging as a significant player.

The regional tourism market as a whole has been growing at a fairly high rate of 6.8 percent annually (during 1980-1993). If growth continues at this level (and all the current industry projections indicate that it will), this would provide room for Jamaica's continued expansion, if only by maintaining its market share. There is, in this sense, a considerable *market potential*. But, given the nature of current and prospective changes in competitive conditions within the region, it will also take a considerable effort to realize that potential.

Exporters in the tourism sector must develop a strategy to deal with this challenge. Growth of this sector has been hampered by domestic constraints associated with social conditions (tourist harassment, crime) and deficiencies in physical infrastructure. These constraints must be addressed in order to enhance competitiveness of the industry. The singularly successful product innovation represented by the "all-inclusive" package has provided a major impetus for growth since the mid 1980s, in part because it helped to get around the domestic constraints. But the continued and increasing pressure of competition makes it necessary to place even greater emphasis now on improving the quality of the tourism product, especially as regards the diversity and depth of attractions and the options available to the smaller hotels.

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### Summary of Chapter 2

- \* *The market for Jamaica's exports is highly concentrated in the NAFTA region.*
- \* *Export concentration by product mix has declined, but still remains relatively high.*
- \* *The unskilled labour-intensive category of products predominates in exports, the human-capital/technology intensive category is a very small component, and the natural- resource-intensive category, though declining, is the largest component.*
- \* *The long term pattern of growth shows significant change in composition of the manufacturing sector's exports accompanied by increase in the export share of manufactures.*
- \* *Jamaica's competitive performance, measured by the share of dynamic sectors in merchandise exports, though impressive on its own terms, lags significantly behind that of other countries.*
- \* *Areas of market strength and weakness exist at the sectoral level. These are identified in terms of the dual criteria of market capability and market potential. A diagnostic guide for export policy is developed on this basis, focusing on the need for and possibilities of export growth through product diversification.*
- \* *Consistent with global trends in the structure of world trade, a dramatic shift has been taking place in export shares between merchandise and services.*
- \* *The single most important and continuing growth-factor in services has been tourism. This industry shows strong market capability and strong market potential, but current and prospective changes in competitive conditions within the region demand a considerable effort to realize that potential.*
- \* *In general, a successful export-growth strategy requires an ability to adjust to evolving market conditions by shifting into areas of high growth-potential, i.e. to diversify into new and dynamic product lines, while taking advantage of whatever growth opportunities are offered by existing product lines.*

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## THE ROLE OF MACROECONOMIC FACTORS

### 3.1 Macroeconomic Issues

Prevailing macroeconomic conditions in Jamaica during the period of the 1980s up to the present have been marked by instability, taking the form of persistently high domestic inflation and corresponding depreciation of the currency. Along with these conditions there has existed for some time a monetary regime of tight liquidity associated with high interest rates.

Questions arise from this as to: How exporters fare under these conditions? What is the impact of these conditions on export performance?

It is important to provide a systematic answer to these questions in order to determine the appropriate strategy to be adopted in dealing with issues of macroeconomic policy, specifically as concerns a strategy of export-led growth for Jamaica.

The analysis presented in this chapter addresses these questions. The focus of attention is on the role of the exchange rate, financial conditions, and macroeconomic instability.

### 3.2 The Exchange Rate

The exchange rate is one of the key variables which enter into exporters' calculation of the relative costs and returns as well as risk involved in export activity. It enters *directly* by way of both the amount of earnings from the products exported and the cost of imported inputs. It enters *indirectly* by way of its effect on the price of inputs purchased in the domestic market: materials, labour, and services.

For some exporters, as in tourism, bauxite, sugar, and the apparel industry, export earnings are subject to contractual arrangements specified in terms of foreign currency and, therefore, do not vary in value with respect to the foreign currency when the exchange rate changes. Similarly, for some of these exporters, a significant proportion of input cost is associated with imported inputs purchased directly out of export earnings in foreign currency. Nevertheless, as long as some proportion of earnings is not tied in this way and/or input costs are incurred from domestic suppliers of goods and services there will be some effect of the exchange rate on the exporter's balance sheet. The effect is greater or less depending on the exact proportions involved in each case.

It is therefore important to examine the conditions determining the level of the exchange rate and its movement over time, how those conditions are affected by economic policy, and what effect they may have, in turn, on the level of exports and the prospects for export growth.

### 3.3 The Mechanism of Exchange-Rate Adjustment

The exchange rate is a price. In nominal terms, it is the relative price of one country's currency in terms of other currencies, say, 40 Jamaican dollars for one US dollar. Call this the nominal exchange



rate (NER). As a price, it is essentially governed by market forces working through the laws of supply and demand. In the context of a liberalized foreign exchange market, those forces tend to preserve a definite alignment of the NER in relation to "the fundamentals" as reflected in the real exchange rate (RER). The RER is, strictly speaking, a measure of the real value of the tradeable goods and services that the economy produces. It is determined by the price of those goods and services in Jamaica's trading partners relative to Jamaica's domestic costs and prices. A standard measure of RER is the NER multiplied by this price ratio.

Changes in the fundamentals of relative costs and prices among trading partners alter the RER and shift the balance between supply and demand for tradeable goods and services, in either direction depending on the particular circumstances. That shift, in turn, working through the demand and supply for foreign exchange, brings about a realignment of the NER.

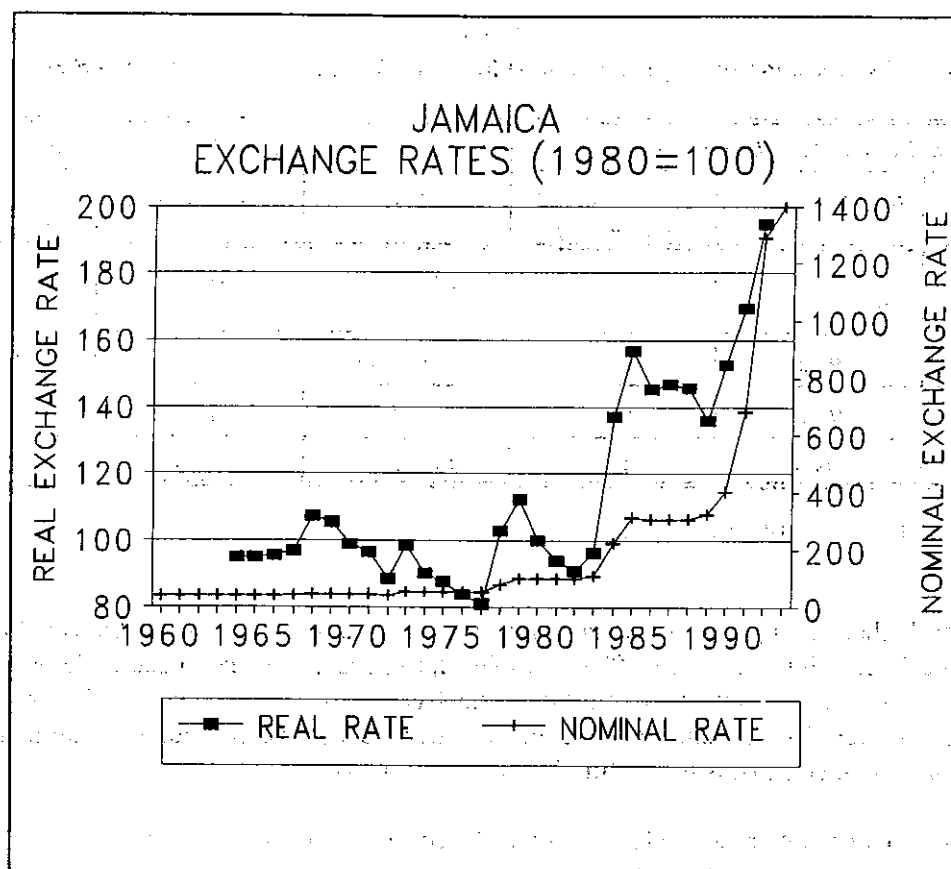
Increase in NER (depreciation) is warranted when domestic costs rise in relation to international costs. Decrease in NER (appreciation) is warranted in the reverse situation, i.e. when domestic costs fall in relation to international costs. The need for such adjustment, of one type or the other depending on the particular situation, arises precisely because of (a) movements in the current account brought about by response of exports and imports to a situation of overvaluation or undervaluation of the exchange rate in relation to the underlying structure of relative prices, or because of (b) movements in the capital account due to capital inflow/outflow in response to relative interest rates and risk factors.

From the standpoint of economic policy, the NER is one of the main policy instruments for managing adjustment to the fundamentals. Others are: fiscal and monetary policy, income and price policy. It is also one of the economic indicators most closely watched by all economic agents in a foreign-exchange sensitive economy like Jamaica. The action of those agents, in line with their expectations about likely movements in the exchange rate in a situation of perceived misalignment, can itself produce large movements in the NER and create turmoil in the foreign exchange market. The recent (1994-1995) experience of Jamaica's neighbour, Mexico, provides a dramatic example of exactly how this process works.

These factors play a powerful role in the foreign exchange market and, therefore, must be closely monitored by policy makers so that policy may be appropriately adjusted to accommodate change in underlying conditions. Exporters, in turn, have direct interest in a policy of maintaining alignment of the NER with the fundamentals. This is because it allows them to preserve competitive parity with firms in other countries and with other producers of tradeables operating in the domestic market.

In general, for exporters, the correct exchange-rate policy is a matter of preserving their international competitiveness by maintaining a competitive exchange rate through predictable adjustment to the economic fundamentals.

Figure 3.1



Source: Calculated from data-bases of IDB, IMF, and BOJ.

### 3.4 Jamaica's Experience in Exchange-Rate Adjustment

As regards the adaptability of Jamaica's exchange rate policy to the underlying fundamentals, analysis of data for the last 30 years indicates a mixed record of performance. The results are shown in Figure 3.1 in terms of the relation between the RER and NER.

During the period 1965-1995, there have been 4 episodes of significant upward adjustment (depreciation) in the NER, interspersed with periods of constancy, and a corresponding long-term tendency to depreciation of the currency. The nominal exchange rate against the US dollar, as of the end of 1993, was 46 times its level in 1965. By the end of 1995, it was 56 times the 1965 level. The RER, on the other hand, has had 4 episodes of appreciation, although the long term tendency is also one of depreciation. In every case, the depreciation in NER came after a long period (typically 4 years) of substantial and sustained appreciation in RER, as indicated in Table 3.1.

Table 3.1  
Episodes of Depreciation (+)/Appreciation (-) in the Exchange Rate of Jamaica, 1965-1995

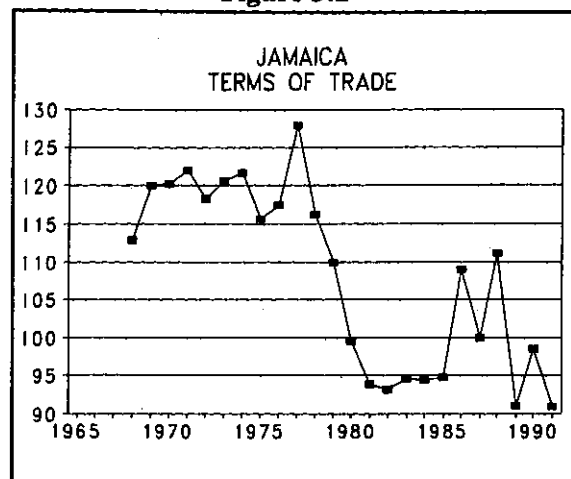
Nominal Exchange Rate (Depreciation)			Real Exchange Rate (Appreciation)		
Years	Total Change (%)	Average Annual Change (%)	Years	Total Change (%)	Average Annual Change (%)
1972-1973	1972 = -7.9 1973 = +17.6	4.9	1968-1972	-17.4	-4.7
1978-1979	94.2	40.2	1973-1977	-17.7	-4.7
1983-1985	212.0	51.2	1979-1982	-19.2	-6.8
1989-1995	538.9	33.9	1985-1989	-13.3	-3.4

Source: Calculated from data-bases of IDB, IMF, and BOJ.

In general, then, it appears that *there is an overall tendency of inertia in the NER relative to movements in the RER*. However, since 1989, sizeable adjustments have been made in the NER so as to bring about closer alignment with the fundamentals. This has occurred in the context of adoption of new policy initiatives to liberalize the Jamaican foreign exchange market and consequent emergence of new market institutions and mechanisms for trading in foreign exchange.

An important element of the fundamentals which account for movement in the exchange rate is the terms of trade, measured by the ratio of the price index of exports to that of imports. Available data on the terms of trade for Jamaica over the period since 1965 are plotted in Figure 3.2. It is evident that there have been large fluctuations in the terms of trade operating within what is clearly an overall trend of long term decline. The sharpest decline occurred in the 1977-1982 period, and there was a reversal in the late 1980s, but the downward trend has continued since then. In recent years, the level of import tariffs has come down, and this has contributed a counteracting factor to the decline in the terms of trade.

Figure 3.2



Source: Calculated from data-base of IDB.

### 3.5 Measuring the Effect of the Exchange Rate on Exports

For practical purposes, important questions arise as to: How significant is the quantitative impact of change in the exchange rate on exports? Do exporters respond to movement in the exchange rate, and how large is the response?

In order to answer these questions, this study made a detailed econometric analysis of the effect of changes in the exchange rate on Jamaica's export performance since 1965. The analysis considered both the aggregate level of exports of goods and services and sectoral disaggregation in terms of traditional and non-traditional sectors, goods and services. The results of this analysis are presented in Tables A.14 and A.15.

The results strongly confirm that exports are significantly affected by change in the real exchange rate. For total exports the effect is quite large. A depreciation of one percent in the RER can be expected to produce an increase of 0.38 percent in the growth rate of exports. Or, put differently, it would take a 2.7 percent real depreciation to get a one percentage point increase in the export growth rate. Correspondingly, appreciation of the exchange rate reduces exports. The size of the effect for Jamaica is significantly larger (by a factor of 2.2) than the average of a sample of 5 Caribbean countries estimated in an earlier study (Harris, 1995).

It turns out also that the size and significance of the effect vary greatly across different sectors of exports. The most responsive sectors are tourism and other services, and some of the non-traditional sectors, specifically food and apparel. This result is clearly understandable on economic grounds, since demand for output of these sectors is price elastic and the proportion of total costs represented by domestic inputs, though highly varied among them, is not negligible.

Accumulated results from research on other developing economies confirm this broad picture. In general, the exchange rate is one of the key factors determining export performance.

### 3.6 Exchange-Rate Risk and Exports

While there can be no doubt about the significant role of the real exchange rate as indicated above, another aspect of the matter deserves attention. This concerns the element of risk contributed to exporters' decision-making by variability in the exchange rate.

It is commonly recognized that this element of risk, called *exchange-rate risk*, constitutes a negative factor in long-term decision-making related to investment and production. As regards exports, this negative factor is likely to count significantly because of the complex and lengthy stages involved in the export process and the crucial role of the exchange rate in calculations of cost relative to returns at all stages of the process. A high degree of variability in the exchange rate undermines predictability in calculations of potential profitability and increases the risk factor in investment from the standpoint of the long-term exporter.

An attempt was made to test for the effect of this factor on export performance by a cross-country analysis of countries within CARICOM, including Jamaica. Several variables were used to represent macroeconomic conditions in the different countries. An estimate was made of the correlation coefficient between each of these variables and the overall export growth rate for the different countries. Of all the variables, the highest correlation was found for the variance in the nominal exchange rate and its correlation coefficient was negative (see Table A.16).

Therefore, at least for this group of countries, it can be said that high variance in the exchange rate (as measured by the coefficient of variation) is associated with low performance in terms of export growth. Moreover, it appears that the crucial element of the macroeconomic environment that matters, from the standpoint of export growth, is exchange-rate risk. Other elements matter only insofar as they affect this risk factor.

This finding is a highly significant one for explanatory purposes. In particular, it helps to explain a key feature of the observed practice among exporters, namely that a high proportion of output is sold on the domestic market (with the exception of operators in the Free Zone). This practice is evidently a way of hedging against foreign-exchange risk by maintaining a financial cushion in domestic sales.

This inference suggests, furthermore, that exporters have an interest in a stable as well as internationally competitive exchange rate.

Stability of the exchange rate, in this sense, does not mean constancy over time. The exchange rate has to adapt to the fundamentals in order to remain competitive. This implies that it will change in response to changing conditions. Stability requires an appropriate macroeconomic policy to ensure that changes in domestic costs and prices do not produce high variance in the exchange rate and create uncertainty and lack of predictability in decision-making of firms.

### 3.7 A Divergence of Interest Among Exporters?

There is another dimension of this issue. One observation frequently expressed by interviewees in the course of this study is that, during the recent episode of depreciating exchange rate (1989-1995), new players entered certain lines of export business (typically fresh produce) in order to make quick profits by earning foreign exchange. It was thought by the interviewees that, lacking any intention to stay in that line of business, such players were prone to engage in arbitrary price cutting and other practices that spoiled the market for long-term players.

This investigator was not able to verify independently this observation, or to obtain a measure of the relevant quantities involved (in terms of specific product categories, volume of sales, price differentials between new and established players, and number of exporters involved in this practice).

However, on the face of it, it would seem that this practice is related to the specific production and marketing conditions of the market-sector of fresh produce: low set-up costs, homogeneous product, ethnic market orientation, localized distribution system, irregular deliveries. All of these conditions make for ease of entry and exit. Conditions would be very different in the crossover market for similar products, and in other product markets.

It is also clear that the practice is directly related to high variance in the exchange rate, which introduces a bias towards short-term speculative investment. To the extent that such speculative behaviour is induced by variance in the exchange rate, it is likely to decline in an environment of stable and predictable exchange rate.

Thus, there is an evident divergence of interest here, as between the exporter committed for the long-term and the short-term speculative investor. The former has an interest in macro-economic stability, in the first place, because it reduces the risk involved in variability of the exchange rate and, second, because it reduces the speculative behaviour which works to the disadvantage of the established exporter. The speculative investor, on the other hand, may flourish under conditions of instability.

Even so, there may still be room for a cooperative solution among exporters. This possibility exists, for instance, in the *trading-house*, where both types of exporters are linked organizationally in terms of marketing and production, and incentives are provided to ensure cooperation. The trading house has worked well in other countries, and there are successful examples in the Jamaican context.

### 3.8 Financial Conditions

The conditions of availability of investment finance are a key consideration for exporters. They affect the requirements for financing at critical stages of the export process, from start-up costs of working capital for labour and raw materials to costs of marketing, as well as long-term investment in plant and equipment and R&D.

A crucial aspect of the financial conditions is the *cost of capital*, as measured by the level of the interest rate on investment loans. No less important are the *conditions of access*, as related to collateral

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requirements, administrative rules and regulations, and existence of specialized lending agencies oriented to the specific needs of exporters for pre- and post-shipment financing and in foreign exchange. Macroeconomic instability, as represented by variability of prices, wages, interest rate, exchange rate, and supply of foreign exchange, also affect exporters' operations by contributing to *financial risk*.

In Jamaica, the period of the 1980's to the present has been marked by high nominal interest rates, high inflation rate, devaluation of the currency, and a certain degree of instability and risk associated with variability in these macroeconomic conditions (see Table A.17).

Still, it is quite remarkable that, in the presence of these conditions, the rate of export growth has been maintained at a fairly high level during this period.

In fact, as this report shows, during the decade of 1986-1995, the average rate of export growth has been higher than the historical average for the past 45 years. In the last four years, the overall rate has accelerated from 2 percent to 15 percent, with non-traditional exports growing at the phenomenal rate of 20 percent on average and a resurgence of traditional exports also taking place.<sup>3</sup> On the other hand, in these same years, the real lending rate skyrocketed from negative 32.4 percent to positive 21.6 percent and remained at an average of 17.5 for the last three years.

The overall pattern of variation in total exports, real lending rate, and inflation rate during the period 1980-1995 is exhibited below in Figure 3.3. The correlation coefficient provides a useful quantitative measure of the degree and direction of the relationship between exports and these two variables. This statistic was computed for total exports and its main components. The results are shown below in Table 3.2. The sign of the coefficient for the real lending rate is uniformly positive. For the inflation rate it is negative, with one exception. The overall degree of correlation is quite low in all cases.

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<sup>3</sup>The lustre of this recent performance of traditional exports is dimmed to some extent by recognizing that a significant part of the growth in earnings came from autonomous price increases in a single major export sector, alumina, which represents 69 percent of earnings from traditional exports. In 1994-1995, for instance, there was an increase of 27 percent in the price of alumina accompanied by a decline of 9.3 percent in export volume. This does not, however, detract from the substantial real growth that took place in the same period in other sectors of traditional exports, such as sugar (39.9 percent), banana (4.4 percent), citrus (65.5 percent), coffee (67.4 percent), rum (12.8 percent), pimento (9.8 percent). Some of the growth in these sectors was, of course, a recovery of previously lost ground and involved price decreases as well as price increases.

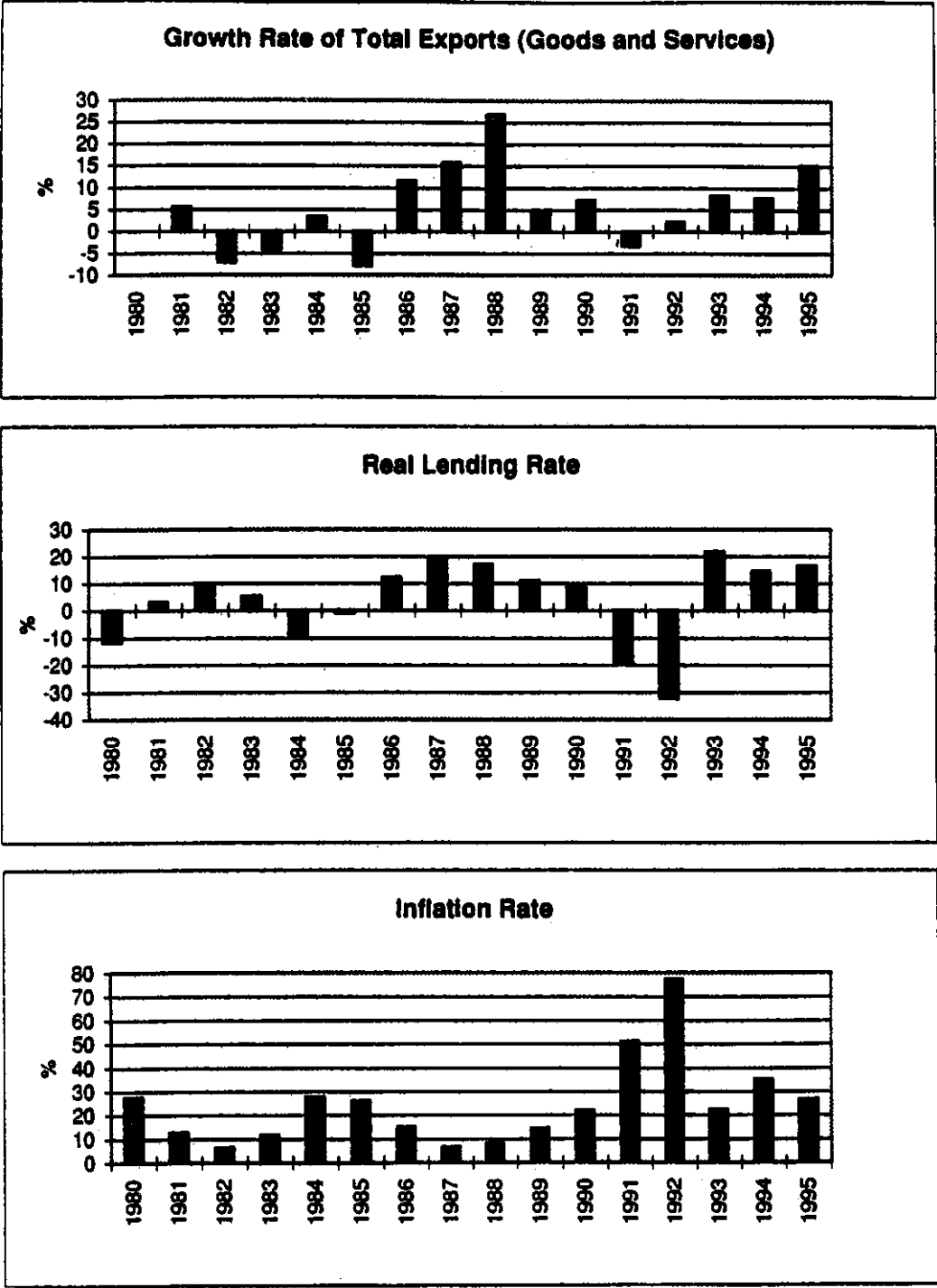


Figure 3.3



**Table 3.2**  
**Correlation between exports, inflation rate and real lending rate, 1980-1995**

Exports (Growth rate, %, per year)	Correlation Coefficient	
	Inflation Rate	Real Lending Rate
Total Exports	-0.2519	0.5064
Merchandise Exports	-0.2020	0.4691
Traditional Exports	-0.2248	0.4222
Non-Traditional Exports	0.1156	0.0781
Services	-0.3156	0.3473
Tourism	-0.1960	0.0833

This evidence suggests that there are some complexities here, as regards the role of financial conditions in export performance, which resist any simplistic interpretation or mono-causal view.

The need for caution is reinforced when analysis is made of cross-country experience within the Caribbean region. The results of such an analysis are reported in Table A.16. These results indicate, as pointed out in the previous section (3.6), a strong negative role of exchange-rate risk in export performance among this group of countries. What this confirms, once again, is the crucial significance of financial risk as it operates specifically through variance in the exchange rate. However, no such inference holds for the direct influence of other financial conditions, as represented by real interest rates, financial spreads, and the inflation rate. It turns out that these conditions are only weakly related to overall export growth, and with a positive correlation. Their influence matters for export growth, it seems, only insofar as they affect the key factor of exchange rate risk.

In interpreting these results, it is important to bear in mind what should be obvious, namely that, though *nominal* interest rates may be relatively high, the *real* interest rate may be quite low. Furthermore, investors are expected to pay positive real interest rates. The nominal lending rate in Jamaica has been quite high and rising throughout this period. From an average of 16 percent in the early 1980s, it had virtually doubled to 31 percent by 1990. Since then, it has fluctuated around 45 percent, rising as high as 60 percent for a brief period. These levels are unquestionably without precedent in Jamaica's history. Closer examination of the *real lending rate* (see Figure 3.3) shows high variability in this rate as measured. However, the average level for the entire period of 1980-1995 was just 4 percent. Up to 1993, prior to the big jump in this rate, the average level was close to zero.

Second, it cannot be inferred from these findings that the level of the interest rate played no role in influencing the outcome in terms of export performance during this period. Moreover, no such rash claim is being made here. Rather, what must be recognized is that the interest rate has a differential effect within the economy across different sectors and firms.

In this regard, it seems likely that the interest-rate effect operated more strongly on the composition of investment, in particular by shifting the balance of investment decisions from long-term to short-term investment. This would help to account for the rapid growth of exports in some of the non-traditional items, such as fresh produce, which entail investments with a short gestation period and relatively easy market access in the ethnic segment of the export market.

Furthermore, it is to be expected that financial conditions have differential impact among exporters, depending not only on the particular sector or product line of exports, but also on the relative size of the firm and associated risk factors.

What matters here is not only the cost of capital but also the differential conditions of access to finance by different firms.

Typically, bigger and more established firms have ready access to credit from the formal financial system. Some are relatively immunized from variations in the local financial market, because they have ready access also to foreign-currency loans and to external financial markets by virtue of a large collateral in receivables payable in foreign exchange or because of partnership or joint-venture links with a foreign firm (for example, see Box 3.1).

### **Box 3.1: An Example of Creative Financing for Exporters**

**DOLLAR\$ & \$ENSE/** Monday, March 13, 1995

#### **LOCAL MANUFACTURER GETS PRODUCTION FUNDING**

Five local financial institutions led by Knutsford Capital Merchant Bank have formed a syndicate to finance the establishment of a production line for Fruit of the Loom Inc.

The five have raised funds for a two year US dollar loan equivalent to J\$25 million, to Quality Manufacturers Ltd., a locally owned garment manufacturer selected to become the first Fruit of the Loom

contractor in Jamaica.

Quality Manufacturers will use the money to upgrade its facilities to produce T-shirts for the US company, under the 807 programme ...

This type of syndicate where one institution structures the financing package to make it investment friendly and then shares up the risk among other institutions is expected to become the blueprint for greater,

less expensive amounts of financing for emerging sectors of the economy ...

Other institutions participating in the loan are Pan Caribbean Merchant Bank, Trafalgar Development Bank, Dehring, Bunting and Golding, and Issa Trust and Merchant Bank.

The loan represents a major new investment in Jamaica's US\$420 million garment sector..

In this connection, it is important to recognize that many of the firms operating in the sectors that represent the really big-ticket items in Jamaica's exports and account for the major part of overall export growth fall in this category. This is quite clearly so in the case of bauxite/ alumina, which represented, in 1995, 23 percent of total exports of goods and services (77 percent of traditional exports). The same is true for the apparel sector (10 percent of total exports, 63 percent of non-traditional exports) and tourism (33 percent of total exports, 62 percent of services). Together these three sectors constitute 66 percent of total exports.

Small and medium-size firms, on the other hand, are handicapped by limited collateral and by the expectation of higher risk by lenders. There is a large number of small firms among exporters in most product groups. At the same time, their share of exports in each group is relatively small (see data presented in Chapter 5).

Given the well established preference among many firms for short-term debt-financing as against long-term equity-financing, it is also to be expected that such firms would suffer adverse effects from a high interest-rate regime, owing to their heavier exposure in terms of debt liability.

These arguments suggest, first of all, that export policy must be sharply clear in identifying and locating the specific effects of the cost of capital within and across different export sectors and for different types of firms.

Second, export policy must focus, not only on the issue of the level of interest rates (cost of capital) as such, but also more broadly on the wide range of conditions which govern *access to credit* and *the terms of credit*.

As regards these latter conditions, the crucial issues concern:

- (a) the mix in supply of finance as between short- and long-term finance, equity, and debt;
- (b) the mix of institutions available to fill the gap in meeting the special financing requirements of exporters (foreign currency loans, pre- and post-shipment financing, export credit insurance, etc.); and
- (c) the specific position of small and medium-size firms with respect to credit access.

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### Summary of Chapter 3

- \* *In Jamaica, the period of the 1980's to the present has been marked by high nominal interest rates, high inflation rate, devaluation of the currency, and a certain degree of instability and risk associated with variability in these macroeconomic conditions.*
- \* *The exchange rate is one of the key variables which enter into exporters' calculation of the relative costs and returns as well as risk involved in export activity.*
- \* *Changes in the fundamentals of relative costs and prices among trading partners alter the real exchange rate (RER). The nominal exchange rate (NER) is one of the main policy instruments for managing adjustment to the fundamentals.*
- \* *In general, for exporters, the correct exchange rate policy is a matter of preserving their international competitiveness by maintaining a competitive exchange rate through predictable adjustment to the economic fundamentals.*
- \* *Jamaica's experience in exchange-rate adjustment indicates an overall tendency of inertia in the NER relative to movements in the RER. In every case, the depreciation in NER came after a long period (typically 4 years) of substantial and sustained appreciation in RER.*
- \* *Results of a detailed econometric analysis of the effect of changes in the exchange rate on Jamaica's export performance since 1965 are presented. The results strongly confirm that exports are significantly and positively affected by change in the real exchange rate. The most responsive sectors are tourism and other services, and some of the non-traditional sectors, specifically food and apparel.*
- \* *High variance in the exchange rate, as a measure of exchange-rate risk, has a negative effect on export growth. This suggests that exporters have an interest in a stable exchange rate. This does not mean constancy over time, since the exchange rate has to adapt to the fundamentals in order to remain competitive.*
- \* *There is an evident divergence of interest, as between the exporter committed for the long term and the short-term speculative investor. But there exists room for a cooperative solution.*
- \* *As regards the role of financial conditions in export performance, some complexities are found in the data which resist any simplistic interpretation or mono-causal view.*
- \* *Financial risk plays a crucial role, operating specifically through variance in the exchange rate.*
- \* *The interest rate has a differential effect within the economy across different sectors and firms. What matters here is not only the cost of capital but also the differential conditions*

*of access to finance by different firms and the preference among many firms for short-term debt-financing as against long-term equity-financing. Small and medium-size firms are handicapped by limited collateral and by the expectation of higher risk by lenders.*

- \* *Export policy must be sharply clear in identifying and locating the specific effects of the cost of capital within and across different export sectors and for different types of firms. Second, export policy must focus, not only on the issue of the level of interest rates as such, but also more broadly on the wide range of conditions which govern access to credit and the terms of credit.*

#### 4.1 Incentives, Disincentives, and Export Policy

In considering the prospects for export expansion and the requirements of a strategy of export-led growth for Jamaica, it is essential to examine the nature of the incentive regime under which export activity takes place.

By the incentive regime is meant here the specific structure of incentives and disincentives that face exporters in their efforts to organize production and delivery of exports and gain access to export markets. This approach is based on a broader analytic view of the problem than one which focuses narrowly on the specifics of particular incentive schemes in isolation from other features of the economic environment. It also leads to a more fruitful formulation of policy.

Incentives and disincentives are two sides of the same coin. Both are important insofar as they affect directly and indirectly operating costs, transactions costs, and profitability of export activity and ease of market access. A balanced export policy would seek to address both sides of the coin in a consistent and integrated manner.

The basic economic rationale of incentive schemes, indeed their key function, is to provide an *offset* to disincentives and distortions that arise from other features of the economic environment facing firms operating in the country. In this respect, they constitute an essential mechanism for providing competitive parity for Jamaica-based firms in relation to firms operating in other countries, given the existence of such disincentives and distortions.

In addition, incentive schemes may be used to target strategic areas of the economy for development, as one component of a national development policy. It is now widely recognized that this latter role of incentive schemes played a significant part in the successful export-led strategy of some of the high-performing Asian economies.

The available evidence of different countries' experience also suggests that, *in the long term, incentive schemes are effective in contributing to sustained economic development only if they are combined with policies that directly seek to remove the disincentives associated with other features of the economic environment.* Furthermore, in the degree to which these latter policies are successful, that would make the particular incentive scheme adopted a transitory device that eventually becomes redundant.

Regardless of how successful or unsuccessful incentive schemes may have been in the past, and whatever may have been the particular formula for success and the strategy for which they were used in particular countries' experience, the evolving regulatory role of the World Trade Organization (WTO) in the current post-Uruguay-Round international economic environment makes it necessary to reexamine the structure and provisions of incentive schemes.

It is clear that the range of options Jamaica now has, in terms of acceptable incentive schemes, is strictly circumscribed and restricted as to the specific form of incentives that are admissible under the new rules of WTO. Developing economies are given some leeway and concessions for an interim period under the

rules. But after that period, they are required to conform to the rules.

#### 4.2 The Prevailing Structure of Incentive Schemes in Jamaica

Since 1949, Jamaica's economy has operated under an incentive regime that had, as one of its central components, a policy of protected import-substitution predominantly oriented to the manufacturing sector.

The key elements of this policy were (a) a system of tariffs and non-tariff barriers applicable to a wide range of imported goods, and (b) legislated relief from income tax and customs duties for manufacturing firms. Nominal tariffs were as high as 200 percent for several items. In terms of effective protection, the measured rate ranged from negative to 220 percent, and the average was among the highest in the Caribbean. In addition to tariffs, there was a system of licences, stamp duties, and quotas applicable to selected import items. Tax and duty relief was granted for periods of up to ten years depending on the type of relief, and up to fifteen years in the case of building construction<sup>4</sup>.

In the case of exporters, under the Export Industry Encouragement Act (EIEA), enacted in 1956, similar provisions for income tax and customs duty relief were granted, with the goal of encouraging export production for third-country (non-CARICOM) markets.

In addition to these schemes, there are some industry-specific schemes. The tourism industry has its own special system of legislated concessions for tax and duty relief that are similar in nature to the above.<sup>5</sup> The bauxite and alumina industry receives special concessions for import duty on capital and materials.<sup>6</sup> In the case of agriculture, approved farmers who grow certain specified crops are granted income tax and duty concession for five to ten years that is renewable. More recently, special concessions have been extended to the motion picture industry, information processing, shipping, and international finance companies.

A special capital allowance (accelerated depreciation, with a write-off period of two years) for qualified businesses has been added to these schemes, beginning in 1994. Companies which do not qualify under any of these schemes may also be granted a moratorium on duties.

Besides these schemes, another major component of the incentive regime is the Free Zone.<sup>7</sup> Companies operating under this Act are granted exemption from income tax on profits and duty relief on raw materials, both in perpetuity. However, they are subject to the restriction that finished products cannot be

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<sup>4</sup> The specific provisions for concession and relief were incorporated in the following legislation: the Pioneer Industries (Encouragement) Law (February 1949), the Industrial Incentives Act (August 1956), the Industrial Incentives (Factory Construction) Act (February 1961).

<sup>5</sup> The Hotel (Incentives) Act and the Resort Cottages (Incentives) Act.

<sup>6</sup> The Bauxite and Alumina Industries Encouragement Act.

<sup>7</sup> There are currently three such zones: The Kingston Free Zone, the Garmex Free Zone, and the Montego Bay Free Zone. They are covered by the Jamaica Export Free Zones Act (1982). Under a recently introduced amendment to the Act, qualified firms can choose to locate in areas other than these three zones.

sold on the local market and, until recently, they must be located in special geographical zones (this particular requirement has now been relaxed to allow "single entity free zones").

This whole system of incentive schemes has been under critical scrutiny for some time.

Complaints have been made that it is unwieldy to administer, suffers from arbitrariness in the criteria used in its application, is subject to bureaucratic delays and inefficiencies (as in the case of the import-duty drawback scheme), and too restrictive in its range of coverage (the EIEA was initially applied only to manufacturing firms). Since 1986, no new concessions have been granted under the Industrial Incentives Act.<sup>8</sup> Recently, a policy of extending export incentives on a uniform basis to other areas of the economy besides manufacture (including entertainment services and non-metallic minerals) has been announced in the National Industrial Policy. Proposals have been made for an Omnibus Incentive Code, aimed at consolidating all the different incentive schemes, but these proposals appear to have been shelved.

### 4.3 The System of Trade Preferences

All along, even before the consolidation of the regime of protected import-substitution, there were areas of exports that operated under another kind of incentive scheme. This is the system of trade preferences that guarantee preferential access to export markets in North America and Europe, through quotas, price agreements and, in some cases, direct subsidies.

Historically, and most notably, this has been the system applicable to most of Jamaica's traditional agricultural exports. Since the early 1980s, under CBI, certain manufactured products have also had similar arrangements for market access to the USA. The most outstanding case of this, with its own special circumstances, is the apparel industry. The bauxite/alumina industry, too, has had the benefit of special arrangements for market access, associated with its vertical integration into the transnational firms which own and operate production and with inter-government agreements.

In some respects, it could be argued that *trade preferences also constitute a form of protection*, in this case protection for exporters from competition in export markets. There is no doubt that this system has served over the years to preserve the market position of many of Jamaica's exporters in the affected sectors even if, in some cases, production has fallen significantly short of quotas, indicating a certain weakness in production and marketing capability in those sectors. Consequently, any removal of these arrangements poses a threat to their market position, until and unless adjustments are made in their competitiveness so as to be able to withstand the challenge of competition.

This system is also now being challenged. The most immediate challenge is to the position of bananas, due both to internal developments within the EU and the LOME convention and an external challenge from the USA and the producers of "dollar bananas". The position of sugar, covered by a different agreement, seems well protected for at least another ten years. Another direct and immediate challenge comes from the formation of NAFTA and the preferential status granted to Mexico as a major competitor of

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<sup>8</sup> This is in keeping with the terms of an IMF/World Bank agreement with the Government of Jamaica. However, the Act has not been repealed. There are some firms which continue to receive concessions under this Act.



Jamaica in apparel and other exports to the US market.

In the longer term, the prospects for sustaining this system of trade preferences seem quite weak and all indications are that some of these arrangements will eventually be phased out.

Bauxite/alumina is a special case, different from all the rest. It currently faces strong market prospects in a new cycle of growth in world demand for aluminium, associated with growth of the automobile industry and broader technological changes. Estimates by the Jamaican industry indicate that it has the capability to meet growing demand from existing capacity plus planned additions that are now on stream.

#### 4.4 Anti-export Bias of Incentives?

Some critics would argue that, by biasing the structure of incentives towards tariff and non-tariff protection and other forms of support for manufacturers committed to producing for the domestic market, a regime of protected import-substitution creates a significant anti-export bias in the economy. There is an implicit preference in this argument for neutrality in the incentive regime as between export and import-substitution. Others might wish to opt for a pro-export bias instead, as a policy choice.

No estimates are available, and apparently no systematic studies have yet been done, of the extent and direction of any such bias in the prevailing structure of incentives in Jamaica. The structure as a whole is evidently quite complex. An overall assessment would require estimating the net bias of the whole structure, including tariff and non-tariff protection, export incentives, and trade preferences. This is an area that calls for further investigation.

In any case, concern for a pro-import-substitution/anti-export bias in the structure of incentives has been considerably weakened in recent years, owing to the program of trade liberalization and deregulation of the domestic economy that has been instituted since 1987. On the whole, it seems that these changes may have shifted the balance significantly in favour of exports. Under this program, the following changes have occurred, for instance:

- \* licences, stamp duties, and quotas on a number of imported goods have been removed;
- \* imports of non-competing raw materials now have a zero rate of duty;
- \* tariff on non-competing capital goods (previously at zero under EIEA and other schemes) has been reduced to 5 percent and is scheduled to fall to zero for all firms under the National Industrial Policy.

Under the regional trade agreements made with CARICOM and the Uruguay Round Agreements, the Common External Tariff (CET) is scheduled to be phased down during the period ending January 1, 1998. Jamaica is ahead of schedule in its program of tariff reform.

Tariff reform, as it relates to the CET, has both costs and benefits for Jamaica-based exporters. Some exporters have in fact benefited directly from the protection afforded by the CET in the CARICOM market. This benefit is likely to diminish in the short term with tariff reduction. However, this likelihood must be taken to signal the need for such exporters to make appropriate adjustments so as to maintain their competitive position. Hence, they must begin now to engage in strategic planning for a future without the protective umbrella of the CET. At the same time, trade reform at the CARICOM level will bring new benefits, by placing exporters in a position to acquire inputs on more competitive terms through international sourcing than was possible before due to import restrictions established in the CARICOM agreement.

The same argument holds, as regards the likely effect of tariff reform in Jamaica's domestic market, which is a matter of concern for some Jamaica-based exporters. Some exporters seek to maintain a strong foothold in the domestic market as a cushion for total sales. Some rely on domestic suppliers for inputs. For these exporters, there are likely benefits and costs of the ongoing program of tariff reform, insofar as it affects domestic sales or input costs or both. Here, again, strategic planning by exporters is called for in order to deal with the changing situation.

#### 4.5 Maintaining Competitive Parity with Other Countries

One rationale that may be given for the incentive schemes is that, even if their net effect is judged to be zero or neutral, since other countries adopt them Jamaica must do so too, simply because of the need to maintain competitive parity with other countries.

It is therefore of interest to assess exactly how Jamaica stands in relation to the pattern of incentives prevailing in other relevant countries. For this purpose, an attempt was made in this study to do a comparative analysis of Jamaica's structure of incentives with that of a selected group of other countries.

As a first step in doing this, it proved useful to adapt a listing of the prevalent types of export incentives, developed from an earlier comparison of incentive schemes that operated at different times in eight countries of E. Asia, consisting of the four "Asian tigers" and another four that are now regarded as successfully undergoing sustained export-led growth. The list is shown in Table 4.1 with an indication of which type of incentive is currently available in Jamaica (yes) and which is not (no). From simply counting the number of these incentives available in Jamaica relative to the total of incentives, it turns out that Jamaica has only about one-half of the items on this list in each of the three main categories of incentives. In this sense, Jamaica's overall mix of incentives is relatively weaker than that of the eight countries.

In the next step, a closer and more detailed comparison was made of the specific terms and provisions of the individual incentive schemes in these countries, the range and depth of their coverage among exporters, and the administrative ease or difficulty of access to the schemes. The following conclusions may be drawn from this comparison:

**Table 4.1**  
**Types of Export Incentives Used in Various Developing Countries: Availability in Jamaica**

Type of Incentive	Available in Jamaica ?
<b>A. "Input-related" Incentives</b>	
1. Intermediate input related	
1.1 Tariff and tax exemptions/rebates on imported inputs for exporters and their domestic suppliers	Yes
1.2 Import credits for exporters	No
1.3 Wastage allowance subsidies	No
1.4 Reduced prices of public utility inputs	No
2. Primary input related	
2.1 Accelerated depreciation	Yes
2.2 Reduced interest rates for exporters	Yes
2.3 Investment loans (preferential access)	Yes
<b>B. "Output-related" Incentives</b>	
1. Direct	
1.1 Production loans for exporters (preferential access, interest rate subsidy)	Yes
1.2 Domestic indirect and direct tax exemptions/rebates	Yes
1.3 Import entitlement/licences linked to exports	No
1.4 Export credits (preferential access, interest rate subsidy)	Yes
1.5 Foreign exchange deposits held by central banks for use by individual exporters	No
1.6 Foreign exchange loans (preferential access)	No
1.7 Subsidised shipment insurance	No
1.8 Direct export subsidies	No
2. Indirect	
2.1 Infrastructure provision	Yes
2.2 Credits for, and government provision of: overseas marketing activities, R & D expenses, etc.	Yes
<b>C. "Externality-related" Incentives</b>	
1.1 Export 'quality' inspection and incentives	Yes
1.2 Monopoly rights granted in new export markets.	No

Source: Falvey and Gemmill (1990), adapted from Yusuf and Peters (1985); Jamaica Promotions Agency (JAMPRO).

Notes: (1) These incentive schemes have operated at various dates in at least one of the following countries: Hong Kong, Indonesia, Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand.

(2) The 'output-related' - 'input-related' division is based on whether the amount of 'subsidy' received is determined primarily by levels of output or input use.

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- \* Jamaica is strong in tax exemptions and tariff relief for exporters.
  - \* Jamaica is weak in the extent of financial support for exporters, in the various forms of investment and production loans, foreign exchange loans, export credits, and interest rate subsidies.
  - \* Jamaica is weak in terms of the range and depth of coverage of exporters and in the degree of selectivity (targeting) among export sectors.
  - \* There is a difference in the timing of certain key incentives: e.g. accelerated depreciation was a very early item on the menu of other countries, whereas Jamaica introduced it very late (just two years ago).
  - \* Jamaica is weaker in terms of the degree of "administrative support" given to exporters and the ease of access to export incentives as reported by surveys and interviews of exporters.

As a further step, a specific comparison was made of incentives provided in export processing zones (EPZs) in seven countries of Central America and the Caribbean, including Jamaica (see Table 4.2). In this comparison, Jamaica's incentives turn out to be very strong in terms of their specific provisions. However, other comparative studies of the actual operations of the different countries' EPZs have rated Jamaica's performance unfavourably in relation to that of others in this group of countries, in particular, with regard to the following operational features:

- \* As public sector EPZs, the Kingston Free Zone and Montego Bay Free Zone are probably the best managed in the Caribbean Basin.
- \* They are weaker than private sector zones in the region in terms of the range of services and quality of facilities offered.
- \* Lease rates are high relative to the corresponding level of service and facilities in comparison to both private sector and public sector zones in the region.
- \* None of the Jamaican zones were found to offer services provided by private zones in the region, such as worker transportation and day care facilities.
- \* The most commonly cited problem by firms in all three of Jamaica's zones was worker transportation.

It should be noted here that the Government of Jamaica, in agreement with recommendations of the World Bank, has been taking steps to deal with some of these recognized problems. The recent move to establish "single-entity free zones" is one such step.

**Table 4.2**  
**Comparison of Incentives in Export-Processing Zones in Central America and the Caribbean**

Incentives	Costa Rica	Dominican Republic	El Salvador	Guatemala	Honduras	Jamaica	Panama
Fiscal incentives (period of application)	No limit	15-20 years	No limit	No limit	20 years	No limit	20 years (I) 10 years (C)
Exemption from import duties on raw materials and parts	100% (C), (I)	100%	100% (C)	100% (C), (I)	100% (C), (I)	100%	100% (C)
Exemption from import duties on machines, equipment, and replacement parts	100% (C), (I)	100%	100% (C), (I)	100% (C), (I)	100%	100%	100% (C), (I)
Exemption from income tax	No	100% 15-20 years	15 years (I) 20 years (C)	12 years (C) 15 years (I) 5 years (T)	20 years	100%	10 years (I) 10-15-20 years (C)
Exemption from income tax on reinvested guarantees	No	100% 15-20 years	No	No	100%	100%	10 years (I) 10-15-20 years (C)
Exemption from taxes on capital and access	10 years (C), (I)	100%	100% (C) 10 years (I)	No	No	100%	100% (C), (I)
Exemption from municipal taxes	10 years (C), (I)	100%	No	No	100% (C), (T) 10 years (I)	100%	No
Exemption from oil and energy taxes	100% (C), (I)	100%	10 years (C)	100% (I)	No	No	No
Exemption from taxes and licences	No	100%	No	No	100%	100%	No
Exemption from taxes on real property	No	100%	No	5 years (I)	100%	100%	100% (I) 15-20 years (C)
Percentage of production permitted to be sold locally	40%	20%	No limit, but subject to government approval	20%	No limit, but subject to government approval	0%	20%

Source: United Nations, *World Investment Directory, Vol. IV, Latin America and the Caribbean, 1994*; Government of Jamaica, "Jamaica Export Free Zones Act, 1982."

Key: (C) = industrial enterprises (corporations); (I) = industrial enterprises (individual); (T) = trade enterprises.

Finally, an attempt was made to examine more closely the particular incentives offered by Trinidad & Tobago, which is a significant point of comparison because of observed trends in export performance of Trinidad & Tobago's manufacturing sector including its trade with Jamaica. From available reports, the following conclusions were drawn:

- \* The two countries' incentives are on a par in many aspects.
- \* The timing of introduction of certain incentives, such as capital depreciation allowance, was earlier in Trinidad & Tobago, and this seems to have provided the manufacturing sector with an early impetus for improved efficiency and increased production.
- \* Trinidad & Tobago offered certain export incentives, currently suspended, and commonly recognized to have facilitated export expansion, that are absent in Jamaica: these incentives include:
  - (1) export allowance deductible from before-tax profits for extra-regional exports;
  - (2) tax deductible facility at the rate of 150 percent on the value of expenses incurred to promote the expansion of existing foreign markets;
  - (3) export development grant for first commercial shipment;
  - (4) exemption from Value Added Tax on inputs, if at least 80 percent of production is exported.
- \* The cost of energy and level of interest rates are two critical factors in which Trinidad & Tobago's exporters have an advantage over Jamaica's.

#### 4.6 Implications of the Uruguay-Round Agreement

Whatever may have been, or currently is, the relative standing of Jamaica in terms of available export incentives compared with other countries, the new rules emerging from the Uruguay-Round Agreement may render moot the possibility of adjusting upwards, in favour of exporters, Jamaica's existing structure of incentives or introducing new ones, as far as certain types of measures are concerned.

As regards the specific provisions of the Uruguay Round Agreement, what is of special significance is the Agreement on Subsidies and Countervailing Measures (ASCM). Agricultural subsidies are not covered by this part of the agreement; they are given special treatment in the Agreement on Agriculture.

The key provisions of the ASCM, applicable to both developed and developing countries, are:

- (a) it defines three categories of subsidies: (i) prohibited subsidies, (ii) actionable subsidies, (iii) non-actionable subsidies;
- (b) it limits a country's options for granting subsidies by establishing a category of subsidies, called "specific subsidy", that is prohibited and subject to disciplines set out in the Agreement.

A *specific subsidy* is a subsidy made available to an enterprise, industry, or group of enterprises that is (a) contingent upon export performance, or (b) subject to a domestic content requirement that favours use of domestic over imported goods. It is further defined to include a broad range of measures: any financial contribution by a government or public body taking the form of a direct transfer of funds, a potential direct transfer of funds or liabilities (e.g. loan guarantees), the foregoing of revenues, the purchase of goods by a government, or the provision of goods and services other than general infrastructure.

*Actionable subsidies* are allowed, providing that they do not have adverse effects on the interests of other countries which are signatories to the agreement. If challenged, they are covered by procedures for dispute settlement.

*Non-actionable subsidies* are either non-specific (i.e. made available on a general basis) or specific to defined areas, e.g. industrial research, disadvantaged regions, environmental management. They can also be challenged by other WTO signatories.

Mechanisms and procedures (including notification, cross-notification, challenge by "injured" parties, and adjudication) are built into the Agreement to ensure that signatories comply with the rules.

Developing countries are given certain concessions, as follows:

(i) Countries classified by the UN as "least developed" are exempt from the rules on specific subsidies for exporters. Jamaica does not qualify for this concession.

(ii) Other countries, not so classified, are exempt from the rules for a period of eight years beginning on January 1, 1995, but also are required to:

- \* phase out export subsidies within the eight year period,
- \* not increase the level of export subsidies beyond the level existing on January 1, 1995,
- \* phase out subsidies based on a domestic content requirement within five years.
- \* introduce no new subsidy in the prohibited category,

(iii) Developing countries are exempt from countervailing action if it is found that the level of subsidies does not exceed 2 percent of the value of exports.

It is evident from these provisions that the ASCM has far-reaching implications for Jamaica's export policy, given that Jamaica is a signatory to the Agreement, and given the present structure of incentive schemes that exists in Jamaica. While some leeway is permitted, through the allowance of an 8-year adjustment period, the policy itself will have to be examined with a view to bringing it into conformity with the rules by the end of that period.

Meanwhile, it is worth noting that the outcome of this process, in terms of the specific set of policy measures that Jamaica eventually adopts, is not predetermined. The question of conformity with the rules is a matter to be determined on a case-by-case basis. The rules as presently structured also allow for some flexibility.

In particular, there is room for maintaining or introducing certain kinds of incentive measures, *provided they are not restricted to exporters or to a specific industrial sector but are made generally available, for example, to all manufacturers.*

Furthermore, so far as measures in favour of exporters are concerned, it is still permissible to grant remission or draw-back of the actual level of import duties charged on imported inputs that are used in production of an export product. This measure does not constitute an export subsidy within the accepted interpretation of the Agreement. However, it eventually becomes redundant in the context of a generalized movement towards elimination of tariffs on imported inputs as is now occurring in Jamaica's tariff reform program.

As to the particular rationale that Jamaica must follow what other countries are doing, this is

modified to some extent by the WTO rules. In particular, to the extent that the new rules prohibiting specific subsidies to exporters apply uniformly to all countries and all countries are made to observe the rules, this removes those items from the list that Jamaica must consider matching to remain competitive with other countries.

However, that still leaves open a wide range of incentives which do not come under the rules and which will continue to skew the balance of competitive advantage among countries in favour of those which have established those incentives. Jamaica must remain on the alert to maintain its competitive position in these areas.

#### 4.7 The Structure of the Tax System

One area of incentives that is of special concern, and will become increasingly so as countries move away from specific (exporter-targeted) fiscal incentives in accordance with the prohibitions of WTO, is that of the corporate income tax generally applicable to all firms in the country.

In this connection, it is of interest to compare available estimates of *the level of effective corporate tax rates* in selected countries including Jamaica (see Table A.18). It turns out that Jamaica's effective corporate tax rates for both the sectors of manufacture and services are significantly lower than the average of all developing economies in this sample. These estimates are especially instructive because they provide measures of the effective rate with and without tax holidays. Therefore, one can readily infer what would be the result of eliminating the tax-holidays component of the incentive package. In Jamaica's case, the result would be a higher tax rate in manufacture and a much lower tax rate in services. Even then, Jamaica's rates would still remain below average.

Another issue concerns *the structure of tax rates* in Jamaica across different categories of income (profits, dividends, capital gains, and personal income) and on savings. Various studies have been done on this issue and it appears to be undergoing policy review by the Government of Jamaica. It is also currently a matter of public debate, especially as concerns the matter of double taxation of dividends.

#### 4.8 What Next, in the Era of WTO?

Certain broad policy directions seem clear, as regards the path to be taken to foster continued growth of exports in an export-led strategy for Jamaica in the post-Uruguay-Round international environment.

One set of policy directions concerns *the structure of incentive schemes*. Along with the effort to achieve conformity with WTO rules, attention must be given to redesigning the whole structure of incentives so as to achieve greater coherence among the different components, uniformity and consistency in application, simplicity and transparency in their operation, and a clear identification of performance standards. In this connection, it is worth revisiting the proposal for an *omnibus incentive code*.

The administrative support and ease of access provided by relevant public sector agencies need to be upgraded and constantly monitored.



As fiscal incentives are made uniform in an across-the-board review of tax rates applicable to general business, the balance can properly shift from the pursuit of fiscal incentives as such and the special status they confer on particular sectors to the increasingly important issue of providing support services for firms in the areas of production, scientific research and product development, finance, and market access.

Another set of policy directions relate to the other side of the coin of the incentive regime: the *disincentives* that face exporters, due to deficiencies in physical and social infrastructure, in administrative efficiency of the public sector, and in aspects of the social environment (crime, praedial larceny, etc.). A systematic effort must be made to address directly these disincentives.

Finally, manifold ongoing changes in the international economic environment, involving not only the role of WTO, but also developments within this hemisphere (NAFTA, ACS, FTAA), in Europe (EU, LOME), and beyond, point to the crucial need to develop a dynamic and flexible trade policy focused on promoting Jamaica's interest and on strategic bargaining to defend those interests in all the relevant international arenas and fora. Exporters must constantly monitor, and seek to influence, the formulation and implementation of such a trade policy.

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### Summary of Chapter 4

- \* *Incentives and disincentives are two sides of the same coin. Both are important insofar as they affect directly and indirectly operating costs, transactions costs, and profitability of export activity and ease of market access.*
- \* *A balanced export policy would seek to address both sides of the coin in a consistent and integrated manner. In the long term, incentive schemes are effective in contributing to sustained economic development only if they are combined with policies that directly seek to remove the disincentives associated with other features of the economic environment.*
- \* *Jamaica has a complex structure of incentive schemes: a system of protected import-substitution, export incentives, export processing zones, and trade preferences.*
- \* *This whole system of incentives has been under critical scrutiny for some time. Changes have been taking place in some components and there are proposals for change in others. The system of trade preferences is under serious challenge.*
- \* *Concern for a pro-import substitution/anti-export bias in the structure of incentives has been considerably weakened in recent years, due to trade liberalization and deregulation of the domestic economy. These changes may have shifted the balance significantly in favour of exports.*
- \* *One economic rationale for export incentives is that they are necessary to maintain competitive parity with other countries. It is therefore relevant to assess exactly how Jamaica stands in relation to the pattern of incentives prevailing in other countries. This assessment is made through comparison with a selected group of Asian countries, with other Free Zones in the Caribbean region, and with the special case of Trinidad & Tobago. Jamaica's incentive system turns out to be strong in tax exemptions and tariff relief for exporters, but it is weaker in many other respects.*
- \* *The new rules emerging from the Uruguay-Round-Agreement may render moot the possibility of adjusting upwards Jamaica's existing structure of incentives or introducing new ones, as far as certain types of measures in favour of exporters are concerned. It has become necessary to examine the existing structure to bring it into conformity with the rules in a definite time frame.*
- \* *The outcome, in terms of the specific set of incentive measures that Jamaica adopts is not predetermined and allows for some flexibility. In particular, there is still room for maintaining or introducing certain kinds of incentive measures, provided they are not restricted to exporters or to a specific industrial sector but are made generally available.*
- \* *As countries move away from specific (exporter-targeted) fiscal incentives, one area that will be of increasing concern is that of the rate of corporate income tax generally applicable to all firms, and the structure of tax rates across different categories of income*

*(profits, dividends, capital gains, and personal income).*

- \* *Certain broad policy directions seem clear as regards the path to be taken to foster continued growth of exports in the era of the WTO:*
  - (1) redesigning the whole structure of incentives so as to achieve coherence, uniformity, transparency, and clear performance standards;*
  - (2) upgrading the administrative support system in the public sector;*
  - (3) addressing directly the disincentives and constraints that face exporters;*
  - (3) shifting the balance from pursuit of fiscal incentives as such to the increasingly important issue of providing support services for firms in the areas of production, scientific research and development, finance, and market access;*
  - (4) developing a dynamic and flexible trade policy, focused on promoting Jamaica's interest and on strategic bargaining to defend those interests in all the relevant international arenas and fora.*

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## JAMAICA'S EXPORTERS: A MICROECONOMIC PROFILE

### 5.1 Microeconomic Analysis

The conditions for successful export growth depend heavily on the capability of the individual exporting firm and on the design of policies that effectively reinforce and strengthen that capability.

Accordingly, in undertaking this study, it was considered important to deepen the analysis by examining the characteristic features and problems of export activity as they appear at the microeconomic level of the individual exporting firm. There are inherent limitations of aggregate data in this respect. Since there are also evident differences across export sectors and firms, it therefore seemed necessary and useful to try to quantify the nature of those differences and assess the ways in which they relate to export performance.

In this regard, the analysis could be especially useful for export policy in helping to identify and locate the specific needs and interests of exporters.

The results of this microeconomic analysis are presented in this chapter. The analysis is carried out in two steps.

First, statistics are constructed on the characteristics of exporting firms in terms of the size distribution of firms by employment, the distribution by sectors of production, and the distribution by location of their operations in the different parishes of the island. This is done using the list of registered exporters regularly compiled and updated by JAMPRO. The list contains two classes of exporters: Approved and Provisional, distinguished by the frequency of shipments. Provisional exporters make three or less shipments per year, Approved make more.

Second, the analysis focuses on survey data generated by a stratified random sample of exporting firms selected from the JAMPRO list of approved exporters for intensive interviewing using a specially designed questionnaire instrument. Statistical analysis of the responses to the questionnaire is done so as to identify distinctive patterns among exporters.

### 5.2 Descriptive Characteristics of Exporting Firms

Altogether, there are 908 registered firms in the JAMPRO list as of November 1995. Of these, 494 are on the Approved List and 414 on the Provisional List. These two groups are examined separately here so as to identify characteristics within each group and for comparison between groups. In addition, a three-way comparison is made between the data for these two groups and data for all establishments in Jamaica obtained from the STATIN data-base.<sup>9</sup>

From analysis of the data, presented in Tables B.01 to B.09 in Appendix B, the following features

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<sup>9</sup> The STATIN data-base is restricted to "large establishments", defined to consist of establishments with 10 or more employees, and excludes the sectors of Agriculture, Government, and Free Zones. Adjustments are made in the JAMPRO data-base for comparison. Remaining incomparabilities in the data are considered to be of minor significance.

stand out.

1. In terms of size, as measured by number of employees per firm, *approved exporters are typically larger than average compared with all-Jamaica establishments*, proportionally more than twice as many firms (49.5 percent compared with 23.9 percent) being in the above-50-employees group (Table B.01). This difference holds for all sectors and subsectors, with the singular exception of the Transportation, Storage & Communication sector. One may infer from this that there are in fact significant scale advantages involved in the export business, at least from the standpoint of active (frequent) exporting.
2. *Provisional exporters are typically smaller than average* (only 14.6 percent in the above-50-employees group), compared with both the all-Jamaica establishments and approved exporters (Table B.01). The only exception to this general rule is the sector of Printing, Publishing & Allied Industries. Consistent with the previous finding, this suggests that there are also scale economies involved in going from infrequent to frequent exporting.
3. Though being generally larger than average, *exporting firms (approved list) tend to cluster around the lower end of the size distribution*: 41 percent are in the 1-25-employees range, 57 percent in the 1-50 range, and 74 percent in the range of 1-100 employees (Table B.02). Of all firms on the approved list, 85 percent are in the range of 1-200 employees.
4. The highest concentration of *small firms* (1-25 employees) on the approved list is in the sectors of Transportation, Storage & Communication (75 percent), Agriculture, Forestry & Fishing (67 percent), Distributive Trade (60 percent).
5. The *largest firms* (above 200 employees) on the approved list are in Utilities (931 employees per firm), Financial, Legal & Business Services (591 employees per firm), Construction (591 employees per firm), Mining (271 employees per firm). With a much larger than average size of firm, these sectors also have a correspondingly high share of total employment, 22 percent altogether, though representing only 7 percent of the population of firms on the approved list.
6. *Exporting firms are heavily concentrated in manufacture*, 61 percent of all approved exporters and 48 percent of provisional exporters being in this sector (Tables B.02 and B.06). Excluding agriculture, the proportions are respectively 78.3 percent and 65.4 percent (Table B.01). In contrast, only 37 percent of all-Jamaica establishments are in manufacture (Table B.01).
7. Within the sector of manufacture, exporting firms are concentrated in the sub-sectors of Food, Beverages & Tobacco (25 percent of approved exporters in the sector, 47 percent of provisional exporters), Garments, Textiles & Leather (30 percent of approved, 16 percent of provisional), Chemicals, Petroleum, Rubber & Plastics (19 percent of approved, 11 percent of provisional) (Tables B.04 and B.08).
8. *Outside of manufacture, the heaviest concentration is in Agriculture, Forestry & Fishing* (23 percent of all approved exporters, 27 percent of all provisional) (Tables B.02 and B.06). There is also a relatively high proportion of provisional exporters (15 percent) in Transportation, Storage and Communication and of approved exporters (8 percent) in Distributive Trade.
9. Within agriculture, there is a very heavy concentration of firms (59.5 percent of approved exporters, 77.9

percent of provisional) in the sub-sector of Roots, Pulses, Vegetables and other domestic crops (Tables B.03 and B.07). In contrast, only about a third of the firms in agriculture are in traditional export crops. This relative weighting of firms in the agricultural subsectors may involve a certain amount of selection bias in the JAMPRO list (some sub-sectors appear to be under-represented, e.g. sugar, bananas), but it does point to *the emergence of the non-traditional agricultural exporters as a major factor in agriculture*.

10. As to *the spatial/geographical distribution of firms*, a very high proportion of firms (74 percent of the approved list, 70 percent of the provisional list) are located in the greater Kingston metropolitan area (Kingston, St. Andrew, St. Catherine) (Tables B.05 and B.09). A much smaller proportion is found in St. James (6 and 8 percent, respectively, of the approved and provisional list) and Manchester (4 percent), and the rest are widely dispersed in other parishes. Only 6 percent of firms on the approved list and 1 percent of the provisional list are located in the Free Zone.

### 5.3 The Sample Survey of Exporters

For the interview survey, a sample of 100 exporting firms was selected from the JAMPRO list of approved exporters by the method of stratified random sampling. Stratification was based on sector, size, and location. Interviews were held during the period of December 1995 to April 1996 by a team of seasoned interviewers hired by the survey-firm contracted for undertaking the survey. Interviewees were typically the owner or a top officer of the firm and were assured of strict anonymity and confidentiality in the treatment of information given in the interview.

Of the firms interviewed, 45 provided a set of answers sufficiently comprehensive to be considered usable for analysis. The analysis presented here is based on these responses. Of the remaining firms in the sample, some refused to be interviewed, some gave only a very limited set of answers, and the relevant officers of some firms could not be contacted in the allotted time period.

The survey instrument consisted of an extensive questionnaire constructed for the purpose of this study. The questions focused on the following areas of interest as they relate to the firms' exporting capability:

- (a) the firm's ownership, management and organizational structure;
- (b) the firm's entry into exports;
- (c) the firm's growth and adjustment to change;
- (d) competitive advantage, strengths/weaknesses;
- (e) incentives, constraints, and barriers faced by the firm;
- (f) strategic planning and decision-making;
- (g) investment financing;
- (h) research and product development;
- (i) support/assistance for exporters.

In many cases, the questions utilize a quantitative rating system so as to enable the firm to give its own internal evaluation in a quantitative form. The element of subjectivity involved here is intentional: the survey aims to capture the perceptions of exporters regarding their own situation. At the same time, by being quantitative, the ratings allow direct comparison across firms. They also permit measuring the magnitude and direction of perceived changes over time and, hence, capturing the dynamic of changing conditions as

perceived by exporters. The ratings generated by this sort of self-evaluation test, insofar as they are representative of the population of exporting firms, constitute an important objective feature of the situation that export policy must take into account.

In general, the results provide a highly detailed set of information on a wide range of relevant features of the exporting firm and the conditions in which it operates. From this information a rich, multi-dimensional and complex picture emerges of Jamaica's exporters. A discussion of the specific findings is presented in the following sections, with reference to the relevant tables in Appendix C.

#### 5.4 Profile of Owners and Managers

(Table C.01) The top two officers of the firm tend to cluster in the age group 40-49. There is a much higher incidence of the first officer in the upper age ranges, and none at all in the below 30 range. The second and third officers are more dispersed in age, the third officer being generally more evenly distributed in all age groups below 60.

(Table C.01) There is a low proportion of females compared with males at all levels of top officers, the lowest at the third level. The ratio of females to males is 1/3.8 at the first level, 1/3 at the second, and 1/6.7 at the third.

(Table C.02) The educational level of all three officers is typically high, much higher than for the general population: 60 percent or more have at least a secondary education, 40 percent or more have post-secondary education. Among first officers, there is an impressive 75.5 percent with post-secondary education, and 26.7 percent with advanced degrees.

(Table C.02) The level of proficiency in a foreign language is generally low, and falls very sharply from the first- to the third-officer level.

(Table C.03) Experience of foreign travel and residence (in all dimensions, i.e. frequency, destination, duration) is very strong at the first officer level, weaker at the second, and weakest at the third.

(Table C.04) In terms of previous occupation of current owners, the highest proportion, 34.1 percent, come from former employees of small, medium, and large firms (including former managers/technical workers). The next highest, 20.4 percent, were previously owner/operators of their own company or self-employed. A significant proportion, 13.6 percent, come from various professions (academic/doctor/lawyer/engineer/scientist). The rest come from a variety of other occupations.

#### 5.5 Structure of the Firm

(Table C.05) The ownership structure of firms is quite varied and has changed significantly over the years. The most common are the limited liability and corporate forms. Their share of firms has increased significantly from 44.4 percent at the start to 55.6 percent today. The family-business and sole

proprietorships, which previously dominated the corporate form, have both declined. Joint ventures have also declined. Partnerships have maintained a steady share of 11.1 percent. Firms registered on the stock exchange were non-existent at the start, but today have a share of 4.4 percent. The incidence of foreign ownership of firms has decreased.

(Table C.06) A high proportion of firms, 41.9 percent, are structured as part of a larger unit (company/group/organization). Most of them are small in relation to the whole unit. One-half represent 20 percent or less of total turnover of the unit. As regards their internal structure, 60 percent of firms report having an organization chart.

(Table C.07) The profile of distribution of firms by valuation of total assets appears to be very flat across the range of valuations reported. This profile looks very different from that of the size distribution by number of employees which clusters around the lower end of the size distribution. This would imply that the ratio of assets to employees declines as the employee-size of the firm increases.

(Table C.08) The firm's ratio of exports to sales averages around 50%. The distribution of this ratio across firms is bi-polar: there is a high proportion of firms with either a high or low exports/sales ratio and a low proportion for intermediate levels of this ratio.

## 5.6 Entry into Exports, Change, and Adjustment

(Table C.09) A striking dynamic of entry into exports is sharply revealed in this table. At the start (before 1950), most firms are oriented to the domestic market, with a very small proportion of existing firms (about 20 percent) beginning to export. Over time, as the firm population increases, the proportion of exporters increases. There is a slight decline in this proportion in the early 1960s, but a big jump occurs in the 1965-1969 period. By the early 1970s one-half of existing firms are exporters. In the early 1980s another big jump occurs and the process of entry into exports sharply accelerates so that by the early 1990s almost all firms are exporters.

By reference to the analysis of exchange rate movements presented in Chapter 3, it can be seen that the timing of this process of accelerated entry into exports correlates remarkably closely with the period of sustained depreciation of the exchange rate.

(Table C.10) As to the factors influencing the decision of firms to get into exports, the highest rating is given to "the opportunity to earn foreign exchange". Devaluation of the Jamaican dollar is ranked fourth. These two ratings confirm the crucial significance of the foreign exchange mechanism as a determining factor in export behaviour and performance.

The competitive advantage of an existing company ranks second. This seems eminently reasonable, and it confirms that competitive advantage is a necessary requirement for successful entry into export. One index of potential competitive advantage that matters is strong performance in the domestic market (rank = 9). Strong performance in the CARICOM market appears to be less significant (rank = 11). Other features of the firm's competitive situation that matter, in descending order of significance, are: international travel/contact (rank = 7), link with existing business interest (rank = 10), existence of surplus production capacity (rank = 12). These factors would serve also to focus the firm's interest on getting into the export



market. Interestingly, saturation of the domestic market for the firm's product ranks lowest of all (rank = 15), lower than the existence of surplus production capacity. This suggests that the cost of holding idle capacity is a stronger stimulus to export than reaching a barrier in the domestic market (which may be associated with high returns). Unsolicited offer of a purchase contract is an exogenous factor that plays a strong role (rank = 6).

Observed success in export by other companies also matters. This indicates a significant role of imitative behaviour. But, note that it is the success of other companies in a different product line that matters more (rank = 8) than success in the same or related product line (rank = 14). This suggests that imitation is not just a simple herd effect or pure copying, but more of a calculated response to the general climate of success in and support for export.

Government support evidently plays a key role, both through the offer of incentives (rank = 3) and through government-sponsored campaigns (rank = 5). However, access to special funding schemes has a relatively low rank (= 13). It seems here that it is not the existence of special funding schemes as such that matters. Other dimensions of funding, such as the terms and conditions of loan availability, may matter more. This supports the view outlined earlier and further developed below that the finance factor plays a complex multi-dimensional role.

(Table C.11) This table gives exporters' perception of the obstacles and difficulties involved in exporting, their relative ranking today and at the start. From this, one can infer the magnitude and direction of the changes that have occurred in the interim since the start of exports. Altogether, 27 different factors are evaluated. They are ranked in terms of their rating as obstacles/difficulties operating today. Ratings of 3.00 and above are considered moderate to very high. There are thirteen factors that fall in this range. Of these the highest by far is the cost of finance. Another dimension of finance, i.e. the collateral requirement, also ranks high at fifth place. In second place is an input factor, the cost of energy. Other input factors that rank highly are: cost of imported inputs (#4), supply of local raw materials (#6), labour (cost #7, supply of skilled labour #9, motivation/attitude of employees #10), packaging (#11), shipping (#12), and supply of water/irrigation (#13). The risk of changing exchange rate comes in third. This confirms the finding, reported in Chapter 3, that foreign exchange risk, associated with uncertainty and high variance in the exchange rate, is a negative factor in exports. The level of crime (#8) figures as a significant factor in the social and economic environment.

Of interest also is the change in significance of these factors over time, in terms of both magnitude and direction. All of the factors that receive top rating today (#16 and above) have increased in significance over time. The biggest increase has occurred in the cost of finance, thus placing the finance factor ahead again by far. Three other factors show exceptionally large increases (more than 40%): risk of changing exchange rate (47.35%), cost of labour (49.77%), and packaging (44.08%). Most of the factors that receive low rating today (below #16) have declined in significance and, in this sense, have improved. Four factors that show the biggest improvements are: telecommunications (-16.39%), quality of management (-16.96), product quality (-14.16), and the company registration process (-23.83).

(Table C.12) Specific recent changes (over the past three years) are evaluated in terms of their impact, negative or positive, on exports and rated as to the degree of their impact from negative to positive. Of the eleven changes listed, two factors are considered to be negative (rated 3 or lower): the interest rate and inflation, with the interest rate being most negative. Six of them are considered to be neutral (rated between 3

and 4). Three are given a positive rating (above 4): NAFTA, CARICOM, and accelerated depreciation allowance.

### 5.7 Competitive Advantage: Strengths, Weaknesses, and Size of the Gap

(Table C.13) The ranking of the top three factors that provide exporters with a competitive advantage is striking. There is complete unanimity among exporters concerning the top two factors. In the first place is cost of energy. Second is access to government assistance. There is less agreement about the third position, but large size/scale of production clearly emerges as the dominant factor. Two other factors highly rated (by more than 50% of firms) are: use of advanced machinery and equipment, and domestic sourcing of raw materials.

(Table C.14) This table gives exporters' evaluation of their current strengths and weaknesses in a wide range of areas of the firm's operations, 56 such areas altogether, falling within 6 main groups. Thus, the evaluation involved here is both intensive and comprehensive. The evaluation is made against two different reference standards: one is the firm's local competitors, the other is its foreign competitors. By comparing these two ratings, one can then get a measure of the prevailing competitive gap between foreign and local competitors. A negative gap means foreign competitors are considered superior (i.e. have a competitive edge), a positive gap means domestic competitors are considered superior.

A clear pattern emerges here of unambiguous superiority of foreign competition in all but three areas. Of these three areas, local competitors have the biggest edge in pricing (group 1, #7). They have a very slight edge in management turnover (group 5, #3). Foreign and local competitors are equal in the average age of transport equipment (group 2, #9).

Foreign competitors are considered to have a big edge (more than 20 percent) in 11 areas, a moderate edge (between 10 and 20 percent) in 24 areas, and a small edge in the rest. The smallest difference (less than 5%, which may be judged insignificant) lies in 5 areas: market knowledge, distribution network, public relations, state of transport equipment, labour turnover, and labour relations.

### 5.8 Strategic Planning and Decision-making

(Table C.15) 71.1 percent of firms report having currently a business plan. A much smaller proportion of firms have had such plans on a regular continuing basis in the past five years. Only 26.7 percent report having 5 plans in that period (one per year). 11.1 percent report 3 plans, 8.9 percent report 2 plans, and 6.7 percent just 1 plan. Evidently, planning, if it is undertaken at all, is largely an irregular and unsystematic activity.

(Table C.16) Planning and decision-making require access to sources of information on factors affecting the firm's export business. Firms rate highest, by a wide margin, personal contact and travel as a source of information. Considered of high significance are: relations with other companies, and participation in trade shows/fairs. Moderately significant, in order of significance, are: trade magazines, newspaper reports, hiring of consultants, and government ministry/agency. The firm's banker gets a very low rating.

(Table C.17) The strategies that firms have followed in the past three years to improve performance of their export business are rated. In first place with the highest rating is: strategic alliance with a foreign company. In contrast, the lowest rating, by a wide margin, is given to strategic alliance with other local companies. Evidently, exporters are very much less disposed to building strategic alliances with local companies than they are with foreign companies. The second highest rating goes to improving the quality of products. Of the other listed strategies, a medium to high rating (between 3 and 4) is given to 7 strategies (ranked #3 to #9) and a low to medium rating (between 2 and 3) to 6 strategies (#10 to #15).

(Table C.18) When consideration is given to steps taken in the current period (1995) to improve competitive position, as distinct from strategies followed in the previous three years, a somewhat different picture emerges. In this context, what appears to matter most are three factors associated with production and technology: increased efficiency in use of existing machinery and equipment (#1), investment in new plant and equipment (#2), and increased use of computer system (#3). They are rated in the medium to high range, which is consistent with the rating given to them in Table C.17 (#6 and #7). Reappearing in this same range is the factor: upgrading the skill of workers (#7). Several factors now appear in this range that are either new or more highly rated: use of both in-house and outside research on product development (#4, #8), international sourcing of materials (#5), increasing the scale of production (#6), and getting on the Internet (#9). Forming strategic alliance with a foreign firm (#10) now has a lower rating in the medium to high range. An increased rating is given to cooperative links with local companies, but it is still relatively low in rank and rating.

The role of subcontracting, which is widely identified internationally as a key component of competitive strategy, is given a low rating here (#13, Table C.18). This factor is further examined in Table C.19. Its limited significance is confirmed: only one-third of firms are disposed to use this strategy and they assign a high degree of importance to its role in competitiveness.

From analysis of Tables C.17 and C.18, one finds both a certain consistency over time in the strategies pursued by exporting firms and a certain adaptiveness in strategic behaviour involving change in the policies pursued (presumably in response to changing conditions).

(Table C.20) Methods of export promotion and marketing are essential elements of competitive strategy. Ten specific methods are identified. The highest rating is given to periodic visits to customers abroad, in first place, and use of foreign subsidiaries and affiliates, in second place. Low to medium rating is given to other factors. Lowest rated is government-financed advertising campaigns.

## 5.9 Investment Financing

(Tables C.21, C.22) For both startup of a new enterprise and investment in an existing enterprise, the overall pattern of financing is quite similar: the predominant source of investment funds is equity capital. This source ranks highest with a normalized share of 58.4 percent for startup and 59.7 percent for investment. It is followed by loan capital with shares of 36.3 percent and 38.6 percent respectively.

As to the specific component sources of financing, there are some differences. The respective rankings are summarized in Box 5.1. The most significant single source for startup is the parent company/group (23.6 percent), followed by personal capital/savings (22.2 percent), and loans by family and friends (15.8 percent). The most significant single source for investment funds is retained earnings/reserves (49.2 percent). Commercial bank loans rank second for investment (33.9 percent), but come in much lower at fourth for startup (10.1 percent).

*Box 5.1* Ranking Sources of Investment Capital

Rank	Startup Funds	Percent (normalized)	Investment Funds	Percent (normalized)
	MAJOR SOURCES		MAJOR SOURCES	
1	Equity capital	58.4	Equity capital	59.7
2	Loan capital	36.3	Loan capital	38.6
3	Other	5.3	Other	1.7
	SPECIFIC COMPONENTS		SPECIFIC COMPONENTS	
1	Parent company/group	23.6	Retained earnings/reserves	49.2
2	Personal capital/ savings	22.2	Commercial bank loan	33.9
3	Loan by family or friends	15.8	Parent company/group	9.1
4	Commercial bank loan	10.1	Development bank loan	4.8
5	Development bank loan	7.8	Other	1.7
6	Sale/mortgage of property	5.5	Issue of shares	1.1
7	Other	5.3	Sale/mortgage of property	0.3
8	Issue of shares	4.4		
9	Sale of previous business	2.7		
10	Venture capital company	1.6		
11	Credit union	1.1		
<p><i>Note:</i> Ranking is based on normalized percent of funds, equal to mean percent of funds across reporting firms weighted by the corresponding percent of firms and normalized so as to sum to 100%.</p>				

These rankings are, in part, indicative of the preferences of exporting firms for different financing alternatives. Such firms evidently pursue a significantly different strategy of financing for startup activity vis-à-vis investment in an existing enterprise. In both cases, there is a definite preference for non-bank

financing as the primary source of funds. Bank financing turns out to be a relatively inferior source, but it is much less so in the case of new investment than for startup. Various forms of equity are highly ranked, the highest being internal funds, either in the form of retained earnings/reserves or funding by the parent company/group. Issue of shares gets a lower ranking, which is consistent with a prevailing view that firms are averse to control by "outsiders". It appears, however, that this consideration is much weaker for startup firms than for existing enterprises.

These rankings may also be taken to reflect, in part, the lending policies of financial institutions. In particular, financial institutions may seek to limit exposure for startup activity, considered to be higher risk, and prefer to lend to existing enterprises with a known track record and collateral assets. This policy would be consistent with risk-averse behaviour on their part. It would of course make it necessary for startup enterprises to seek funding elsewhere, hence the much greater significance assigned to a variety of non-bank sources for startup funds.

It may well be also that these rankings are simply indicative of the structure of available financing opportunities as determined by the state of development of the capital market. This is suggested by the fact that formal financial institutions and share issue generally have a low rank compared with internal sources (retained earnings/reserves, parent company/group), personal capital/savings, family/friends, and property transfers.

### 5.10 Research and Development Activity

(Table C.23) 44.4 percent of firms report engaging in some form of in-house R&D activity. Of these firms, one-half have an identifiable organized unit mainly concerned with such activity, employing about five persons working on average 32.5 hours per week. The other half have no such unit, but employ 2 to 3 persons working on average 18.3 hours per week in R&D activity.

Very little joint cooperative effort with other companies/agencies in R&D activity occurs. Only 17.8 percent of firms report such efforts. Outside contracting/hiring of R&D activity is also limited: only 24.4 percent of firms report doing this. The firms that do engage in R&D activity rate highly the perceived benefits from it.

(Table C.24) The amount spent on R&D activity is typically small. The median amount of the annual budget is in the range of US\$20,000 - \$50,000. Only 8.8 percent of firms report budgets exceeding \$100,000, and a half of these have budgets exceeding \$1 million.

(Table C.25) Less than half of the firms, 46.7 percent, report having plans for introducing any new export products.

Despite the rather limited role of R&D activity indicated here, it does appear from the data in Tables C.17 and C.18 that increasing emphasis is being placed by firms on this activity as an element of competitive strategy.

(Table C.26) As to the technical support in production and product development received from outside agencies, firms rate most highly, by a wide margin, the contribution of the Rural Agricultural

Development Authority (RADA). The Food Technology Institute and Scientific Research Council occupy second and third place with a low to medium rating. They are followed, in order of rank, by UWI, Bodles, UTech, and the government chemist.

### 5.11 Incentives for Exporters

(Table C.27) A very small proportion of firms, no more than 8.9 percent, report receiving any incentives under existing government programmes. This suggests a limited range of coverage by these programmes, at least among this sample of exporters.

(Table C.28) As to specific forms of incentive/relief, four of these are rated high to very high in terms of assistance to the firm's operations in general: corporate income tax, general consumption tax, customs duty, and excise duty. For assistance in promoting exports, the corporate income tax receives an even higher rating than for the firm's general operations and is ranked along with the common external tariff (CET) in the high to very high rating. Three other forms of incentive/relief appear significant for exports, with a medium rating for each: accelerated depreciation allowance, interest rate, stamp duty.

### 5.12 Labour Relations

(Table C.29) In the past five years, about 28 percent of firms have had union representation by workers. About 23 percent on average have faced industrial action by workers, between 1 and 5 such actions and 1-10 hours lost in most cases. Only 8.8 percent of firms report heavy loss exceeding 30 hours, and these cases occur once in the five-year period.

A significant and increasing proportion of firms, 55.6 percent in 1995, have adopted a productivity incentive scheme for workers. A very small, but apparently increasing, proportion have an employee share ownership programme, 8.9 percent in 1995. A large majority of firms, around 73 percent, have an employee health benefit plan.

### 5.13 Support Network for Exporters

(Table C.30) Eight of the business organizations that provide various forms of support/assistance to firms are evaluated. Of these, the Jamaica Exporters' Association receives the highest rating, in the range of low to medium, for assistance to exports. Ranked second and third in the same range are the Shipping Association of Jamaica and the Jamaica Manufacturers' Association. A low to very low rating is given to the rest.

(Table C.31) Nine government agencies are evaluated for support/assistance to exports. JAMPRO comes out on top with a rating slightly above medium. It is followed, in order of rank, by the Customs Department, EX-IM Bank, Bureau of Standards, and Port Authority, each with a low to medium rating. The lower ranks, with a low to very low rating, are occupied by the three development banks and the Jamaica Tourist Board.

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### Summary of Chapter 5

- \* *The microeconomic analysis presented here addresses the characteristic features and problems of export activity as they appear at the microeconomic level of the individual exporting firm. This is especially useful for export policy in helping to identify and locate the specific needs and interests of exporters.*
- \* *Statistics are constructed on the characteristics of exporting firms in terms of the size distribution of firms by number of employees, the distribution by sectors of production, and the distribution by location of their operations. This is done using the list of registered exporters regularly compiled and updated by JAMPRO.*
- \* *The analysis focuses also on survey data generated by a stratified random sample of exporting firms selected for intensive interviewing, using a specially designed questionnaire instrument. Statistical analysis of the responses to the questionnaire is done so as to identify distinctive patterns among exporters.*
- \* *The specific findings concern the following areas as they relate to the firms' exporting capability, needs, and potential for growth and development:*
  - (a) profile of owners and managers;*
  - (b) structure of the firm;*
  - (c) entry into exports, change, and adjustment;*
  - (d) competitive advantage: strengths, weaknesses, and size of the gap;*
  - (e) strategic planning and decision-making;*
  - (f) investment financing;*
  - (g) research and development activity;*
  - (h) incentives for exporters;*
  - (i) labour relations;*
  - (j) support network for exporters.*
- \* *In general, the results provide a highly detailed set of information on a wide range of relevant features of the exporting firm and the conditions in which it operates. From this information a rich, multi-dimensional, and complex picture emerges of Jamaica's exporters.*

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## REQUIREMENTS FOR AN EXPORT-LED STRATEGY

### 6.1 Maintaining the Momentum of Growth

In the past decade, Jamaica's exporters have put in a strong performance in terms of overall growth of exports and emergence of new dynamic sectors. In this respect, they have shown a capacity to respond to available opportunities, even while facing a combination of both favourable and unfavourable circumstances. This strong performance has been a major factor in sustaining employment, income, foreign exchange earnings, and general development in the economy as a whole.

The important question that arises at this time is how to maintain this momentum of export growth and the associated process of export-led development.

### 6.2 The Requirements for Success

There is no simple formula for success in this effort.

The preceding analysis has explored the complexity of the problem by seeking to bring into proper focus the key issues and underlying factors, and carrying out a careful and detailed investigation of the empirical relationships involved both at the macroeconomic and microeconomic level. In addition, analysis of the survey data has proved especially valuable in giving insights into the objective situation and perception of the individual exporter and how the exporter seeks to cope with the business of exporting in that situation.

The results of this analysis make it possible to identify sharply the factors that need to be addressed from the standpoint of export policy and to draw inferences about the specific requirements of such policy.

These requirements are classified and enumerated in detail in Table 6.1. They are broken down into six key components, representing the crucial functions and capabilities that this investigator considers to be involved in the successful carrying out of exporting activity. These components are as follows:

1. market expansion and diversification;
2. production and technology;
3. product innovation;
4. supply of inputs;
5. financing;
6. information generation and access.

The specific roles and activities that need to be performed in these areas are organized according to three groups of actors: the individual exporter, business organizations (the Jamaica Exporters' Association being a key actor in this regard), and the government.

In this way, a definite identification of the respective roles and responsibilities of these actors can be made, and structured according to a definite analytic conception of crucial elements of the overall process of



export growth and development.

### 6.3 General Requirements

It should be evident that no single component or requirement taken by itself is sufficient. What is required is an integrated mix of many different elements.

It is therefore necessary to strive for consistency and balance among the different elements. This implies, furthermore, a need for coordination and constant monitoring of policy.

In general terms, what is required is the **building of an export culture** in Jamaica that is grounded in a broad-based commitment to the goals of export-led development. That culture itself grows out of and is founded on the concrete and specific activities identified in this analysis.

**Table 6.1**  
**Requirements for an Export-led Strategy in the Jamaican Economy**

		<b>Actors, Roles, and Activities</b>		
		<b>The Individual Exporter</b>	<b>The Supporting Environment</b>	
<b>Functions and Capabilities</b>			<b>Business Organizations (JEA)</b>	<b>Government</b>
1. Market expansion and diversification	<ul style="list-style-type: none"> <li>* participate in trade shows/exhibitions</li> <li>* learn foreign language &amp; travel</li> <li>* anticipate/project market trends</li> <li>* strategic alliance/networking with local &amp; foreign firms</li> <li>* organize advertising/promotion campaigns</li> <li>* strategic planning: develop a market-sensitive, growth-focused strategy, keyed to product quality, range, and diversity</li> <li>* make small size into an asset: emphasize uniqueness, aim for the high-end of the market</li> </ul>	<ul style="list-style-type: none"> <li>* information services</li> <li>* consultancy services</li> <li>* language translation services</li> <li>* organize trade shows/exhibitions</li> <li>* arrange group/sector trade missions</li> <li>* joint ventures with public-sector agencies</li> <li>* active participation and guidance in trade-policy formulation</li> </ul>	<ul style="list-style-type: none"> <li>* information services</li> <li>* consultancy services</li> <li>* active anti-dumping program in local market</li> <li>* pursue non-tariff barriers in foreign markets</li> <li>* ensure efficiency and security in operation of customs</li> <li>* sponsor trade missions, trade shows, joint advertising campaigns</li> <li>* activist trade policy/strategic bargaining in all international arenas/forums</li> <li>* incentives/awards for market success</li> <li>* stable, competitive exchange rate</li> </ul>	
2. Production and technology	<ul style="list-style-type: none"> <li>* quality control</li> <li>* packaging</li> <li>* training/motivation/compensation of workers; management upgrading</li> <li>* retooling/repair of plant &amp; equipment</li> <li>* adjust technology/scale of production</li> <li>* improve management/organization of production flow &amp; inventory control</li> <li>* flexible specialization/subcontracting</li> <li>* strategic alliance/networking with local &amp; foreign firms</li> </ul>	<ul style="list-style-type: none"> <li>* information services</li> <li>* consultancy services</li> <li>* building networks of producers within/ across sectors for mutual assistance</li> </ul>	<ul style="list-style-type: none"> <li>* create and support productivity centres for sector-specific technical assistance at firm level</li> <li>* education and training programs for flexible skills and creative work</li> <li>* incentives/matching-grants for retooling efforts</li> <li>* support for quality control methods &amp; testing, efficient bureau of standards</li> <li>* control of crime, praedial larceny</li> <li>* adequate transportation system</li> </ul>	

**Table 6.1 (continued)**  
**Requirements for an Export-led Strategy in the Jamaican Economy**

<b>Functions/Capabilities</b>	<b>Individual Exporter</b>	<b>Business Organizations (JEA)</b>	<b>Government</b>
3. Product innovation	<ul style="list-style-type: none"> <li>* create active feedback from market to production through R&amp;D activity</li> <li>* active in-house research &amp; testing</li> <li>* hire/contract outside specialists</li> <li>* strategic alliance/networking with local &amp; foreign firms</li> <li>* strategic planning for product innovation</li> </ul>	<ul style="list-style-type: none"> <li>* information services</li> <li>* consultancy services</li> <li>* networking with government technical-support agencies and R&amp;D institutions</li> </ul>	<ul style="list-style-type: none"> <li>* create and support productivity centres for sector-specific technical assistance at firm level</li> <li>* support for R&amp;D activities/institutions actively linked to demand &amp; needs of firms</li> <li>* incentives/awards for new products</li> </ul>
4. Supply of inputs	<ul style="list-style-type: none"> <li>* local and international sourcing of inputs to achieve cost efficiency</li> <li>* strategic alliance/networking with local &amp; foreign firms</li> <li>* strategic planning</li> </ul>	<ul style="list-style-type: none"> <li>* information services</li> <li>* consultancy services</li> <li>* building networks of suppliers</li> </ul>	<ul style="list-style-type: none"> <li>* reduction/elimination of tariffs on imported inputs</li> <li>* infrastructure development (roads, rail, airport, transportation, shipping, water, energy, telecommunications, industrial parks, etc.)</li> <li>* ensure efficiency and security in operation of customs</li> </ul>
5. Financing	<ul style="list-style-type: none"> <li>* internal financial controls, accounting, &amp; asset management</li> <li>* local and international sourcing of finance</li> <li>* strategic alliance/networking with local &amp; foreign firms</li> <li>* strategic planning</li> </ul>	<ul style="list-style-type: none"> <li>* information services</li> <li>* consultancy services</li> <li>* organize targeted financial programs/packages through local/international lending agencies</li> <li>* sensitize lenders to special financial needs of exporters</li> </ul>	<ul style="list-style-type: none"> <li>* organize/underwrite financial programs/packages for loans to private sector</li> <li>* target financial support for small-business development</li> <li>* foster development of capital market to promote forms of equity and venture capital</li> <li>* maintain policies for macroeconomic stability (low inflation, low interest rate, stable exchange rate)</li> </ul>

**Table 6.1 (continued)**  
**Requirements for an Export-led Strategy in the Jamaican Economy**

<b>Functions/Capabilities</b>	<b>Individual Exporter</b>	<b>Business Organizations (JEA)</b>	<b>Government</b>
6. Information generation & access	<ul style="list-style-type: none"> <li>* use of the Internet</li> <li>* tap into local &amp; international data agencies &amp; networks</li> <li>* use of computer hardware &amp; software</li> <li>* storage and analysis of information on track record of the firm</li> <li>* timely filing of accurate information with government agencies</li> <li>* use of technical consultants</li> <li>* trade journals, magazines, newspapers</li> <li>* strategic alliance/networking with local &amp; foreign firms</li> </ul>	<ul style="list-style-type: none"> <li>* information services</li> <li>* consultancy services</li> <li>* networking with government information and technical-support services</li> </ul>	<ul style="list-style-type: none"> <li>* information services</li> <li>* consultancy services</li> <li>* preparation/publication of timely &amp; accurate information</li> <li>* target support for development and use of information technology</li> <li>* build a national data network</li> </ul>

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**APPENDIX A**

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**Tables A.01 - A.18**

**Table A.01**  
**Comparative Growth Rate of Merchandise Exports, by Region/Area/Country, 1950-1993**  
 (average annual growth rates)

Region/Area/Country	1950-1993	1950-1960	1960-1970	1970-1980	1980-1990
World	11.2	6.4	9.2	20.4	6.1
Developed Market Economies	11.4	7.0	10.0	19.0	7.6
North America	10.2	5.4	9.0	17.5	6.0
Europe	11.7	8.0	10.1	19.4	8.1
Asia	16.1	16.1	17.3	20.8	8.9
Developing Economies	11.0	3.6	6.7	25.8	3.2
Latin America & Caribbean	8.8	2.4	5.0	20.8	2.1
Africa	9.0	3.8	9.5	21.5	-2.5
Asia	12.5	4.1	6.5	29.8	4.5
Oceania	9.9	9.2	10.4	15.3	4.0
Eastern Europe	9.8	11.9	8.4	18.0	2.4
Barbados	7.3	3.4	4.8	18.1	-3.2
Chile	8.8	3.7	10.0	15.9	8.0
Costa Rica	9.5	3.1	10.6	18.3	4.6
Cyprus	8.9	3.6	7.8	17.9	4.7
Dominican Republic	6.1	5.0	2.1	14.7	-2.1
Hong Kong	15.4	-0.3	14.5	22.4	16.8
<b>Jamaica</b>	<b>7.5</b>	<b>14.6</b>	<b>5.2</b>	<b>12.4</b>	<b>0.7</b>
Malta	15.2	7.1	15.1	30.2	9.2
Mauritius	8.9	2.1	2.4	21.0	14.4
Singapore	12.0	-0.1	3.3	28.2	9.9
Sri Lanka	4.8	0.9	-1.6	13.5	5.5
Taiwan	20.7	6.5	23.2	28.6	14.8
Trinidad & Tobago	7.9	10.5	4.8	23.6	-9.9

Source: UNCTAD, *Handbook of International Trade and Development Statistics*, New York: United Nations, 1995.

**Table A.02**  
**Exports of Jamaica, 1980, 1986-1995: Value, Composition, and Growth Rate**

Exports	1980	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1986-1995 (avg.)
<b>Value (US\$millions)</b>												
Merchandise Exports	962.7	590.8	709.2	883.0	1000.4	1157.5	1150.7	1053.6	1075.4	1219.5	1429.0	
Traditional	831.0	404.6	467.8	619.4	712.6	899.6	835.4	735.6	713.2	777.0	916.2	
Non-Traditional	108.7	162.5	224.5	241.7	252.6	223.1	226.5	296.0	345.1	405.8	464.3	
Re-exports	22.2	23.7	16.9	21.9	35.2	34.8	88.8	22.0	17.1	36.7	49.7	
Services	458.9	821.6	925.0	1189.6	1172.9	1170.8	1097.8	1241.9	1407.7	1454.1	1651.6	
Tourism	240.6	516.0	594.9	525.0	593.0	740.0	764.0	858.1	942.6	919.0	1020.9	
Other Services	218.3	305.6	330.1	664.6	579.9	430.8	333.8	383.8	465.1	535.1	630.7	
<b>Total Exports</b>	<b>1421.6</b>	<b>1412.4</b>	<b>1634.2</b>	<b>2072.6</b>	<b>2173.3</b>	<b>2328.3</b>	<b>2248.5</b>	<b>2295.5</b>	<b>2483.1</b>	<b>2673.6</b>	<b>3080.6</b>	
<b>Percentage</b>												
Merchandise Exports	67.7	41.8	43.4	42.6	46.0	49.7	51.2	45.9	43.3	45.6	46.4	
Traditional	58.5	28.6	28.6	29.9	32.8	38.6	37.2	32.0	28.7	29.1	29.7	
Non-Traditional	7.6	11.5	13.7	11.7	11.6	9.6	10.1	12.9	13.9	15.2	15.1	
Re-exports	1.6	1.7	1.0	1.1	1.6	1.5	3.9	1.0	0.7	1.4	1.6	
Services	32.3	58.2	56.6	57.4	54.0	50.3	48.8	54.1	56.7	54.4	53.6	
Tourism	16.9	36.5	36.4	25.3	27.3	31.8	34.0	37.4	38.0	34.4	33.1	
Other Services	15.4	21.6	20.2	32.1	26.7	18.5	14.8	16.7	18.7	20.0	20.5	
<b>Total Exports</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	
<b>Total Exports/GDP</b>	<b>53.0</b>	<b>52.5</b>	<b>50.5</b>	<b>47.3</b>	<b>46.1</b>	<b>52.0</b>	<b>45.1</b>	<b>70.4</b>	<b>59.6</b>	<b>59.2</b>		
<b>Growth Rate</b>												
Merchandise Exports		3.9	20.0	24.5	13.3	15.7	-0.6	-8.4	2.1	13.4	17.2	10.1
Traditional		6.2	15.6	32.4	15.0	26.2	-7.1	-11.9	-3.0	8.9	17.9	10.0
Non-Traditional		5.5	38.2	7.7	4.5	-11.7	1.5	30.7	16.6	17.6	14.4	12.5
Re-exports		-29.3	-28.7	29.6	60.7	-1.1	155.2	-75.2	-22.3	114.6	35.4	23.9
Services		17.8	12.6	28.6	-1.4	-0.2	-6.2	13.1	13.4	3.3	13.6	9.0
Tourism		26.8	15.3	-11.7	13.0	24.8	3.2	12.3	9.8	-2.5	11.1	10.2
Other Services		5.1	8.0	101.3	-12.7	-25.7	-22.5	15.0	21.2	15.1	17.9	11.6
<b>Total Exports</b>		<b>11.5</b>	<b>15.7</b>	<b>26.8</b>	<b>4.9</b>	<b>7.1</b>	<b>-3.4</b>	<b>2.1</b>	<b>8.2</b>	<b>7.7</b>	<b>15.2</b>	<b>9.0</b>

Sources: BOJ, Balance of Payments, various issues; PIOJ, Economic and Social Survey Jamaica, various issues; IMF, International Financial Statistics Yearbook 1995.



**Table A.03**  
**Destination of Jamaica's Merchandise Exports: by Trading Areas and Countries, 1985, 1989-1994**

Trading Areas/ Countries	Percent of Exports						
	1985	1989	1990	1991	1992	1993	1994
CARICOM	7.23	6.99	6.28	5.86	5.67	5.62	4.76
Barbados	2.11	1.40	1.40	1.35	1.19	1.25	1.05
Trinidad & Tobago	2.76	3.20	2.81	2.83	2.52	2.08	1.69
EEC	23.86	31.07	29.43	27.65	23.46	25.98	23.47
UK	16.81	16.00	16.99	18.52	17.34	14.27	13.47
Germany	0.68	0.30	0.29	0.33	0.42	0.52	0.53
Netherlands	2.32	12.05	12.19	9.69	5.41	6.22	4.04
NAFTA	49.75	49.62	39.38	42.52	48.16	47.74	48.45
Canada	16.50	13.20	10.68	11.06	11.55	11.11	12.11
USA	33.24	34.70	28.65	31.41	36.52	36.30	36.07
Mexico	0.01	1.72	0.05	0.05	0.10	0.33	0.27
EFTA	2.94	5.22	12.21	12.23	13.59	8.73	9.97
Norway	2.33	4.70	10.33	7.83	11.02	8.26	8.37
AFRICAN LOME	3.37	2.87	4.72	4.14	5.02	5.87	3.81
Ghana	2.95	2.65	4.55	3.93	4.81	5.76	3.47
CACM	0.81	0.25	0.05	0.07	0.06	0.03	0.03
LAIA	0.58	1.64	1.18	1.26	0.34	0.95	2.93
OPEC	0.01	0.02	0.01	0.03	0.01	0.35	0.04
Other Countries			6.39	5.58	3.36		
Hong Kong		0.09	0.02	0.13	0.04	0.01	0.06
Puerto Rico		0.16	0.13	0.09	0.41	0.44	0.23
Japan		0.93	0.69	0.85	1.46	1.83	1.29
Russia		2.66	4.44	2.40	0.41	0.82	3.50
Singapore		0.00	0.00	0.01	0.01	0.01	0.01
Korea, South		0.55	0.01	0.00	0.01	0.00	0.01

Source: STATIN, External Trade, various issues.

**Table A.04**  
**Cross-Country Comparison of Export Concentration**  
**by Product Mix and Destination of Exports, Various Years**

Country	Concentration Index*							
	Product Mix				Export Destination			
	1980	1990	1992		1980	1985	1991	Average
Barbados	0.367	0.292			0.322	0.758	0.303	0.461
Chile	0.406	0.396	0.308					
Costa Rica	0.316	0.281	0.303		0.273	0.254	0.327	0.285
Cyprus	0.148	0.210	0.203					
Dominican Repub.	0.345	0.454	0.383		0.453	0.661	0.531	0.548
Hong Kong	0.164	0.146	0.152					
<b>Jamaica</b>	<b>0.769</b>	<b>0.640</b>	<b>0.406</b>		<b>0.276</b>	<b>0.314</b>	<b>0.295</b>	<b>0.295</b>
Malta	0.223	0.407	0.505					
Mauritius	0.688	0.342	0.332					
Singapore	0.235	0.194	0.183					
Sri Lanka	0.387	0.279	0.232					
Taiwan	0.117	0.086	0.089					
Trinidad & Tobago	0.636	0.451	0.422		0.413	0.455	0.334	0.400

Source: UNCTAD, *Handbook of International Trade and Development Statistics* 1992, 1995.

Note: \*The concentration index is computed according to the Hirschman index, normalized to make values ranging from 0 (lowest concentration) to 1 (highest concentration).

**Table A.05**  
**Jamaica: Composition of Exports, at SITC 2-digit level, 1970-1993**  
 (ranked by percent share in 1993)

SITC #	Section Name	1970	1980	1990	1991	1992	1993
28	Metalliferous ores and metal scrap	67.17	78.14	65.07	62.47	54.46	51.23
84	Articles of apparel and clothing accessories	2.17	0.75	7.40	9.19	14.79	16.45
06	Sugar, sugar preparations and nes honey	11.67	5.89	7.67	8.35	8.04	9.51
05	Vegetables and fruit	6.79	2.45	5.71	6.73	6.80	6.48
11	Beverages	1.43	2.06	2.66	2.54	2.94	3.42
07	Coffee, tead, cocoa, spices	2.30	1.73	1.99	2.10	2.64	2.75
09	Miscellaneous edible products and preparations	0.08	0.23	0.62	1.06	1.08	1.24
08	Fish, crustaceans and molluscs	0.03	0.00	0.29	0.58	0.90	1.23
55	Essential oils and perfume materials	1.00	0.71	1.35	1.19	1.25	1.17
33	Petroleum, petroleum products	2.61	1.91	1.47	1.03	0.98	0.64
89	Miscellaneous manufactured articles nes,	0.60	0.83	0.53	0.53	0.61	0.56
52	Inorganic chemicals	0.00	0.23	0.19	0.35	0.58	0.54
12	Tobacco and tobacco manufactures	0.60	1.07	0.62	0.53	0.48	0.54
62	Rubber manufactures nes	0.00	0.04	0.56	0.70	0.52	0.43
54	Medicinal and pharmaceutical products	0.16	0.24	0.28	0.21	0.36	0.37
04	Cereal and cereal preparations	0.04	0.21	0.43	0.18	0.30	0.36
02	Dairy products and birds' eggs	0.06	0.01	0.17	0.23	0.31	0.34
82	Furniture and parts thereof	0.05	0.33	0.30	0.31	0.32	0.34
69	Manufactures of metal nes	0.34	0.39	0.31	0.27	0.25	0.29
66	Non-metallic mineral manufactures nes	0.48	0.07	0.26	0.26	0.39	0.25
29	Crude animal and vegetable materials nes	0.10	0.24	0.31	0.30	0.29	0.25
27	Crude fertilizers and crude minerals	0.57	0.15	0.20	0.13	0.18	0.20
42	Fixed vegetable oils and fats	0.01	0.00	0.00	0.02	0.00	0.14
65	Textile yarn, fabrics, made-up articles nes and related products	0.10	0.13	0.10	0.24	0.20	0.13
77	Electrical machinery, apparatus and appliances nes and parts	0.24	0.46	0.27	0.21	0.22	0.13
85	Footwear	0.23	0.15	0.20	0.23	0.15	0.11
53	Dyeing, tanning and colouring materials	0.34	0.20	0.13	0.14	0.11	0.11
01	Meat & meat preparations	0.02	0.03	0.07	0.13	0.15	0.11
59	Chemical materials and products nes	0.17	0.15	0.13	0.11	0.09	0.09
08	Feeding stuff for animals excluding unmilled cereals	0.02	0.01	0.06	0.08	0.09	0.09
64	Paper, paperboard and articles of paper pulp, of paper or paperboard	0.09	0.10	0.05	0.04	0.09	0.08
63	Cork and wood manufactures (excluding furniture)	0.01	0.02	0.02	0.02	0.03	0.07
68	Non-ferrous metals	0.05	0.16	0.09	0.06	0.09	0.05
58	Artificial resins and plastic materials and cellulose esters and ethers	0.00	0.06	0.05	0.03	0.04	0.04
78	Road vehicles (including air cushion vehicles)	0.00	0.00	0.03	0.04	0.04	0.04
74	General industrial machinery and equipment nes and parts nes	0.11	0.05	0.05	0.08	0.07	0.03
73	Metalworking machinery	0.00	0.00	0.03	0.03	0.01	0.03
25	Pulp and waste paper	0.01	0.01	0.03	0.02	0.02	0.02
83	Travel goods, handbags and similar containers	0.03	0.01	0.11	0.09	0.06	0.01
00	Live animals chiefly for food	0.02	0.00	0.00	0.00	0.01	0.01
57	Explosives and pyrotechnics	0.00	0.00	0.00	0.00	0.01	0.01
72	Machinery specialized for particular industries	0.00	0.07	0.00	0.01	0.00	0.01
75	Office machines and automatic data processing equipment	0.00	0.00	0.00	0.00	0.00	0.01
87	Professional, scientific and controlling instruments and apparatus nes	0.01	0.00	0.00	0.00	0.00	0.01
51	Organic chemicals	0.08	0.00	0.02	0.09	0.01	0.01
81	Sanitary, plumbing, heating and lighting fixtures and fittings nes	0.01	0.01	0.01	0.00	0.00	0.01
21	Hides, skins and furskins, raw	0.00	0.00	0.00	0.00	0.00	0.01
99	Other nes	0.00	0.00	0.00	0.00	0.00	0.01
	All other items	0.25	0.67	0.14	0.08	0.02	0.01
	All Sections	100.00	100.00	100.00	100.00	100.00	100.00

Source: STATIN, External Trade, various issues.

**Table A.06**  
**Jamaica: Exports of Manufactures, by Factor Intensity Category, SITC 2-digit level, 1970-1993**  
 (percentage of total exports)

SITC #	Section Name	1970	1980	1990	1991	1992	1993
5,6,7,8	<b>All Manufactures</b>	<b>6.47</b>	<b>5.82</b>	<b>12.59</b>	<b>13.44</b>	<b>20.33</b>	<b>21.41</b>
	<b>Human Capital/Technology Intensive</b>	<b>2.55</b>	<b>3.19</b>	<b>3.42</b>	<b>3.16</b>	<b>3.10</b>	<b>2.85</b>
51	Organic chemicals	0.08	0.00	0.02	0.09	0.01	0.01
53	Dyeing, tanning and colouring materials	0.34	0.20	0.13	0.14	0.11	0.11
54	Medicinal and pharmaceutical products	0.16	0.24	0.28	0.21	0.36	0.37
55	Essential oils and perfume materials	1.00	0.71	1.35	1.19	1.25	1.17
57	Explosives and pyrotechnic products	0.00	0.00	0.00	0.00	0.01	0.01
58	Artificial resins and plastic materials and cellulose esters and ethers	0.00	0.06	0.05	0.03	0.04	0.04
59	Chemical materials and products, nes	0.17	0.15	0.13	0.11	0.09	0.09
62	Rubber manufactures nes	0.00	0.04	0.56	0.70	0.52	0.43
67	Iron and steel	0.06	0.58	0.11	0.01	0.01	0.00
68	Non-ferrous metals	0.05	0.16	0.09	0.06	0.09	0.05
69	Manufactures of metal nes	0.34	0.39	0.31	0.27	0.25	0.29
71	Power generating machinery and equipment	0.00	0.01	0.00	0.00	0.00	0.00
72	Machinery specialized for particular industries	0.00	0.07	0.00	0.01	0.00	0.01
73	Metalworking machinery	0.00	0.00	0.03	0.03	0.01	0.03
74	General industrial machinery and equipment nes and parts nes	0.11	0.05	0.05	0.08	0.07	0.03
75	Office machines and automatic data processing equipment	0.00	0.00	0.00	0.00	0.00	0.01
76	Telecommunications and sound recording and reproducing apparatus	0.00	0.05	0.00	0.00	0.00	0.00
77	Electrical machinery, apparatus and appliances nes and parts	0.24	0.46	0.27	0.21	0.22	0.13
78	Road vehicles (including air cushion vehicles)	0.00	0.00	0.03	0.04	0.04	0.04
79	Other transport equipment	0.00	0.00	0.00	0.00	0.00	0.00
81	Sanitary, plumbing, heating and lighting fixtures and fittings nes	0.01	0.01	0.01	0.00	0.00	0.01
87	Professional, scientific and controlling instruments and apparatus nes	0.01	0.00	0.00	0.00	0.00	0.01
88	Photographic apparatus, equipment and supplies and optical goods nes	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Unskilled Labour Intensive</b>	<b>2.61</b>	<b>1.38</b>	<b>8.11</b>	<b>9.06</b>	<b>15.53</b>	<b>17.05</b>
61	Leather, leather manufactures nes and dressed furskins	0.03	0.01	0.00	0.00	0.00	0.00
65	Textile yarn, fabrics, made-up articles nes and related products	0.10	0.13	0.10	0.24	0.20	0.13
82	Furniture and parts thereof	0.05	0.33	0.30	0.31	0.32	0.34
83	Travel goods, handbags and similar containers	0.03	0.01	0.11	0.09	0.06	0.01
84	Articles of apparel and clothing accessories	2.17	0.75	7.40	8.19	14.79	16.45
85	Footwear	0.23	0.15	0.20	0.23	0.15	0.11
	<b>Natural Resource Intensive</b>	<b>0.72</b>	<b>0.42</b>	<b>0.53</b>	<b>0.67</b>	<b>1.09</b>	<b>0.95</b>
52	Inorganic chemicals	0.00	0.23	0.19	0.35	0.58	0.54
56	Fertilizers manufactured	0.14	0.00	0.00	0.00	0.00	0.00
63	Cork and wood manufactures (excluding furniture)	0.01	0.02	0.02	0.02	0.03	0.07
64	Paper, paperboard and articles of paper pulp, of paper or paperboard	0.09	0.10	0.05	0.04	0.09	0.08
66	Non-metallic mineral manufactures nes	0.48	0.07	0.26	0.26	0.39	0.25
	<b>Other Manufactures</b>	<b>0.60</b>	<b>0.83</b>	<b>0.53</b>	<b>0.53</b>	<b>0.61</b>	<b>0.56</b>
89	Miscellaneous manufactured articles nes	0.60	0.83	0.53	0.53	0.61	0.56

Source: STATIN, External Trade, various issues.

**Table A.07**  
**Jamaica: Average Annual Growth-Rate of Exports, SITC 2-digit level, 1990-1993**

SITC#	Section Name	Growth Rate
	All sections	-2.85
75	Office machines and automatic data processing equipment	1580.19
42	Fixed vegetable oils and fats	1434.68
72	Machinery specialized for particular industries	292.80
88	Photographic apparatus, equipment and supplies and optical goods nes	136.87
81	Sanitary, plumbing, heating and lighting fixtures and fittings nes	104.18
03	Fish, crustaceans and molluscs	57.46
63	Cork and wood manufactures (excluding furniture)	56.22
51	Organic chemicals	42.16
52	Inorganic chemicals	41.67
84	Articles of apparel and clothing accessories	30.55
65	Textile yarn, fabrics, made-up articles nes and related products	25.14
09	Miscellaneous edible products and preparations	24.62
73	Metalworking machinery	22.77
02	Dairy products and birds' eggs	22.47
64	Paper, paperboard and articles of paper pulp, of paper or paperboard	20.95
01	Meat and meat preparations	19.17
54	Medicinal and pharmaceutical products	12.79
08	Feeding stuff for animals excluding unmilled cereals	12.52
61	Leather, leather manufactures nes and dressed furskins	8.98
07	Coffee, tea, cocoa, spices	8.71
04	Cereal and cereal preparations	8.13
11	Beverages	6.24
78	Road vehicles (including air cushion vehicles)	5.91
06	Sugar, sugar preparations and nes honey	4.76
58	Artificial resins and plastic materials and cellulose esters and ethers	3.85
66	Non-metallic mineral manufactures nes	2.31
27	Crude fertilizers and crude minerals	2.15
82	Furniture and parts thereof	1.92
05	Vegetables and fruit	1.49
89	Miscellaneous manufactured articles nes	-0.27
22	Oil seeds and oleaginous fruit	-1.38
69	Manufactures of metal nes	-3.67
74	General industrial machinery and equipment nes and parts nes	-4.29
12	Tobacco and tobacco manufactures	-5.91
55	Essential oils and perfume materials	-7.01
53	Dyeing, tanning and colouring materials	-7.53
29	Crude animal and vegetable materials nes	-8.90
62	Rubber manufactures nes	-9.13
25	Pulp and waste paper	-10.00
28	Metalliferous ores and metal scrap	-10.26
68	Non-ferrous metals	-10.43
59	Chemical materials and products, nes	-11.64
85	Footwear	-18.16
77	Electrical machinery, apparatus and appliances nes and parts	-21.71
33	Petroleum, petroleum products	-25.42
83	Travel goods, handbags and similar containers	-46.79
67	Iron and steel	-51.10
26	Textile fibres and their wastes	-72.23
	All others	N. A.

Source: STATIN, External Trade, various issues.

Note: N. A. = data not available.

**Table A.08**  
**Jamaica: Composition of Exports, All Categories, SITC 2-digit level, 1970-1993**  
 (ranked within section, by 1993 percentage share)

SITC #	Section Name	1970	1980	1990	1991	1992	1993
<b>0</b>	<b>Food and Live Animals</b>	<b>21.01</b>	<b>10.56</b>	<b>17.02</b>	<b>19.44</b>	<b>20.32</b>	<b>22.12</b>
06	Sugar, sugar preparations and nes honey	11.67	5.89	7.67	8.35	8.04	9.51
05	Vegetables and fruit	6.79	2.45	5.71	6.73	6.80	6.48
07	Coffee, tea, cocoa, spices	2.30	1.73	1.99	2.10	2.64	2.75
09	Miscellaneous edible products and preparations	0.08	0.23	0.62	1.06	1.08	1.24
03	Fish, crustaceans and molluscs	0.03	0.00	0.29	0.58	0.90	1.23
04	Cereal and cereal preparations	0.04	0.21	0.43	0.18	0.30	0.36
02	Dairy products and birds' eggs	0.06	0.01	0.17	0.23	0.31	0.34
01	Meat and meat preparations	0.02	0.03	0.07	0.13	0.15	0.11
08	Feeding stuff for animals excluding unmilled cereals	0.02	0.01	0.06	0.08	0.09	0.09
00	Live animals chiefly for food	0.02	0.00	0.00	0.00	0.01	0.01
<b>1</b>	<b>Beverages and Tobacco</b>	<b>2.02</b>	<b>3.14</b>	<b>3.28</b>	<b>3.07</b>	<b>3.42</b>	<b>3.96</b>
11	Beverages	1.43	2.06	2.66	2.54	2.94	3.42
12	Tobacco and tobacco manufactures	0.60	1.07	0.62	0.53	0.48	0.54
<b>2</b>	<b>Crude Materials, Inedible, except Fuels</b>	<b>67.87</b>	<b>78.55</b>	<b>65.63</b>	<b>62.92</b>	<b>54.96</b>	<b>51.71</b>
28	Metalliferous ores and metal scrap	67.17	78.14	65.07	62.47	54.46	51.23
29	Crude animal and vegetable materials nes	0.10	0.24	0.31	0.30	0.29	0.25
27	Crude fertilizers and crude minerals	0.57	0.15	0.20	0.13	0.18	0.20
25	Pulp and waste paper	0.01	0.01	0.03	0.02	0.02	0.02
21	Hides, skins and furskins, raw	0.00	0.00	0.00	0.00	0.00	0.01
<b>3</b>	<b>Mineral Fuels, Lubricants and Related Materials</b>	<b>2.61</b>	<b>1.91</b>	<b>1.47</b>	<b>1.10</b>	<b>0.98</b>	<b>0.64</b>
33	Petroleum, petroleum products	2.61	1.91	1.47	1.03	0.98	0.64
<b>4</b>	<b>Animal and Vegetable Oils and Fats and Waxes</b>	<b>0.01</b>	<b>0.01</b>	<b>0.00</b>	<b>0.02</b>	<b>0.00</b>	<b>0.14</b>
<b>5,6,7,8</b>	<b>All Manufactures</b>	<b>6.47</b>	<b>5.82</b>	<b>12.59</b>	<b>13.44</b>	<b>20.33</b>	<b>21.41</b>
84	Articles of apparel and clothing accessories	2.17	0.75	7.40	8.19	14.79	16.45
55	Essential oils and perfume materials	1.00	0.71	1.35	1.19	1.25	1.17
89	Miscellaneous manufactured articles nes	0.60	0.83	0.53	0.53	0.61	0.56
52	Inorganic chemicals	0.00	0.23	0.19	0.35	0.58	0.54
62	Rubber manufactures nes	0.00	0.04	0.56	0.70	0.52	0.43
54	Medicinal and pharmaceutical products	0.16	0.24	0.28	0.21	0.36	0.37
82	Furniture and parts thereof	0.05	0.33	0.30	0.31	0.32	0.34
69	Manufactures of metal nes	0.34	0.39	0.31	0.27	0.25	0.29
66	Non-metallic mineral manufactures nes	0.48	0.07	0.26	0.26	0.39	0.25
65	Textile yarn, fabrics, made-up articles nes and related products	0.10	0.13	0.10	0.24	0.20	0.13
77	Electrical machinery, apparatus and appliances nes and parts	0.24	0.46	0.27	0.21	0.22	0.13
85	Footwear	0.23	0.15	0.20	0.23	0.15	0.11
53	Dyeing, tanning and colouring materials	0.34	0.20	0.13	0.14	0.11	0.11
59	Chemical materials and products, nes	0.17	0.15	0.13	0.11	0.09	0.09
64	Paper, paperboard and articles of paper pulp, of paper or paperboard	0.09	0.10	0.05	0.04	0.09	0.08
63	Cork and wood manufactures (excluding furniture)	0.01	0.02	0.02	0.02	0.03	0.07
68	Non-ferrous metals	0.05	0.16	0.09	0.06	0.09	0.05
58	Artificial resins and plastic materials and cellulose esters and ethers	0.00	0.06	0.05	0.03	0.04	0.04
78	Road vehicles (including air cushion vehicles)	0.00	0.00	0.03	0.04	0.04	0.04
74	General industrial machinery and equipment nes and parts nes	0.11	0.05	0.05	0.08	0.07	0.03
73	Metalworking machinery	0.00	0.00	0.03	0.03	0.01	0.03
83	Travel goods, handbags and similar containers	0.03	0.01	0.11	0.09	0.06	0.01
72	Machinery specialized for particular industries	0.00	0.07	0.00	0.01	0.00	0.01
51	Organic chemicals	0.08	0.00	0.02	0.09	0.01	0.01
	All other manufactures	0.25	0.65	0.13	0.01	0.02	0.06
	<b>All sections</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Source: STATIN, External Trade, various issues.

**Table A.09**  
**Comparison of Competitive Performance:**  
**Exports of Dynamic Sectors\*, by Region and Country**  
**(average annual percent, 1979-1981, 1991-1993)**

Country/Region	Exports of Dynamic Sectors			
	Share of OECD Market (%)		Share of Exports of Country/Region (%)	
	1979-1981	1991-1993	1979-1981	1991-1993
<b>CARIBBEAN<sup>1</sup></b>	0.17	0.20	15.71	49.48
Barbados	0.01	..	56.45	52.19
Dominican Republic	0.04	0.13	23.54	80.04
<b>Jamaica</b>	<b>0.02</b>	<b>0.03</b>	<b>10.92</b>	<b>40.17</b>
Trinidad & Tobago	0.01	0.01	1.93	11.96
<b>CENTRAL AMERICA<sup>2</sup></b>	0.13	0.19	15.87	47.96
Costa Rica	0.02	0.07	11.11	49.70
<b>LATIN AMERICA<sup>3</sup></b>	1.73	2.96	18.04	48.81
Chile	0.03	0.08	6.10	19.97
<b>ASIA (4 tigers)<sup>4</sup></b>	6.08	7.84	80.20	90.85
Singapore	0.56	1.33	50.26	90.41

Source: ECLAC, *Análisis de la Competitividad de los Países*, versión 2.0, Diciembre 1994.

Notes: \* Dynamic sectors consist of sectors of Types I and II, i.e. those in which a country or region has increasing market share in the OECD market.

<sup>1</sup> Barbados, Cuba, Dominican Republic, Haiti, Jamaica, Trinidad & Tobago.

<sup>2</sup> Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua.

<sup>3</sup> Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, Venezuela.

<sup>4</sup> Korea, Hong Kong, Singapore, Taiwan.

**Table A.10**  
**Fastest Growing Sectors in OECD Trade**  
**(Top 100 Sectors Ranked by Sector-share Growth Rate, SITC 3-digit Categories)**

SITC#	Description	Share in OECD Imports (annual average)		Change %
		1979-1981	1991-1993	
688	Uranium depleted in u235 and thorium and their alloys, waste and scrap	0.00017	0.00203	1,069.58
752	Automatic data processing machines and units thereof	0.86370	2.94014	240.41
759	Parts nes and accessories for use with machines of type #751 or #752	0.54029	1.69621	213.94
553	Perfumery, cosmetics and toilet preparations (excluding soaps) etc.	0.12713	0.32261	153.77
898	Musical instruments and parts and accessories	0.27346	0.68706	151.24
773	Equipment for distributing electricity	0.18210	0.45338	148.97
111	Non-alcoholic beverages, nes	0.02990	0.07154	139.26
776	Hermionic, cold cathode and photo-cathode valves and boots	0.80336	1.86625	132.31
872	Medical instruments and appliances	0.17280	0.38375	122.07
771	Electric power machinery	0.14573	0.31820	118.35
098	Edible products and preparations, nes	0.12814	0.26942	110.26
894	Babies carriages, toys, games, and sporting goods	0.55039	1.12470	104.35
893	Articles, nes of materials of the kinds described in section #58	0.49792	1.00357	101.55
541	Medicinal and pharmaceutical products	0.68889	1.37961	100.26
714	Engines and motors, non-electric, parts of engines and motors	0.40550	0.80748	99.13
931	Special transactions and commodities not classified according to kind	0.90403	1.79797	98.88
764	Telecommunications equipment nes, and parts	0.83914	1.65997	97.82
871	Optical instruments and apparatus	0.06584	0.12926	96.33
048	Cereal preparations and preparations of flour or starch of fruits or vegetables	0.16301	0.31119	90.90
831	Travel goods, shopping bags, handbags, satchels, brief-cases, wallets, purses, etc.	0.18909	0.34395	81.90
895	Office and stationery supplies	0.08242	0.14984	81.80
843	Outer garments, women's, girls' and infants', of textile fabrics	0.63929	1.16065	81.55
845	Outer garments and other garments	0.56682	1.02799	81.36
774	Electrical apparatus for medical purposes and radiological apparatus	0.13744	0.24811	80.52
844	Under garments of textile fabrics	0.17740	0.31844	79.50
772	Electrical apparatus for making and breaking and protection of electrical circuits etc.	0.59640	1.06064	77.84
812	Sanitary, heating, plumbing and lighting fixtures	0.18111	0.32128	77.39
122	Tobacco manufactured	0.13129	0.22988	75.09
514	Nitrogen-function compounds	0.34695	0.60443	74.21
897	Jewelry, goldsmiths' and silversmiths' wares, etc.	0.25390	0.43675	72.01
592	Starches, inulin and wheat gluten; albuminoidal substances; glues	0.10469	0.17900	70.98
761	Television receivers	0.25729	0.42957	66.96
612	Manufactures of leather or composition leathers; saddlery and harness; parts of footwear	0.05775	0.09634	66.82
846	Under garments, knitted or crocheted	0.30830	0.51082	65.69
821	Furniture and parts thereof	0.66148	1.09433	65.44
034	Fish, fresh (live or dead), chilled or frozen	0.39445	0.64556	63.66
778	Electrical machinery and apparatus, nes	0.75902	1.23259	62.39
741	Heating and cooling equipment and parts	0.34161	0.54859	60.59
781	Passenger motor vehicles	3.84880	6.08856	58.19
533	Pigments, paints, varnishes and related materials	0.19982	0.31598	58.13
036	Crustaceans and molluscs, fresh (live or dead), chilled, frozen, salted, in brine or dried, etc.	0.33769	0.52724	56.13
951	Armoured fighting vehicles, arms of war and ammunition therefor, and parts of arms nes.	0.07662	0.11878	55.03
037	Fish, crustaceans and molluscs, prepared or preserved	0.16251	0.24939	53.46
642	Paper and paperboard, cut to size or shape, etc.	0.27901	0.42762	53.26
628	Articles of rubber, nes	0.11116	0.17014	53.06
842	Outer garments, mens' and boys', of textile fabrics	0.48309	0.73703	52.57
554	Soap, cleansing and polishing preparations	0.13226	0.19923	50.63
899	Other miscellaneous manufactured articles, nes	0.27691	0.41574	50.13
	.../continued			



**Table A.10 (continued)**  
**Fastest Growing Sectors in OECD Trade**  
**(Top 100 Sectors Ranked by Sector-share Growth Rate, SITC 3-digit Categories)**

SITC#	Description	Share in OECD Imports (annual average)		Change %
		1979-1981	1991-1993	
679	Iron and steel castings, forgings and stampings, nes	0.03351	0.05020	49.83
775	Household type, non-electrical and electrical equipment, nes	0.49568	0.74145	49.58
874	Measuring, checking and controlling instruments and apparatus and parts and accessories, nes	0.78152	1.15175	47.37
743	Pumps (other than liquid pumps) and parts	0.39130	0.57264	46.34
783	Road motor vehicles, nes	0.13354	0.19509	46.10
046	Meal and flour of wheat and flour of meslin	0.00750	0.01082	44.32
792	Aircraft and associated equipment	1.15678	1.66363	43.82
847	Clothing accessories, of textile fabrics	0.11000	0.15803	43.66
516	Other organic chemicals	0.16792	0.24067	43.33
716	Rotating electric plants and parts thereof, nes	0.26383	0.37778	43.19
727	Food-processing machines and parts	0.07505	0.10740	43.10
022	Milk and cream	0.15584	0.22264	42.87
661	Lime, cement, and fabricated construction materials	0.13741	0.19593	42.59
635	Wood manufactures	0.19198	0.27042	40.85
728	Other machinery & equipment specialized for particular industries and parts	0.57537	0.80910	40.62
726	Printing and bookbinding machinery and parts	0.20022	0.28068	40.19
531	Synthetic organic dyestuffs, etc	0.15327	0.21209	38.38
763	Gramophones, including record players and tape decks	0.34703	0.48000	38.32
851	Footwear	0.75869	1.04217	37.37
598	Miscellaneous chemical products, nes	0.48398	0.66088	36.55
658	Made-up articles, wholly or chiefly of textile materials	0.21300	0.28888	35.62
515	Organo-inorganic and heterocyclic compounds	0.34006	0.45822	34.75
664	Glass	0.21327	0.28729	34.71
713	Internal combustion piston engine and parts etc.	0.78049	1.04567	34.10
892	Printed Matter	0.48254	0.64622	33.92
692	Metal containers for storage and transport	0.09766	0.13041	33.53
791	Railway vehicles	0.09374	0.12463	32.96
745	Other non-electrical machinery and parts	0.33238	0.44152	32.84
062	Sugar confectionery (except chocolate confectionery) and other sugar preparations	0.05233	0.06924	32.31
784	Parts and accessories, nes, for motor vehicles for sections #722, #781, #782, or #783	1.95869	2.58465	31.96
691	Structures and parts of structures	0.16664	0.21922	31.56
744	Mechanical handling equipment and parts	0.43064	0.56543	31.30
621	Materials of rubber	0.09535	0.12452	30.59
742	Pumps (including motor and turbo pumps) for liquid and parts	0.25140	0.32715	30.13
583	Polymerization and copolymerization products	0.93715	1.21835	30.01
749	Non-electrical parts and accessories	0.82737	1.06590	28.83
725	Paper mill and pulp mill machinery and parts	0.11435	0.14723	28.76
513	Carboxylic acids etc.	0.24117	0.30835	27.86
718	Other power generating machinery and parts	0.07965	0.10074	26.49
782	Motor vehicles for transport of goods or materials and special purpose motor vehicles	0.81216	1.02361	26.04
572	Explosives and pyrotechnic products	0.02325	0.02925	25.84
551	Essential oils, perfume and flavour materials	0.08786	0.10961	24.76
699	Manufactures of base metals, nes	0.60540	0.74996	23.88
633	Cork manufactures	0.02124	0.02630	23.80
848	Articles of apparel and clothing accessories of other than textile fabrics	0.29905	0.36679	22.65
641	Paper and paperboard	1.24630	1.52383	22.27
665	Glass ware	0.17253	0.21052	22.02
532	Dyeing and tanning extracts, and synthetic tanning materials	0.01414	0.01724	21.85
882	Photographic and cinematographic supplies	0.35251	0.42873	21.62
058	Fruit, preserved, and fruit preparations	0.27341	0.33197	21.42
273	Stone, sand and gravel	0.09126	0.11009	20.63
073	Chocolate and other food preparation containing cocoa	0.12171	0.14664	20.48

Source: ECLAC, *Análisis de la Competitividad de los Países*, versión 2.0, Diciembre 1994.

Note: nes = not elsewhere specified or included.

**Table A.11**  
**International Trade in Services, 1980-1993**

Region/ Economic Group/ Country/ Area	Exports of Services										
	Percent of total exports	Value, US\$millions, 1993					Average annual growth rates, 1980-1993				
		Merchandise insurance & freight	Passenger services & other transportation	Travel	Labour income	Other services	Merchandise, insurance & freight	Passenger services & other transportation	Travel	Labour income	Other services
<b>Developed Economies</b>	<b>23.3</b>	<b>82209</b>	<b>110632</b>	<b>212470</b>	<b>31625</b>	<b>296498</b>	<b>3.8</b>	<b>5.2</b>	<b>8.7</b>	<b>4.3</b>	<b>9.6</b>
North America	23.6	8223	32535	64428	1747	58427	3.9	8.9	12.8	9.0	17.4
Europe	25.2	61472	61575	135093	24924	208612	4.0	3.9	7.1	3.8	8.1
<b>Developing Economies</b>	<b>20.8</b>	<b>19219</b>	<b>28821</b>	<b>65255</b>	<b>34884</b>	<b>64370</b>	<b>8.4</b>	<b>4.5</b>	<b>8.6</b>	<b>3.0</b>	<b>9.5</b>
South America	10.0	2749	3868	5554	775	3692	4.5	5.2	7.2	6.8	3.1
Africa	28.2	1185	5620	6480	10121	5680	-3.0	4.2	6.5	4.4	8.5
E. & S. Asia	17.8	12569	12548	30712	11567	35106	12.8	8.7	12.9	4.5	12.9
Oceania	25.5	46	184	330	122	372	13.7	6.4	5.9	11.2	20.5
<b>C. America &amp; Caribbean</b>	<b>39.8</b>	<b>111</b>	<b>2843</b>	<b>13170</b>	<b>5032</b>	<b>9036</b>	<b>0.5</b>	<b>0.9</b>	<b>6.8</b>	<b>9.6</b>	<b>11.1</b>
Antigua & Barbuda	85.9	0	77	243	..	13	..	..	15.6	..	17.9
Aruba	33.9	10	65	467	3	46	-7.8	..	11.1	..	26.2
Bahamas	85.0	..	67	1279	..	104	..	-8.3	6.1	..	-1.6
Barbados	81.6	5	36	528	16	91	2.4	-4.4	5.8	4.2	7.0
Belize	50.0	..	13	69	17	34	..	-1.7	24.9	-6.8	20.7
Costa Rica	33.9	13	125	591	0	268	0.6	9.8	16.1	..	14.1
Dominica	57.3	0	5	29	20	12	..	..	19.3	6.5	11.9
Dominican Republic	81.0	14	71	1231	362	498	-0.1	15.2	16.3	5.4	12.6
El Salvador	61.3	..	80	79	795	203	..	9.2	14.6	24.1	7.1
Grenada	81.2	..	5	56	10	15	..	38.2	9.2	..	25.3
Guatemala	38.9	7	30	205	241	384	-0.5	-1.3	9.7	18.6	14.8
Haiti	65.0	2	2	23	123	2	-4.7	-3.7	-8.8	1.1	0.0
Honduras	28.1	11	48	32	125	114	2.4	3.2	2.1	39.8	14.8
Jamaica	58.8	6	167	951	242	114	-7.6	4.3	11.1	7.0	16.2
Mexico	35.7	..	938	6167	3026	6440	..	5.9	5.2	8.6	11.9
Netherlands Antilles	84.9	..	261	609	7	392	..	-7.2	3.7	1.3	18.1
Nicaragua	26.6	5	7	41	25	18	-1.8	-2.5	5.1	..	14.4
Panama	16.7	30	611	228	0	192	-1	0.4	2.2	..	2.7
St. Kitts & Nevis	71.4	..	4	67	0	8	..	..	19.4	-14.5	43.9
St. Lucia	61.4	0	16	166	0	13	..	..	12.5	..	..
St. Vincent & Grenadines	36.9	..	4	29	1	12	..	..	4.7	..	22.6
Trinidad & Tobago	20.7	9	211	81	20	65	..	-2.7	-4.8	9.5	-4.4

Source: UNCTAD, Handbook of International Trade and Development Statistics, New York: UN, 1995.

Table A.12 / Jamaica: Exports of Services (Value and Composition), 1980, 1986-1995

Exports	1980.	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
<b>Value (US\$millions)</b>											
Freight & Insurance	16.5	12.2	9.5	11.2	13.6	15.5	10.0	6.0	5.9	13.4	3.6
Freight	16.5	12.2	9.5	11.2	13.6	15.5	10.0	6.0	5.9	13.4	3.6
Insurance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other Transportation	97.0	136.1	154.5	157.4	184.8	195.0	161.2	189.0	167.3	231.4	273.4
Passenger Fares	61.9	80.6	105.8	107.9	115.7	117.6	88.9	96.4	99.4	127.0	130.0
Port Disbursement	30.2	39.5	38.9	40.1	53.8	59.2	63.1	79.9	38.4	103.0	141.8
Other	4.9	16.0	9.8	9.4	15.3	18.2	9.2	12.7	29.5	1.4	1.6
Travel	240.6	516.	594.9	525.	593.0	740.	764.0	858.1	942.6	919.0	1020.
Investment Income		10.5	5.7	10.1	11.7	15.1	14.0	17.1	65.0	55.4	89.8
Direct Investment		1.3	2.2	3.1	1.2	1.0	1.0	1.0	42.7	8.6	14.9
Other		9.2	3.5	7.0	10.5	14.1	13.0	16.1	22.3	46.8	74.9
Other Government		46.3	42.2	39.2	47.2	51.0	42.0	43.8	49.6	45.0	52.5
Other Private	65.7	100.5	118.2	446.7	322.6	154.2	106.6	127.9	177.3	189.9	211.4
NM Insurance	15.0	10.1	10.0	310.7	173.0	15.6	10.0	8.5	9.2	25.0	37.8
Other	50.7	90.4	108.2	136.0	149.6	138.6	96.6	119.4	168.1	164.9	173.6
<b>Total Services</b>	<b>458.9</b>	<b>821.6</b>	<b>925.0</b>	<b>1189.</b>	<b>1172.</b>	<b>1170.</b>	<b>1097.</b>	<b>1241.</b>	<b>1407.</b>	<b>1454.</b>	<b>1651.</b>
<b>Percentage</b>											
Freight & Insurance	3.6	1.5	1.0	0.9	1.2	1.3	0.9	0.5	0.4	0.9	0.2
Freight	3.6	1.5	1.0	0.9	1.2	1.3	0.9	0.5	0.4	0.9	0.2
Insurance											
Other Transportation	21.1	16.6	16.7	13.2	15.8	16.7	14.7	15.2	11.9	15.9	16.6
Passenger Fares	13.5	9.8	11.4	9.1	9.9	10.1	8.1	7.8	7.1	8.7	7.9
Port Disbursement	6.6	4.8	4.2	3.4	4.6	5.1	5.8	6.4	2.7	7.1	8.6
Other	1.1	1.9	1.1	0.8	1.3	1.6	0.8	1.0	2.1	0.1	0.1
Travel	52.4	62.8	64.3	44.2	50.6	63.2	69.6	69.1	67.0	63.2	61.8
Investment Income		1.3	0.6	0.8	1.0	1.3	1.3	1.4	4.6	3.8	5.4
Direct Investment		0.2	0.2	0.3	0.1	0.1	0.1	0.1	3.0	0.6	0.9
Other		1.1	0.4	0.6	0.9	1.2	1.2	1.3	1.6	3.2	4.5
Other Government		5.6	4.6	3.3	4.0	4.4	3.8	3.5	3.5	3.1	3.2
Other Private	14.3	12.2	12.8	37.6	27.5	13.2	9.7	10.3	12.6	13.1	12.8
NM Insurance	3.3	1.2	1.1	26.1	14.8	1.3	0.9	0.7	0.7	1.7	2.3
Other	11.0	11.0	11.7	11.4	12.8	11.8	8.8	9.6	11.9	11.3	10.5
<b>Total Services</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: BOJ, Balance of Payments, various issues.

**Table A.13**  
**Tourism Market of Central America & Caribbean:**  
**Market-Shares and Market-Share Growth-Rates,**  
**by Country**

Country	Market share 1993 %	Growth rate % 1980-1993 (Avg. annual)
Antigua & Barbuda	1.85	8.8
Aruba	3.55	4.3
Bahamas	9.71	-0.7
Barbados	4.01	-1.0
Belize	0.52	18.1
Costa Rica	4.49	9.3
Dominica	0.22	12.5
Dominican Republic	9.35	9.5
El Salvador	0.60	7.8
Grenada	0.43	2.4
Guatemala	1.56	2.9
Haiti	0.17	-15.6
Honduras	0.24	-4.7
Jamaica	7.22	4.3
Mexico	46.83	-1.6
Netherlands Antilles	4.62	-3.1
Nicaragua	0.31	-1.7
Panama	1.73	-4.6
St. Kitts & Nevis	0.51	12.6
St. Lucia	1.26	5.7
St. Vincent & Grenadines	0.22	-2.1
Trinidad & Tobago	0.62	-11.6
C. America & Caribbean	100.00	..

Source: Calculated from data in UNCTAD, *Handbook of International Trade and Development Statistics*, New York: UN, 1995.

**Table A.14**  
**Relation between Jamaica's Total Exports, Real Exchange Rate, and Terms of Trade, 1965-1992:**  
**Regression Results**

Equation	Constant	DRER	TIME	DTOT	R <sup>2</sup>	DW	Rho	N
1	0.0008 (0.0308)	0.3755 (3.5058)	0.0010 (0.6769)		0.40	1.98	-0.19 (-0.98)	26
2	-0.0007 (-0.0286)	0.3837 (3.6399)	0.0012 (0.7910)	0.2563 (1.1355)	0.44	2.04	-0.22 (-1.15)	26

*Note:* Results of OLS regression with time series data. Adjusted for first-order serial correlation of the error, by Cochrane-Orcutt iterative technique. t-statistics in parentheses. R<sup>2</sup> = coefficient of determination, adjusted for degrees of freedom. DW = Durbin Watson statistic. Rho = autocorrelation coefficient. N = number of observations.

Dependent variable = growth rate of exports of goods and non-factor services in constant 1988 US dollars;

DRER = rate of change in index of real exchange rate;

TIME = index of year;

DTOT = rate of change in index of terms of trade.

The basic hypothesis tested, as specified in equation 1, is that exports respond to changes in fundamentals expressed in the real exchange rate. If there is inertia in RER due to economic policy, changes in fundamentals may not be fully captured by RER and are represented by a trend variable, TIME. In the presence of inertia, the terms of trade (as an important component of the fundamentals) may be expected to exercise an independent influence. Accordingly this variable is added in equation 2.

**Table A.15**  
**Export Supply Functions, by Sector:**  
**Regression Estimates**

X	Equation	Constant	RER	Y*	X <sub>t-1</sub>	R <sup>2</sup>	DW	Rho	DF
Traditional	1	47.640 (0.98)	0.156 (0.52)	-4.309 (0.70)		0.37	1.93	0.64 (3.42)	18
	2	31.776 (1.12)	0.225 (0.91)	-3.529 (0.98)	0.676 (3.56)	0.34	1.98	-0.53 (0.13)	16
<i>Non-Traditional</i> Total	1	-33.281 (0.77)	0.798 (2.13)	5.124 (0.92)		0.71	1.99	0.29 (1.27)	18
	2	22.435 (0.80)	0.791 (2.90)	-2.548 (0.70)	0.532 (3.34)	0.74	1.96	-0.34 (1.31)	16
<i>Non-Traditional</i> Food	1	-126.100 (3.19)	0.552 (1.46)	15.108 (2.97)		0.75	1.98	-0.07 (0.30)	18
	2	-159.103 (2.64)	0.537 (1.16)	19.171 (2.53)	-0.160 (0.61)	0.73	1.90	0.02 (0.02)	16
<i>Non-Traditional</i> Beverages & Tobacco	1	3.217 (0.06)	-0.403 (0.78)	-0.340 (0.05)		0.02	2.22	0.12 (0.57)	18
	2	9.259 (0.22)	-0.266 (0.67)	-1.093 (0.20)	0.420 (2.21)	0.04	1.84	-0.44 (1.64)	16
<i>Non-Traditional</i> Crude Materials	1	-74.450 (0.78)	-0.657 (0.74)	9.258 (0.75)		0.12	1.91	0.11 (0.46)	18
	2	66.238 (0.89)	0.577 (0.81)	-8.689 (0.91)	0.545 (2.51)	0.17	2.17	0.45 (1.68)	16
<i>Non-Traditional</i> Apparel	1	-546.135 (2.93)	0.727 (0.97)	66.945 (2.87)		0.91	2.35	0.79 (6.33)	18
	2	-80.399 (1.53)	0.995 (1.82)	9.326 (1.39)	0.719 (7.18)	0.93	2.07	-0.29 (1.10)	16
<i>Non-Traditional</i> Other	1	-143.11 (2.67)	0.129 (0.26)	17.652 (2.56)		0.62	1.71	0.13 (0.49)	18
	2	-72.797 (0.98)	0.440 (0.86)	8.768 (0.93)	0.179 (0.70)	0.56	1.9	0.04 (0.03)	16

.../cont'd.

**Table A.15 (continued)**  
**Export Supply Functions, by Sector: Regression Estimates**

X	Equation	Constant	RER	Y*	X <sub>t-1</sub>	R <sup>2</sup>	DW	Rho	DF
Manufactures	1	-44.044 (0.86)	-0.090 (0.27)	6.267 (0.97)		0.35	1.76	-0.60 (2.86)	17
	2	-19.30 (0.44)	-0.027 (0.08)	2.925 (0.52)	0.319 (1.30)	0.26	1.89	0.354 (0.04)	15
Chemicals	1	-22.633 (0.33)	-0.167 (0.40)	3.639 (0.42)		0.30	1.63	-0.65 (3.16)	17
	2	-8.245 (0.15)	-0.160 (0.37)	1.587 (0.23)	0.362 (1.52)	0.27	1.84	0.40 (0.16)	15
Machinery	1	-164.376 (1.72)	-0.470 (0.53)	20.976 (1.71)		0.28	2.25	0.20 (0.93)	17
	2	-41.968 (0.83)	0.493 (1.15)	5.270 (0.81)	-0.011 (0.09)	0.28	2.42	-0.19 (0.30)	15
Other Manufactures	1	-313.872 (2.07)	0.102 (0.24)	39.232 (2.08)		0.90	1.34	0.85 (7.68)	17
	2	-109.173 (1.86)	0.190 (0.46)	13.590 (1.83)	0.609 (3.77)	0.93	2.21	0.44 (0.66)	15
Services	1	-96.353 (1.66)	0.583 (2.75)	12.371 (1.71)		0.93	1.44	0.86 (8.13)	23
	2	-9.366 (0.54)	0.610 (3.01)	1.128 (0.51)	0.591 (4.47)	0.94	1.84	0.38 (1.39)	21
Travel	1	-142.001 (1.63)	0.720 (2.42)	17.864 (1.65)		0.92	1.18	0.87 (8.32)	23
	2	-37.236 (1.17)	0.593 (2.01)	4.565 (1.13)	0.581 (3.77)	0.94	1.70	0.56 (1.37)	21

*Note:* Two versions of the basic supply model are estimated. Equation 1, the static version, assumes a long-run equilibrium of full adjustment in each period. Equation 2, the dynamic version, allows for the existence of short-run disequilibrium through a lag in adjustment to changes in the exogenous variables. A log-linear form is specified for each equation, which implies an assumption of constant elasticities, given directly by the estimated coefficients. Equations are estimated from time series data, by ordinary least squares, and adjusted for first-order serial correlation of the error, by Cochrane-Orcutt iterative technique. t-statistics in parentheses. R<sup>2</sup> = coefficient of determination adjusted for degrees of freedom. DW = Durbin-Watson statistic. Rho = autocorrelation coefficient. DF = degrees of freedom.

X (dependent variable) = exports, by sector, in constant 1988 US dollars.

X<sub>t-1</sub> = value of dependent variable, lagged one year.

RER = real exchange rate.

Y\* = real GDP predicted from econometric estimate of time trend (interpreted as a proxy for domestic productive capacity, hence representing various sources of dynamic externality associated with the scale of the economy, e.g. quality of infrastructure and institutional factors generating transactions costs, the sign of the estimated coefficient indicating whether such externalities have a negative or positive effect on supply of exports).

**Table A.16**  
**Cross-Country Correlation of Macroeconomic Variables with Export Growth:**  
**CARICOM Countries, 1980-1992**

	Export Growth Rate (annual average)	Real Treasury Bill Rate (annual average)	Real Lending Rate (annual average)	Spread(%): (Lend/ Deposit) (annual average)	Coeff. of Variation: Nominal Exchange Rate	Coeff. of Variation: Inflation Rate (CPI)
Antigua & Barbuda	20.10	0.02	5.46	165.40	0.00	0.90
The Bahamas	4.98	-0.02	3.62	147.91	0.00	0.40
Barbados	5.48	0.41	5.28	193.46	0.00	0.61
Belize	10.30	5.01	10.89	155.88	0.00	0.68
Dominica	14.77	1.64	5.22	213.23	0.00	0.58
Grenada	7.70	0.32	4.43	187.91	0.00	1.02
Guyana	-0.96	0.65	3.39	123.38	1.52	0.72
Jamaica	5.54	-5.41	0.10	122.61	0.89	0.83
St. Kitts & Nevis	11.31	1.93	7.37	170.18	0.00	1.02
St. Lucia	13.66	1.18	6.29	182.86	0.00	0.96
St. Vincent & Grenadines	11.97	1.01	6.17	234.07	0.00	0.85
Trinidad & Tobago	1.95	-5.95	1.72	202.89	0.25	0.35
<b>Correlation Coefficient with Export Growth</b>		<b>0.41</b>	<b>0.50</b>	<b>0.36</b>	<b>-0.62</b>	<b>0.48</b>

Source: Calculated from IMF data in *International Financial Statistics*, 1994.

Note: Real rate of interest equals nominal rate minus rate of inflation (measured by CPI index).



Table A.17  
Jamaica: Macroeconomic Variables, 1980-1995

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Nominal Exchange Rate (J\$/US\$)	1.78	1.78	1.78	1.93	3.94	5.56	5.48	5.49	5.49	5.75	7.18	12.12	22.96	24.95	33.09	35.07
Inflation Rate (%)	27.41	12.75	6.36	11.63	27.68	25.87	15.00	6.60	8.30	14.37	21.95	51.10	77.23	22.11	35.05	26.70
Treasury Bill Rate (%)	9.97	9.83	8.61	12.38	13.29	19.03	20.88	18.16	18.50	19.10	26.21	25.56	34.36	28.85	42.98	27.65
Lending Rate (%)	15.63	16.07	16.44	16.97	18.53	24.92	27.34	25.45	25.19	25.22	30.50	31.51	44.81	43.71	49.46	43.08
Deposit Rate (%)	9.53	10.55	10.71	13.60	15.86	19.58	18.76	15.64	15.80	15.95	23.88	24.67	33.63	27.59	36.41	25.34
Interest Rate Spread (Lend/Deposit) %	164.0	152.3	153.5	124.8	116.8	127.3	145.7	162.7	159.4	158.1	127.7	127.7	133.2	158.4	135.8	170.0
Real Lending Rate (%)	-11.8	3.3	10.1	5.3	-9.2	-1.0	12.3	18.9	16.9	10.9	8.6	-19.6	-32.4	21.6	14.4	16.4

Source: IMF, International Financial Statistics Yearbook, 1995.

Note: Interest rate spread = (Lending rate/Deposit rate)%

Real lending rate = Lending rate - Inflation rate.

**Table A.18**  
**Effective Corporate Tax Rates in Selected Countries<sup>a</sup>**  
**(Percent)**

Region/Economy	Without Tax Holidays <sup>b</sup>		With Tax Holidays	
	Manufacture	Services	Manufacture	Services
<b>Developed Countries</b>				
Canada	25.2	14.7	..	..
France	23.3	21.5	..	..
Germany	25.4	29.8	..	..
Greece	6.6	-8.4	..	..
Italy	22.6	30.7	..	..
Portugal	23.4	15.1	..	..
Spain	25.9	23.2	..	..
United States	26.9	15.5	..	..
<b>Developing Economies</b>				
<b>Africa</b>				
Algeria <sup>c</sup>	31.2	-17.5	8.2	10.4
Cyprus <sup>c</sup>	12.3	5.7	2.2	2.1
Egypt <sup>c</sup>	14.9	-28.6	0.1	0.2
Libyan Arab Jamahiriya <sup>d</sup>	..	..	..	..
Malta <sup>c</sup>	15.5	10.0	10.3	9.8
Morocco <sup>c</sup>	..	..	..	..
Tunisia <sup>c</sup>	36.8	35.7	6.4	6.2
<b>Asia</b>				
Bangladesh	32.9	9.7	9.5	10.2
China	12.9	20.8	17.8	16.1
Hong Kong <sup>c</sup>	-16.1	-52.3	..	..
India	52.8	46.6	20.7	21.1
Indonesia	32.6	27.4	..	..
Jordan	33.2	25.3	1.5	1.6
Korea, Republic of	5.6	15.5	21.3	20.2
Lebanon	12.6	8.3	6.2	7.8
Malaysia <sup>c</sup>	18.3	14.7	12.7	11.5
Oman	29.7	23.2	2.8	3.5
Pakistan	37.6	2.3	11.2	13.9
Singapore <sup>c</sup>	30.8	26.7	10.1	9.7
Syrian Arab Republic	60.2	51.3	14.7	10.0
Taiwan	18.7	18.4	16.5	14.4
Thailand	28.5	28.9	8.6	8.2
Yemen	31.4	30.6	5.7	6.3

.../continued

**Table A.18 (contd.)**  
**Effective Corporate Tax Rates in Selected Countries<sup>a</sup>**  
**(Percent)**

Region/Economy	Without Tax Holidays <sup>b</sup>		With Tax Holidays	
	Manufacture	Services	Manufacture	Services
<b>Latin America and the Caribbean</b>				
Argentina	12.8	13.7	..	..
Brazil	15.6	11.2	13.8	10.2
Chile	8.3	5.6	..	..
Colombia	11.6	9.6	..	..
Guyana <sup>c</sup>	23.2	-2.3	..	..
Jamaica <sup>c</sup>	<b>20.9</b>	<b>-70.3</b>	<b>6.0</b>	<b>5.0</b>
Mexico <sup>c</sup>	15.9	16.8	10.4	17.3
Trinidad & Tobago	22.6	-7.5	13.5	12.5
Venezuela <sup>c</sup>	18.8	6.1	..	..
<b>Central and Eastern Europe</b>				
Belarus	-253.3	-328.5	16.9	15.8
Bulgaria	-241.7	-128.0	10.2	9.8
Czech Republic	37.4	25.9	22.2	19.8
Hungary	4.2	-31.7	6.0	5.1
Poland	-239.1	-326.4	7.6	14.3
Romania	60.9	32.4	12.2	9.8
Russia	-91.7	-180.7	..	..
Ukraine	-148.1	-297.3	11.9	9.2

Source: World Bank, IFC, Foreign Investment Advisory Service.

Notes:

- (a) The effective corporate tax rate is a measure of the way in which a tax system reduces the rates of return on a marginal investment over the life of the investment. It includes the following input parameters: corporate income tax, expected inflation rate, nominal interest rate, investment-tax allowance, tax depreciation rates, dividend withholding tax, inventory valuation, indexed accounting system, and tax holidays. The negative effective tax rate implies that the true value of deductions and credits is more than the amount of taxes paid on income earned by marginal projects.
- (b) Figures for effective tax rates without taking into account tax holidays. These figures may or may not include investment-tax credits or allowances.
- (c) The country offers investment-tax allowances or credits for investment in machinery and/or structures.
- (d) The presumptive tax on gross revenues equal to 15 percent applies instead of the corporate income tax for manufacturing or services.
- (e) Mexican firms located in the Maquiladoran regions are exempt from corporate income taxes, but are subject to the 2 percent minimum tax.

## **APPENDIX B**

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**Tables B.01 - B.09**

**Table B.01**  
**Distribution of Firms by Size and Sector/Sub-sector, 3-Way Comparison:**  
**All Jamaica, Approved Exporters, Provisional Exporters**

Sector/Sub-sector	Distribution of Firms, by number of employees and by Sector/Sub-sector									
	All Jamaica*			Approved Exporters**			Provisional Exporters**			Size Distribution
	Percent	Size		Perc	Size		Perc	Size Distribution		
		10-49	50+		1-49	50+		1-49	50+	
Mining	0.3	42.9	57.1	1.3	40.0	60.0	1.3	50.0	50.0	
Manufacture	37.0	70.6	29.4	78.3	49.2	50.8	65.4	86.3	13.7	
Food, Beverages & Tobacco	9.9	62.4	37.6	19.4	63.5	36.5	30.9	94.6	5.4	
Garments, Textiles & Leather	7.5	63.6	36.4	23.8	23.1	76.9	10.6	62.5	37.5	
Wood & Wood Products	3.9	85.9	14.1	4.7	55.6	44.4	1.7	100.0	0.0	
Printing, Publishing & Allied Ind.	3.3	78.1	21.9	3.1	58.3	41.7	3.0	44.4	55.6	
Chemicals, Petroleum, Rubber & Plastics	4.1	62.6	37.4	15.2	58.6	41.4	7.3	90.9	9.1	
Non-Metallic Minerals, Pottery & Glass	2.2	83.3	16.7	1.3	40.0	60.0	1.3	100.0	0.0	
Metal, Metal Products, Machinery & Equipment	5.0	77.1	22.9	6.8	50.0	50.0	5.6	82.4	17.6	
Other Manufacture	1.1	91.7	8.3	3.9	86.7	13.3	5.0	100.0	0.0	
Utilities	0.1	0.0	100.0	0.5	0.0	100.0	0.3	0.0	100.0	
Construction	5.5	87.5	12.5	0.5	50.0	50.0	0.0	0.0	0.0	
Distributive Trade	29.2	82.8	17.2	10.5	72.5	27.5	7.0	81.0	19.0	
Transportation, Storage &	6.7	78.9	21.1	2.1	87.5	12.5	20.3	95.1	4.9	
Financial, Legal & Business Services	12.8	64.8	35.2	4.7	11.1	88.9	4.0	50.0	50.0	
Other Services	8.5	86.6	13.4	2.1	62.5	37.5	1.7	80.0	20.0	
<b>All Sectors</b>	<b>100.0</b>	<b>76.1</b>	<b>23.9</b>	<b>100.0</b>	<b>50.5</b>	<b>49.5</b>	<b>100.0</b>	<b>85.4</b>	<b>14.6</b>	

Source: \* Calculated from data-base of STATIN (for March 1995, excluding Agriculture, Government, and Free Zones).

\*\* Calculated from data-base of JAMPRO (for November 1995, adjusted to exclude Agriculture).

Note: Percentages may not add up due to rounding.

**Table B.02**  
**Approved Exporters: Distribution of Firms by Sector, Employment, and Size**

Sector	Number of firms	Percent of total firms	Percent of total employment	Avg. no. of employees per firm	Distribution of Firms, by number of employees (Percent of firms in sector)						
					1-25	26-50	51-100	101-200	201-300	301-600	>600
Agriculture, Forestry & Fishing	112	23	9	52	67	12	10	9	1	0	2
Mining	5	1	2	271	20	20	20	20	0	0	20
Manufacture	299	61	64	147	31	18	20	13	6	9	3
Utilities	2	0	3	931	0	0	50	0	0	0	50
Construction	2	0	2	591	0	0	0	0	0	0	0
Distributive Trade	40	8	3	53	60	13	15	5	3	5	0
Transportation, Storage & Communication	8	2	2	179	75	13	0	0	0	0	13
Financial, Legal & Business Services	18	4	15	591	0	11	22	11	22	11	22
Other Services	8	2	1	44	50	13	25	13	0	0	0
<b>All Sectors</b>	<b>494</b>	<b>100</b>	<b>100</b>	<b>139</b>	<b>41</b>	<b>16</b>	<b>17</b>	<b>11</b>	<b>5</b>	<b>6</b>	<b>4</b>

Source: Calculated from data-base of JAMPRO (for November 1995).  
 Note: Percentages may not add up due to rounding.

**Table B.03**  
**Approved Exporters: Distribution of Firms in Agriculture by Sub-Sector, Employment, and Size**

Sub-Sector	Number of firms	Percent of total firms	Percent of total employment	Avg. no. of employees per firm	Distribution of Firms, by number of employees (Percent of firms in sub-sector)							
					1-25	26-50	51-100	101-200	201-300	301-600	>600	
Sugar	0	0.0	0.0	..	..	..	..	..	..	..	..	..
Banana	3	2.7	0.4	7	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cocoa, coffee	2	1.8	0.3	10	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Citrus	9	8.1	12.1	79	44.4	11.1	0.0	44.4	0.0	0.0	0.0	0.0
Other traditional export crops	17	15.3	46.6	161	47.1	23.5	11.8	5.9	0.0	0.0	0.0	11.8
Roots, Pulses, Vegetables, other domestic crops	66	59.5	23.1	21	77.3	7.6	13.6	1.5	0.0	0.0	0.0	0.0
Agricultural Services	8	7.2	16.6	122	0.0	37.5	0.0	50.0	12.5	0.0	0.0	0.0
Fishing	6	5.4	0.6	6	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>All Agriculture</b>	<b>111</b>	<b>100.0</b>	<b>100.0</b>	<b>52</b>	<b>66.7</b>	<b>11.7</b>	<b>9.9</b>	<b>9.0</b>	<b>0.9</b>	<b>0.0</b>	<b>0.0</b>	<b>3.0</b>

Source: Calculated from data-base of JAMPRO (for November 1995).  
Note: Percentages may not add up due to rounding.

**Table B.04**  
**Approved Exporters: Distribution of Firms in Manufacture by Sub-Sector, Employment, and Size**

Sub-Sector	Number of firms	Percent of total firms	Percent of total employment	Avg. no. of employees per firm	Distribution of Firms, by number of employees (Percent of firms in sub-sector)						
					1-25	26-50	51-100	101-200	201-300	301-600	>600
Food, Beverages & Tobacco	74	25	20	95	46	18	14	14	4	3	3
Garments, Textiles & Leather	91	30	76	293	10	13	20	14	12	23	8
Wood & Wood Products (including Furniture)	18	6	2	49	44	11	39	6	0	0	0
Printing, Publishing & Allied Ind.	12	4	2	34	42	17	25	17	0	0	0
Chemicals, Petroleum, Rubber & Plastics	58	19	15	93	33	26	24	10	2	3	2
Non-Metallic Minerals, Pottery & Glass	5	2	3	199	0	40	0	20	0	40	0
Metal & Metal Products	2	1	1	147	0	0	0	100	0	0	0
Machinery & Equipment	24	8	4	61	38	17	25	17	4	0	0
Other Manufacture	15	5	2	38	60	27	7	0	7	0	0
<b>All Manufacture</b>	<b>299</b>	<b>100</b>	<b>100</b>	<b>147</b>	<b>31</b>	<b>18</b>	<b>20</b>	<b>13</b>	<b>6</b>	<b>9</b>	<b>3</b>

Source: Calculated from data-base of JAMPRO (for November 1995).

Note: Percentages may not add up due to rounding.



**Table B.05**  
**Approved Exporters: Distribution of Firms by Location of Operations (Parish and Free Zone)**  
 (Percent of firms in sector)

Sector	Parish													Free Zone		
	Claren- don	Han- over	Kings- ton	Mau- cheste r	Port- land	St.Ca- therine	St.El- iza- beth	St.An- drew	St.Ann	St. James	St. Mary	St. Tho- mas	Tre- lawny	West- more- land	Yes	No
Agriculture, Forestry & Fishing	3	4	20	7	3	16	2	18	4	6	4	9	5	0	0	100
Mining	20	0	0	0	0	0	0	60	20	0	0	0	0	0	0	100
Manufacture	3	1	47	3	1	15	0	17	1	6	1	2	1	0	8	92
Utilities	0	0	0	50	0	50	0	0	0	0	0	0	0	0	0	100
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distributive Trade	3	0	55	3	0	10	0	23	3	5	0	0	0	0	3	98
Transportation, Storage & Communication	0	0	88	0	0	0	0	13	0	0	0	0	0	0	0	88
Financial, Legal & Business Services	0	0	61	0	0	0	6	28	0	6	0	0	0	0	0	100
Other Services	0	0	88	0	0	0	0	13	0	0	0	0	0	0	0	100
<b>All Sectors</b>	<b>3</b>	<b>2</b>	<b>42</b>	<b>4</b>	<b>1</b>	<b>14</b>	<b>1</b>	<b>18</b>	<b>2</b>	<b>6</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>94</b>

Source: Calculated from data-base of JAMPRO (for November 1995).

Note: Percentages may not add up due to rounding.

**Table B.06**  
**Provisional Exporters: Distribution of Firms by Sector, Employment, and Size**

Sector	Number of firms	Percent of total firms	Percent of total employment	Avg. no. of employees per firm	Distribution of Firms, by number of employees (Percent of firms in sector)							
					1-25	26-50	51-100	101-200	201-300	301-600	>600	
Agriculture, Forestry & Fishing	113	27	8	17	89	4	1	4	0	0	1	0
Mining	4	1	5	296	50	0	0	0	0	0	25	25
Manufacture	197	48	50	62	81	6	7	2	2	2	2	2
Utilities	1	0	14	3,500	0	0	0	0	0	0	0	100
Construction	0	0	0	0	0	0	0	0	0	0	0	0
Distributive Trade	21	5	13	152	76	5	0	14	0	0	0	5
Transportation, Storage & Communication	61	15	4	17	90	5	3	0	2	0	0	0
Financial, Legal & Business Services	12	3	5	96	42	8	17	17	8	8	8	0
Other Services	5	1	1	28	80	0	20	0	0	0	0	0
<b>All Sectors</b>	<b>414</b>	<b>100</b>	<b>100</b>	<b>59</b>	<b>83</b>	<b>5</b>	<b>5</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>

Source: Calculated from data-base of JAMPRO (for November 1995).

Note: Percentages may not add up due to rounding.

**Table B.07**  
**Provisional Exporters: Distribution of Firms in Agriculture by Sub-Sector, Employment, and Size**

Sub-Sector	Number of firms	Percent of total firms	Percent of total employment	Avg. no. of employees per firm	Distribution of Firms by number of employees (Percent of firms in sub-sector)							
					1-25	26-50	51-100	101-200	201-300	301-600	>600	
Sugar	0	0.0	0.0	--	--	--	--	--	--	--	--	--
Banana	3	2.7	1.3	8	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cocoa, coffee	3	2.7	11.1	72	33.3	33.3	0.0	33.3	0.0	0.0	0.0	0.0
Citrus	2	1.8	10.0	98	50.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0
Other traditional export crops	7	6.2	13.0	36	57.1	14.3	14.3	14.3	0.0	0.0	0.0	0.0
Roots, Pulses, Vegetables, other domestic crops	89	78.8	61.6	14	93.3	3.4	0.0	2.2	0.0	1.1	0.0	0.0
Agricultural Services	0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fishing	9	8.0	3.1	7	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>All Agriculture</b>	<b>113</b>	<b>100.0</b>	<b>100.0</b>	<b>17</b>	<b>89.4</b>	<b>4.4</b>	<b>0.9</b>	<b>4.4</b>	<b>0.0</b>	<b>0.9</b>	<b>0.0</b>	<b>0.0</b>

Source: Calculated from data-base of JAMPRO (for November 1995).

Note: Percentages may not add up due to rounding.

**Table B.08**  
**Provisional Exporters: Distribution of Firms in Manufacture by Sub-Sector, Employment, and Size**

Sub-Sector	Number of firms	Percent of total firms	Percent of total employment	Avg. no. of employees per firm	Distribution of Firms, by number of employees (Percent of firms in sub-sector)							
					1-25	26-50	51-100	101-200	201-300	301-600	>600-	
Food, Beverages & Tobacco	93	47	51	67	92	2	3	0	0	0	1	1
Garments, Textiles & Leather	32	16	36	140	59	3	6	9	9	6	6	6
Wood & Wood Products (including Furniture)	5	3	0	5	100	0	0	0	0	0	0	0
Printing, Publishing & Allied Ind.	9	5	5	71	33	11	44	0	11	0	0	0
Chemicals, Petroleum, Rubber & Plastics	22	11	4	22	68	23	9	0	0	0	0	0
Non-Metallic Minerals, Pottery & Glass	4	2	0	7	100	0	0	0	0	0	0	0
Metal & Metal Products	4	2	0	5	100	0	0	0	0	0	0	0
Machinery & Equipment	13	7	3	26	62	15	23	0	0	0	0	0
Other Manufacture	15	8	0	3	100	0	0	0	0	0	0	0
<b>All Manufacture</b>	<b>197</b>	<b>100</b>	<b>100</b>	<b>62</b>	<b>81</b>	<b>6</b>	<b>7</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>

Source: Calculated from data-base of JAMPRO (for November 1995).

Note: Percentages may not add up due to rounding.

**Table B.09**  
**Provisional Exporters: Distribution of Firms by Location of Operations (Parish and Free Zone)**  
 (Percent of firms in sector)

Sector	Parish													Free Zone		
	Clarendon	Hanover	Kington	Manchester	Portland	St. Catherine	St. Elizabeth	St. Andrew	St. Ann	St. James	St. Mary	St. Thomas	Trelawny	Westmoreland	Yes	No
Agriculture, Forestry & Fishing	4	3	35	7	2	11	7	7	2	8	3	2	4	5	0	100
Mining	0	0	25	0	0	0	0	50	25	0	0	0	0	0	0	100
Manufacture	4	1	42	3	1	10	3	19	2	9	1	3	2	3	2	98
Utilities	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	100
Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Distributive Trade	5	0	52	5	0	10	0	10	5	5	0	10	0	0	0	100
Transportation, Storage & Communication	0	0	89	0	0	0	0	10	0	2	0	0	0	0	0	100
Financial, Legal & Business Services	0	0	50	8	0	0	0	25	0	8	0	8	0	0	8	92
Other Services	0	0	20	0	0	0	0	20	0	40	0	0	20	0	0	100
<b>All Sectors</b>	<b>3</b>	<b>1</b>	<b>48</b>	<b>4</b>	<b>1</b>	<b>8</b>	<b>3</b>	<b>14</b>	<b>2</b>	<b>8</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>99</b>

Source: Calculated from data-base of JAMPRO (for November 1995).  
 Note: Percentages may not add up due to rounding.

## **APPENDIX C**

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**Tables C.01 - C.31**

Table C.01

<i>Question: Top three officers of the company: age and gender?</i>			
	Percent of Firms		
	Top three officers		
	1	2	3
<b>AGE (years)</b>			
20 - 29	0.0	6.7	13.3
30 - 39	11.1	13.3	13.3
40 - 49	37.8	22.2	13.3
50 - 59	15.6	15.6	13.3
60+	15.6	6.7	2.2
No response	20.0	35.6	44.4
Total	100.0	100.0	100.0
<b>GENDER</b>			
Female	20.0	20.0	8.9
Male	75.6	60.0	60.0
No response	4.4	20.0	31.1
Total	100.0	100.0	100.0

Table C.02

<i>Question: Top three officers of the company: level of education and language proficiency?</i>			
	Percent of Firms		
	Top three officers		
	1	2	3
<b>EDUCATION (highest level achieved)</b>			
Primary	0.0	4.4	2.2
Secondary	20.0	17.8	20.0
First degree	44.4	28.9	26.7
Advanced degree	26.7	13.3	0.0
Other post-secondary	4.4	13.3	13.3
No response	4.4	22.2	37.8
Total	100.0	100.0	100.0
<b>FOREIGN LANGUAGE (level of proficiency)</b>			
Low	26.7	11.1	6.7
Intermediate	8.9	0.0	2.2
High	15.6	11.1	4.4
Zero/No response	48.9	77.8	86.7
Total	100.0	100.0	100.0



Table C.03

<i>Question: Top three officers of the company: foreign travel and residence?</i>			
	Percent of Firms		
	Top three officers		
	1	2	3
<b>FOREIGN TRAVEL</b>			
<b>Frequency (number of trips in last five years)</b>			
1 - 2	8.9	4.4	6.7
3 - 4	22.2	11.1	13.3
5+	53.3	26.7	11.1
Zero/No response	15.6	57.8	68.9
Total	100.0	100.0	100.0
<b>Destination</b>			
Caribbean only	6.7	4.4	2.2
North America only	24.4	11.1	17.8
North America & Caribbean	11.1	8.9	6.7
Worldwide	48.8	22.2	8.9
Zero/No response	8.9	53.3	64.4
Total	100.0	100.0	100.0
<b>FOREIGN RESIDENCE</b>			
<b>Number of years</b>			
1 - 2	8.9	0.0	0.0
3 - 4	6.7	2.2	2.2
5+	24.4	8.9	2.2
Zero/No response	60.0	88.9	95.6
Total	100.0	100.0	100.0
<b>Place of residence</b>			
Caribbean only	0.0	0.0	0.0
North America only	37.8	8.9	8.9
North America & Caribbean	0.0	2.2	0.0
Worldwide	6.7	4.4	0.0
Zero/No response	55.5	84.5	91.1
Total	100.0	100.0	100.0

Table C.04

<i>Question: Previous occupation of current owner of company before starting this company?</i>		
<b>Rank</b>	<b>Occupation</b>	<b>Percent of firms</b>
1	Owner/operator of small/medium company	15.9
2	Employee of large firm	13.6
3	Employee of small/medium company	11.4
4	Student	11.4
5	Manager/technical worker in large firm	9.1
6	Teacher/academic	6.8
7	Doctor/lawyer/engineer/scientist	6.8
8	Government employee	4.5
9	Self-employed	4.5
10	Non-government organization	2.3
11	Unemployed	2.3
12	Others	6.8
13	No response/not applicable	22.7
<p><i>Note: 1. Ranked by percent of firms in each category.</i>  <i>2. Because of multiple response, percent of firms adds to more than 100%.</i></p>		

Table C.05

<i>Question: Structure of the company, at the start and today?</i>			
Rank	Ownership Structure	Percent of Firms	
		At Start	Today
1	Limited liability	33.3	40.0
2	Corporation	11.1	15.6
3	Family business	20.0	13.3
4	Sole proprietorship	17.8	11.1
5	Partnership	11.1	11.1
6	Registered on stock exchange	0.0	4.4
7	Joint venture	4.4	2.2
	Total	100.0	100.0
	<b>Foreign Affiliations</b>		
	Ownership	35.6	28.9
	Trademarks	4.4	4.4
	No foreign affiliation	55.6	62.2
	No response	4.4	4.4
	Total	100.0	100.0

Table C.06

<i>Question: More on the structure of the company.</i>		
		<b>Percent of firms</b>
	<i>1. Is this company part of a larger company/group/organization?</i>	
	Yes	41.9
	No	58.1
	<b>Total</b>	<b>100.0</b>
	<i>2. What is the size of this company relative to the group as a whole, in terms of turnover in 1994?</i>	
1	Less than 5%	38.5
2	6% to 20%	11.5
3	21% to 35%	7.7
4	36% to 50%	7.7
5	51% to 75%	7.7
6	Over 75%	3.8
7	No response	23.1
	<b>Total</b>	<b>100.0</b>
	<i>3. Does the company have an organization chart?</i>	
	Yes	60.0
	No	33.3
	No response	6.7
	<b>Total</b>	<b>100.0</b>

Table C.07

<i>Question: Current valuation of the company's total assets in US dollars? Average number of employees in the past two years?</i>				
	<b>Valuation of Assets</b>	<b>Percent of firms</b>	<b>Number of employees</b>	<b>Percent of firms</b>
1	Less than \$50,000	4.4	1 - 25	17.8
2	\$50,001 - \$100,000	8.9	26 - 50	11.1
3	\$100,001 - \$500,000	6.7	51 - 100	20.0
4	\$500,001 - \$1,000,000	4.4	101 - 200	6.7
5	\$1,000,001 - \$2,000,000	6.7	201 - 300	6.7
6	\$2,000,001 - \$3,000,000	8.9	301 - 600	6.7
7	\$3,000,001 - \$5,000,000	6.7	>600	2.2
8	\$5,000,001 - \$10,000,000	2.2	No response	28.9
9	Over \$10,000,000	8.9	Total	100.0
10	No response	42.2		
	Total	100.0		

Table C.08

<i>Question: Ratio of exports to sales?</i>		
Exports/Sales (%)	Percent of firms	
	1994	1995
1 - 24	13.3	15.6
25 - 49	4.4	6.7
50 - 74	2.2	2.2
75 - 100	13.3	13.3
No response	66.8	62.2
Total	100.0	100.0
Average Exports/Sales (%)	51.4	48.4

Table C.09

<i>Question: (1) Year company started? (2) Year exports started?</i>				
Year	Percent of firms			
	Company started		Exports started	
	%	Cumulative	%	Cumulative
before 1950	11.0	11.0	2.2	2.2
1950-1959	4.4	15.4	2.2	4.4
1960-1964	11.0	26.4	2.2	6.6
1965-1969	6.6	33.0	8.8	15.4
1970-1974	11.0	44.0	6.6	22.0
1975-1979	4.4	48.4	6.6	28.6
1980-1984	17.7	66.1	19.9	48.5
1985-1989	17.7	83.8	24.8	73.3
1990-1995	11.0	94.8	20.0	93.3
No Response	5.2	..	6.7	..
Total	100.0	..	100.0	..

Table C.10

<i>Question: What factors influenced the decision to get into export business? Rate in terms of significance.</i>		
<b>Rank</b>	<b>Factors</b>	<b>Rating (mean)</b>
1	Opportunity to earn foreign exchange	4.41
2	Competitive advantage of existing company	3.59
3	Government offer of incentives	3.50
4	Devaluation of the Jamaican dollar	3.47
5	Government sponsored campaign	3.36
6	Unsolicited offer of purchase contract	3.22
7	International travel/contact	3.00
8	Observed success of other companies in different product	2.93
9	Strong performance in domestic market	2.87
10	Link with existing business interest	2.74
11	Strong performance in CARICOM market	2.73
12	Existence of surplus production capacity	2.62
13	Access to special funding schemes	2.55
14	Observed success of other companies in same or related product	2.21
15	Saturation of domestic market for product	1.80

*Note: 1. Ranked in order of rating from high to low.  
2. Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.*



Table C.11

<i>Question: What are the perceived obstacles/difficulties in (a) getting into export business at the start, and (b) continuing/increasing exports today? Rate in terms of significance.</i>				
Rank	Obstacles/difficulties	Rating (mean)		
		At the Start	Today	Change (%)
1	Cost of finance	2.83	4.45	57.24
2	Cost of energy	3.00	3.81	27.00
3	Risk of changing exchange rate	2.45	3.61	47.35
4	Cost of imported inputs	2.65	3.55	33.96
5	Collateral required for finance	2.53	3.45	36.36
6	Supply of local raw materials	2.48	3.36	35.48
7	Cost of labour (wage rate)	2.13	3.19	49.77
8	Level of crime	2.32	3.12	34.48
9	Supply of skilled labour	2.36	3.11	31.78
10	Motivation/attitude of employees	2.48	3.07	23.79
11	Packaging	2.11	3.04	44.08
12	Shipping (foreign)	2.67	3.00	12.36
13	Supply of water/irrigation	2.67	3.00	12.36
14	Shortage of foreign exchange	2.47	2.91	17.81
15	Quality of machinery and equipment	2.15	2.84	32.09
16	Transportation (domestic)	2.11	2.64	25.12
17	Telecommunications	3.05	2.55	-16.39
18	Access to distribution outlet	2.25	2.50	11.11
19	Customs clearance (imports)	2.36	2.35	-0.42
20	Lack of knowledge of market	2.52	2.32	-7.94
21	Lack of technical expertise in production	2.52	2.26	-10.32
22	Customs clearance (exports)	2.32	2.19	-5.60
23	Restrictions on market entry	1.94	2.05	5.67
24	Building space	2.16	2.05	-5.09
25	Quality of management	2.30	1.91	-16.96
26	Product quality	2.19	1.88	-14.16
27	Company registration process	2.35	1.79	-23.83

*Note: 1. Ranked in order of rating of factors operating today, from high to low.  
2. Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.*

Table C.12

<p><i>Question: What is the effect of the following changes over the past three years on the export business of the company? Rate in terms of significance.</i></p>		
Rank	Changes	Rating (mean)
1	Interest rate	2.39
2	Inflation	2.68
3	General Consumption Tax (GCT)	3.36
4	Exchange rate of Jamaican dollar	3.46
5	Trade liberalisation	3.58
6	Cutbacks in government expenditure	3.71
7	Income tax	3.73
8	Tariff reduction	3.81
9	NAFTA	4.04
10	CARICOM	4.10
11	Accelerated depreciation	4.22
<p><i>Note: 1. Ranked in order of rating from negative to positive.            2. Rating based on the scale: 1 = extremely negative, 2 = very negative,            3 = negative, 4 = neutral, 5 = positive, 6 = very positive,            7 = extremely positive.</i></p>		

Table C.13

<i>Question: Given below is a list of factors which can provide exporters with a competitive advantage. Rank the top three factors which have provided your company with the greatest advantage at this time.</i>				
	Factors	Percent of firms		
		Rank 1	Rank 2	Rank 3
1	Low wages	9.1	45.5	45.5
2	Skill of its workers	40.9	13.6	45.5
3	Use of advanced machinery and equipment	28.6	71.4	0.0
4	Use of computer systems	25.0	25.0	50.0
5	Access to government assistance	0.0	100.0	0.0
6	Domestic sourcing of materials	66.7	33.3	0.0
7	International sourcing of materials	25.0	25.0	50.0
8	Energy costs	100.0	0.0	0.0
9	Financing costs	16.7	50.0	33.3
10	Small size/scale of production	25.0	50.0	25.0
11	Large size/scale of production	22.2	22.2	55.5
12	Strategic alliance with foreign firms	33.3	25.0	41.7

Table C.14

<i>Question: Evaluate the current strengths and weaknesses of different areas of the company's operation in comparison to your local and foreign competitors. Rate in terms of strength/weakness.</i>				
		Rating (mean)		
		Competitors		Gap: Foreign/Local (%)
		Local	Foreign	
	<b>1. MARKETING</b>			
1	Delivery capability	3.92	3.68	-6.12
2	Market knowledge	3.88	3.79	-2.32
3	Product quality	4.30	4.00	-6.98
4	Product image	4.25	4.00	-5.88
5	Product range	3.80	3.28	-13.68
6	Packaging	3.77	3.35	-11.14
7	Pricing	3.42	3.73	9.06
8	Sales force skills	3.75	3.52	-6.13
9	Distribution network	3.74	3.63	-2.94
10	Advertising	3.88	3.06	-21.13
11	Public relations	3.37	3.25	-3.56
	<b>2. OPERATIONS</b>			
1	Available production capacity	3.81	3.14	-17.59
2	Capacity utilisation	3.78	2.53	-33.07
3	Location	3.78	3.55	-6.08
4	State of buildings	3.50	2.88	-17.71
5	Average age of buildings	3.91	2.10	-46.29
6	State of plant and machinery	3.63	2.65	-27.00
7	Average age of plant and machinery	3.88	3.56	-8.25
8	State of transport equipment	3.36	3.27	-2.68
9	Average age of transport equipment	3.70	3.70	0.00
10	Use of computers	3.61	2.80	-22.44
11	Average age of computers	3.80	3.50	-7.89
12	Productivity overall	3.71	3.21	-13.48
13	Labour productivity	4.04	3.15	-22.03
	.../continued			
<i>Note: Rating based on the scale: 1 = very weak, 2 = weak, 3 = average, 4 = strong, 5 = very strong.</i>				

Table C.14 (continued)

<i>Question: Evaluate the current strengths and weaknesses of different areas of the company's operation in comparison to your local and foreign competitors. Rate in terms of strength/weakness.</i>				
		Rating (mean)		
		Competitors		Gap: Foreign/Local (%)
		Local	Foreign	
	<b>2. OPERATIONS (continued)</b>			
14	Raw materials (quality)	3.96	3.76	-5.05
15	Raw materials (supply)	3.79	3.00	-20.84
16	Storage/warehousing	3.87	3.07	-20.67
17	Maintenance and repair	3.50	3.06	-12.57
18	Supplier relationship	4.15	3.39	-18.31
19	Quality control	3.79	2.94	-22.43
20	Labour skills	3.74	2.79	-25.40
21	Labour turnover	3.88	3.76	-3.09
22	Training on-the-job	3.81	3.18	-16.54
23	Labour relations	3.52	3.47	-1.42
24	Research and development	3.24	2.67	-17.59
	<b>3. FINANCE</b>			
1	Growth of sales	3.62	2.72	-24.86
2	Debt/equity	3.71	3.20	-13.75
3	Net profit (pretax)/sales ratio	3.14	2.46	-21.66
4	Return on equity	3.05	2.73	-10.49
5	Cash flow	3.23	2.80	-13.31
6	Cash reserves	2.57	2.15	-16.34
7	Availability of credit	3.70	3.00	-18.92
8	Terms of credit	3.48	2.75	-20.98
9	Financial controls	3.57	3.07	-14.01
10	Accounting system	3.65	3.36	-7.95
	.../continued			
<i>Note: Rating based on the scale: 1 = very weak, 2 = weak, 3 = average, 4 = strong, 5 = very strong.</i>				

Table C.14 (continued)

*Question: Evaluate the current strengths and weaknesses of different areas of the company's operation in comparison to your local and foreign competitors. Rate in terms of strength/weakness.*

		Rating (mean)		
		Competitors		Gap: Foreign/Local (%)
		Local	Foreign	
	<b>4. ADMINISTRATION</b>			
1	Administrative skills	3.69	3.28	-11.11
2	Clerical skills	3.60	3.18	-11.67
3	Office facilities	3.73	3.17	-15.01
4	Data processing facilities	3.68	2.81	-23.64
	<b>5. MANAGEMENT</b>			
1	Management experience	4.12	3.53	-14.32
2	Management skills	3.83	3.35	-12.53
3	Management Turnover	3.59	3.60	0.28
4	Management training on-the-job	3.83	3.29	-14.10
5	External training courses	3.57	3.20	-10.36
	<b>6. OWNERSHIP</b>			
1	Ownership structure	3.74	3.29	-12.03
2	Board of Directors	3.50	2.92	-16.57

*Note: Rating based on the scale: 1 = very weak, 2 = weak, 3 = average, 4 = strong, 5 = very strong.*

Table C.15

<i>Question: Business plan?</i>	
	<b>Percent of firms</b>
<i>1. Does the company currently have a business plan?</i>	
Yes	71.1
No	28.9
<i>2. How many business plans in the past five years?</i>	
0	28.9
1	6.7
2	8.9
3	11.1
5	26.7
No response	17.8
Total	100.0

Table C.16

<i>Question: What are the company's main sources of information on factors affecting its export business? Rate in terms of significance.</i>		
<b>Rank</b>	<b>Sources</b>	<b>Rating (mean)</b>
1	Personal contact and travel	4.29
2	Relations with other companies	3.31
3	Participation in trade shows/fairs	3.00
4	Trade magazines	2.71
5	Newspaper reports	2.52
6	Hiring of consultants	2.41
7	Government Ministry/Agency	2.16
8	The company's banker	1.58
<p><i>Note: 1. Ranked in order of rating from high to low.</i>  <i>2. Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.</i></p>		



Table C.17

<i>Question: What strategies has the company followed in the past three years to improve performance of its export business? Rate in terms of priority/significance.</i>		
<b>Rank</b>	<b>Strategies</b>	<b>Rating (mean)</b>
1	Strategic alliance with foreign company	4.12
2	Improve quality of products	4.04
3	Upgrade the skills of employees	3.47
4	Improve overseas distribution system/network	3.37
5	Increase foreign contact (travel/trade shows/etc.)	3.35
6	Invest in new plant and equipment	3.22
7	Technical improvement in the production process	3.22
8	Change packaging of products	3.11
9	Diversify into other export markets	3.00
10	Diversify into other export products	2.86
11	Change the compensation package of employees	2.84
12	Invest in research and development	2.74
13	Price reduction	2.68
14	Invest in advertising	2.64
15	Restructure internal organization of the company	2.85
16	Strategic alliance with other local companies	1.88
<p><i>Note: 1. Ranked in order of rating from high to low. 2. Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.</i></p>		

Table C.18

<p><i>Question: Given the company's export performance in 1994, what steps have you taken in the current period to improve your competitive position? Rate each policy in terms of degree of importance.</i></p>		
Rank	Policies	Rating (mean)
1	Increase efficiency in use of existing machinery & equipment	3.79
2	Invest in new plant and equipment	3.54
3	Increase/install use of computer system	3.53
4	Increase use of outside research on product development	3.47
5	Increase international sourcing of materials	3.45
6	Increase the scale of production	3.32
7	Upgrade skill of the workers	3.23
8	Invest in in-house research on product development	3.21
9	Get on the Internet	3.12
10	Form strategic alliance with foreign firm	3.10
11	Form cooperative links with other local companies	2.77
12	Increase local sourcing of materials	2.67
13	Contract out certain processes & services now performed in-house	2.50
14	Maintain low wages	2.50
15	Reduce the scale of production	2.21
<p><i>Note: 1. Ranked in order of rating from high to low. 2. Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.</i></p>		

Table C.19

<i>Question: Subcontracting?</i>		
	1. Does the company subcontract to other firms part/some of the production activities directly involved in the process of producing its products?	
		<b>Percent of firms</b>
	Yes	33.3
	No	62.2
	No response	4.5
	<b>Total</b>	<b>100.0</b>
	2. Indicate the reasons for such subcontracting. Rate according to degree of importance.	
<b>Rank</b>	<b>Reasons</b>	<b>Rating (mean)</b>
1	To reduce costs, by specialisation	4.67
2	To simplify operations of the company	3.89
3	Because of legislation/government policy	3.40
4	To avoid excessive inventories	2.86
<p><i>Note: 1. Ranked in order of rating from high to low.</i>  2. Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.</p>		

Table C.20

<i>Question: In promoting its exports and maintaining contacts in its principal markets, what methods does this company use? Rate in terms of significance.</i>		
<b>Rank</b>	<b>Export promotion/marketing methods</b>	<b>Rating (mean)</b>
1	Periodic visits to customers abroad	3.94
2	Use of foreign subsidiaries or affiliates	3.29
3	Advertising campaigns, self-financed	2.95
4	Participation in trade shows/exhibitions	2.85
5	Periodic visit of customers to Jamaica	2.63
6	Investment in market research	2.60
7	Use of Jamaican Trade Commission	2.55
8	Joint international marketing with other local companies	2.46
9	Personal & business contacts in Jamaican communities abroad	2.42
10	Advertising campaigns, government financed	1.89
<p><i>Note: 1. Ranked in order of rating from high to low.</i>  <i>2. Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.</i></p>		

Table C.21

<i>Question: What were the sources of funds for starting this company?</i>					
	Source	Percent of funds (mean)	Percent of firms	Weighted percent of funds	Normalized percent of funds
1.0	EQUITY	83.5	57.8	48.3	58.4
1.1	Parent Company/Group	94.4	20.0	18.9	23.6
1.2	Personal capital/savings	100.0	17.8	17.8	22.2
1.3	Sale/mortgage of property	65.0	6.7	4.4	5.5
1.4	Issue of shares	31.3	11.1	3.5	4.4
1.5	Sale of previous business	100.0	2.2	2.2	2.7
2.0	LOAN	74.9	40.0	30.0	36.3
2.1	Financial Institutions	63.6	26.7	17.0	20.6
	Commercial bank	62.5	13.3	8.3	10.1
	Development Bank	48.0	13.3	6.4	7.8
	Venture Capital Company	60.0	2.2	1.3	1.6
	Credit Union	40.0	2.2	0.9	1.1
2.2	Loan by family or friends	72.9	17.8	13.0	15.8
3.0	OTHER	100.0	4.4	4.4	5.3
	No response	..	15.6	..	..
<p><i>Note: (1) Because of multiple response, percent of firms adds up to more than 100%.  (2) Ranked, across and within groups, by weighted percent of funds.  (3) Weighted percent of funds equals percent of funds multiplied by corresponding percent of firms.  (4) Normalized percent equals weighted percent normalized so as to sum to 100%</i></p>					

Table C.22

<i>Question: What were the sources of finance for the company's investment in the past year?</i>					
Rank	Source	Percent of funds (mean)	Percent of firms	Weighted percent of funds	Normalized percent of funds
1.0	EQUITY	70.4	55.6	39.1	59.7
1.1	Retained earnings/reserves	80.6	40.0	32.2	49.2
1.2	Parent Company/Group	54.0	11.1	6.0	9.1
1.3	Issue of shares	30.0	2.2	0.7	1.1
1.4	Sale/mortgage of property	10.0	2.2	0.2	0.3
2.0	LOAN	57.0	44.4	25.3	38.6
2.1	Financial Institutions	57.0	44.4	25.3	38.6
	Commercial bank	58.8	37.8	22.2	33.9
	Local	63.1	28.9	18.2	27.8
	Foreign	45.0	8.9	4.0	6.1
	Development Bank	46.7	6.7	3.1	4.8
3.0	OTHER	50.0	2.2	1.1	1.7
	No response	..	33.3	..	
<p><i>Note: (1) Because of multiple response, percent of firms adds up to more than 100%.  (2) Ranked, across and within groups, by weighted percent of funds.  (3) Weighted percent of funds equals percent of funds multiplied by corresponding percent of firms.  (4) Normalized percent equals weighted percent normalized so as to sum to 100%</i></p>					

Table C.23

<i>Question: Research and development activity?</i>						
	Percent of firms			Average number of persons involved	Average hours per week	Rating
	Yes	No	No response			
1. (a) <i>Does the company have an in-house unit mainly concerned with research/testing/innovation in technical aspects of the product/production process?</i>	22.2			5.4	32.5	
(b) <i>If no such unit exists, how much work of this type actually goes on inside the company that is not accounted for separately?</i>	22.2			2.6	18.3	
(c) <i>No such work at all exists in the company</i>		42.2				
(d) <i>No response</i>			13.4			
2. <i>Does the company engage in joint cooperative efforts with other companies/agencies to undertake such R&amp;D activities?</i>	17.8	64.4	17.8			
3. <i>Does the company hire/contract outside consultants/agencies to carry out such R&amp;D activities?</i>	24.4	60.0	15.6			
4. <i>How significant are the perceived benefits to the company from its R&amp;D activities? Rate in terms of significance.</i>	28.9		71.1			4.00
<i>Note: Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.</i>						

Table C.24

<i>Question: What is the company's current annual budget for R&amp;D activities (in US dollars)?</i>		
	<b>Annual Budget</b>	<b>Percent of firms</b>
1	0	42.2
2	\$1,000 - \$3,999	8.9
3	\$4,000 - \$19,999	2.2
4	\$20,000 - \$49,999	6.7
5	\$50,000 - \$99,999	4.4
6	\$100,000 - \$499,999	2.2
7	\$500,000 - \$999,999	2.2
8	\$1,000,000+	4.4
9	No response	26.7
	<b>Total</b>	<b>100.0</b>

Table C.25

<i>Question: Does the company now have plans for introducing any new export products?</i>	
	<b>Percent of firms</b>
Yes	46.7
No	53.3
<b>Total</b>	<b>100.0</b>



Table C.26

<p><i>Question: Has the company received any benefit, in terms of contribution to technical aspects of the product/production process, from the work of the following agencies? Rate in terms of significance of the benefit.</i></p>		
<b>Rank</b>	<b>Agencies</b>	<b>Rating (mean)</b>
1	Rural Agricultural Development Authority (RADA)	3.00
2	Food Technology Institute	2.29
3	Scientific Research Council	2.25
4	University of the West Indies	2.17
5	Bodles Agricultural Research Station	2.00
6	University of Technology	1.50
7	Government Chemist	1.50
<p><i>Note: 1. Ranked in order of rating from high to low. 2. Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.</i></p>		

Table C.27

<i>Question: Does (did) the company receive any incentives under existing government programmes?</i>				
	Incentives	Percent of Firms		
		Yes	No	No Response
1	Export Industry Encouragement Act	8.9	62.2	28.9
2	Export Free Zone Act	6.7	64.4	28.9
3	Bauxite & Alumina Industries Encouragement Act	2.2	66.7	31.1
4	Approved Farmer Status	6.7	64.4	28.9
5	Motion Picture Encouragement Act	4.4	64.4	31.1
6	Foreign Sales Corporation Act	2.2	66.7	31.1
7	International Finance Companies (Income Tax Relief) Act	0.0	68.9	31.1
8	Shipping (Incentives) Act	0.0	68.9	31.1
9	Moratorium on Duties	0.0	68.9	31.1
10	Hotel Incentives Act	0.0	68.9	31.1
11	Resort Cottages Act	0.0	68.9	31.1
12	Modernisation of Industry	2.2	64.4	33.4
13	Urban Renewal (Tax Relief) Act	4.4	62.2	33.3
14	Accelerated Depreciation (Special Capital Allowance)	8.9	44.4	46.7
15	Data Processing Systems Development	2.2	66.6	31.1

Table C.28

<i>Question: Evaluate the importance of various forms of government incentives/subsidies/tax relief the company receives (or received) in assisting (a) the company's operation in general, and (b) the promotion of exports in particular. Rate each in terms of degree of importance.</i>						
Rank	Incentives	Received (Percent of Firms)			Rating	
		Yes	No	No Response	For Company	For Exports
1	Corporate income tax	8.9	44.4	46.7	4.38	4.63
2	CET	4.4	44.4	51.1	3.67	4.50
3	GCT	28.9	37.8	33.4	4.00	3.81
4	Customs duty	15.6	40.0	44.4	4.14	3.50
5	Excise duty	6.7	44.4	48.9	4.25	3.33
6	Accelerated depreciation allowance	8.9	44.4	46.7	3.00	3.00
7	Interest rate	2.2	46.7	51.1	2.00	3.00
8	Stamp duty	6.7	46.7	46.7	3.20	3.00
9	Tonnage tax	48.9	0.0	51.1	2.00	2.42
10	Transfer tax	0.0	51.1	48.9	..	..
11	Fees for services	0.0	51.1	48.9	..	..
12	Electricity	0.0	51.1	48.9	..	..
13	Fuel	0.0	51.1	48.9	..	..
14	Freight	0.0	51.1	48.9	..	..

*Note: 1. Ranked in order of rating from high to low for exports.  
2. Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.*

Table C.29

<i>Question: What is the experience of this company as regards labour relations during the past five years?</i>					
	Percent of firms				
	1991	1992	1993	1994	1995
<i>1. Workers represented by a union?</i>					
Yes	26.7	26.7	26.7	28.9	28.9
No	60.0	60.0	60.0	57.8	57.8
Non-response	13.3	13.3	13.3	13.3	13.3
Total	100.0	100.0	100.0	100.0	100.0
<i>2. Number of industrial actions by workers?</i>					
0	75.6	77.8	77.8	75.6	80.0
1 - 5	11.1	8.9	11.1	13.3	8.9
6 - 10	2.2	2.2	2.2	2.2	2.2
No response	11.1	11.1	8.9	8.9	8.9
Total	100.0	100.0	100.0	100.0	100.0
<i>3. Number of hours lost due to industrial action?</i>					
0	93.3	95.6	93.3	88.9	91.1
1 - 10	4.4	2.2	4.4	2.2	4.4
11 - 30	0.0	2.2	0.0	0.0	2.2
31 - 60	2.2	0.0	2.2	4.4	0.0
61+	0.0	0.0	0.0	4.4	2.2
No response	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0
.../ (continued)					

Table C.29 (continued)

<i>Question: What is the experience of this company as regards labour relations during the past five years?</i>					
	Percent of firms				
	1991	1992	1993	1994	1995
<i>4. Does the company have a productivity incentive scheme?</i>					
Yes	44.8	48.9	51.1	55.6	55.6
No	33.3	28.9	28.9	24.4	26.7
No response	22.2	22.2	20.0	20.0	17.8
Total	100.0	100.0	100.0	100.0	100.0
<i>5. Does the company have an employee share ownership plan?</i>					
Yes	4.4	6.7	4.4	4.4	8.9
No	82.2	82.2	84.4	84.4	80.0
No response	13.3	11.1	11.1	11.1	11.1
Total	100.0	100.0	100.0	100.0	100.0
<i>6. Does the company have an employee health benefit plan?</i>					
Yes	73.3	73.3	73.3	75.6	73.3
No	15.6	15.6	15.6	15.6	17.8
No response	11.1	11.1			

Table C.30

<i>Question: Rate the effectiveness of different business organizations in providing support/assistance to achieve the company's goal of increased exports.</i>		
Rank	Business Organization	Rating (mean)
1	Jamaica Exporters' Association	2.70
2	Shipping Association of Jamaica	2.29
3	Jamaica Manufacturers' Association	2.14
4	Jamaica Chamber of Commerce	1.77
5	Private Sector Organization of Jamaica	1.50
6	Jamaica Agricultural Society	1.25
7	Jamaica Hotel & Tourist Association	1.25
8	Jamaica Computer Society	1.17

*Note: 1. Ranked in order of rating from high to low.  
2. Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.*

Table C.31

<i>Question: Rate the effectiveness of different government agencies in providing support/assistance to achieve the company's goal of increased exports.</i>		
<b>Rank</b>	<b>Government Agencies</b>	<b>Rating (mean)</b>
1	JAMPRO	3.03
2	Customs Department	2.70
3	EX-IM Bank	2.64
4	Bureau of Standards	2.52
5	Port Authority	2.20
6	Agricultural Credit Bank	1.67
7	National Development Bank	1.33
8	National Investment Bank of Jamaica	1.00
9	Jamaica Tourist Board	1.00

*Note: 1. Ranked in order of rating from high to low.  
2. Rating based on the scale: 1 = very low, 2 = low, 3 = medium, 4 = high, 5 = very high.*



## **CRITICAL ISSUES IN CARIBBEAN DEVELOPMENT**

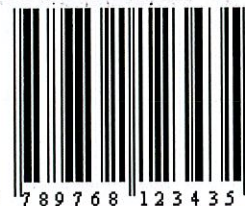
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Ian Randle Publishers  
206 Old Hope Road  
Kingston 6  
Jamaica

ISBN 976-8123-43-5



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